



SMALL WATER SYSTEM RESOURCE: CONTRACTING A CERTIFIED WATER OPERATOR (CIRCUIT RIDER)



pennsylvania
DEPARTMENT OF ENVIRONMENTAL
PROTECTION

BUREAU OF SAFE DRINKING WATER

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SMALL WATER SYSTEM RESOURCE: CONTRACTING A CERTIFIED WATER OPERATOR (CIRCUIT RIDER)

Purpose of this Document

This document is a resource to help public water system owners or responsible officials that need to retain the services of a certified water operator. Understanding how to select a contract operator and what to expect from that operator can help you ensure that your public water system complies with all state and federal regulations and delivers safe drinking water to your customers. This document offers suggestions on how to find the right operator for your system, helps you to define and communicate the delegation of water system responsibilities with your operator, and assists with documentation of expectations. This document is intended to be an assistance tool, and not a replacement for understanding the provisions of Pa. Code, Title 25: Environmental Protection, Chapter 109: Safe Drinking Water and Chapter 302: Administration of the Water and Wastewater Systems Operators' Certification Program. This document is strictly a guide, and you should seek your own legal counsel before entering into any contracts.

In Pennsylvania, all Community, Nontransient Noncommunity (NTNC) and Consecutive Water Systems are required by regulation to have a certified water operator to operate and maintain their water system. Some examples of these types of water systems include:

- **Small municipalities**
- **Mobile home parks**
- **Homeowners' associations**
- **Small, privately-owned water systems**
- **Schools and large businesses**

In some cases, transient noncommunity water systems may be required by permit to retain a certified operator.

Only a properly certified operator (available operator) may make a process control decision (any decision that affects the quality or quantity of water supplied to the public).

This document includes the following:

1. The role of a certified water operator in helping ensure the provision of safe drinking water
2. A table of roles and responsibilities of owners or responsible officials and operators
3. An interview tool to help you ask the right questions when interviewing potential operators
4. A list of topics and responsibilities to include in a written agreement with your operator

What are Community, NTNC and Consecutive Public Water Systems?

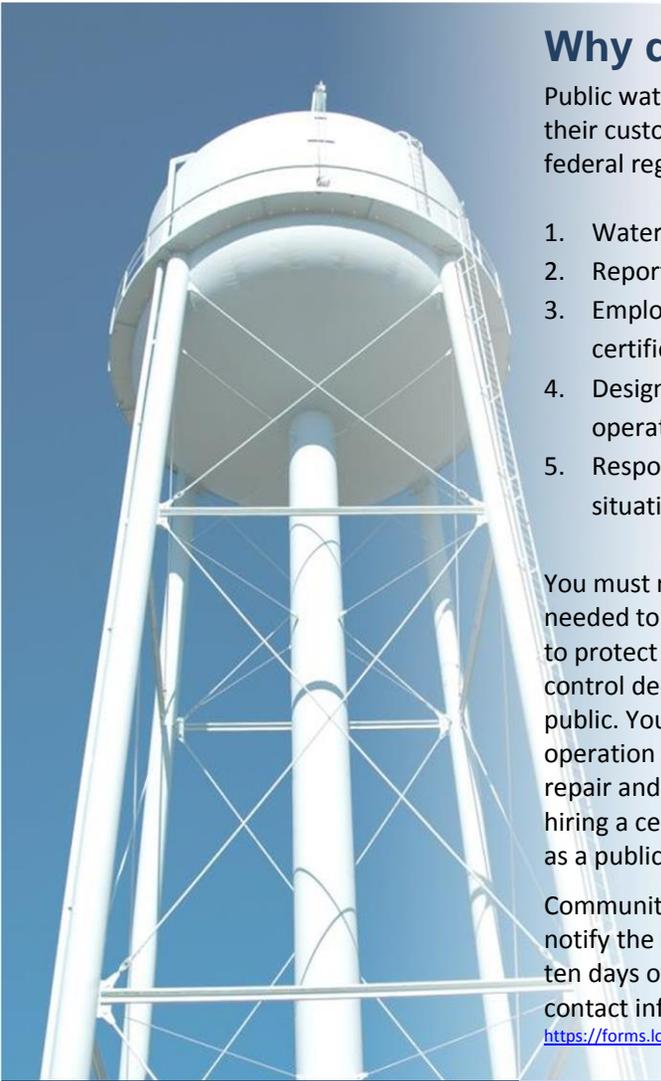
A community water system serves at least 15 service connections or 25 or more year-round residents. A NTNC water system provides water for human consumption to 25 or more of the same persons daily over 6 months per year. A consecutive water system obtains all of its water from another public water system and resells the water to a person, provides treatment to meet a primary maximum contaminant level or provides drinking water to an interstate carrier. A community, NTNC or consecutive public water system can be publicly owned by municipalities or authorities. A public water system can also be privately owned, such as by homeowners' associations or mobile home parks.

Am I an Owner or Responsible Official?

You are a public water system owner or responsible official if you own or make financial or management-related decisions for a public water system. Public water system owners or responsible officials can include water system board or authority members, water system owners, water system managers, or elected officials. Other examples may include homeowners' association board members and those who own or operate mobile home parks.

What is a Certified Water Operator?

A certified water operator is an individual who is authorized by the PA State Board for Certification of Water and Wastewater System Operators (via a licensing process) to operate and maintain a public water system in PA. A certified water operator is necessary to operate your water system and maintain compliance with drinking water regulations.



Why do I need a Certified Water Operator?

Public water system owners or responsible officials are charged with ensuring their customers receive safe drinking water that complies with state and federal regulations. These regulations include those that pertain to:

1. Water quality sampling
2. Reporting and recordkeeping
3. Employing properly certified water operators
4. Design, construction and operation of water systems
5. Responding to emergency situations

What is an Available Operator?

An available operator is a certified operator who is on-site or able to be contacted as needed to make process control decisions that affect water quality or quantity, in a timely manner, to protect public health and the environment.

You must retain a certified operator who has the knowledge and experience needed to ensure that your public water system delivers safe drinking water to protect public health. Only an available operator may legally make process control decisions that affect the quality or quantity of water supplied to the public. Your certified operator may also assist you with overall water system operation and maintenance, including consultation, treatment installation, repair and maintenance, and system-wide sanitary inspections. However, hiring a certified water operator does not eliminate your legal responsibilities as a public water system owner or responsible official.

Community, NTNC and consecutive public water systems are required to notify the Pennsylvania Department of Environmental Protection (DEP) within ten days of the addition, loss, change, or replacement of any operator(s). See contact information below, or link to online form:

https://forms.logiforms.com/formdata/user_forms/23785_4145344/77494/page1.html?cachebust=323

What if I have questions?

The first step for information and assistance is the Pennsylvania Department of Environmental Protection, Bureau of Safe Drinking Water. The Department can answer questions regarding operator certification for your public water system.

Pennsylvania Department of Environmental Protection

Phone: 717-787-4018

Email: RA-OperatorWebsite@pa.gov

Mail:

State Board for Certification of Water and Wastewater System Operators
Rachel Carson State Office Building
P.O. Box 8454
Harrisburg, PA 17105-8454

Website:

<http://www.dep.pa.gov/Business/Water/BureauSafeDrinkingWater/OperatorCertification>
Or www.dep.pa.gov Search "Operator Certification"

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WATER SYSTEM OWNER/RESPONSIBLE OFFICIAL AND CERTIFIED WATER OPERATOR RESPONSIBILITIES

Delivering safe drinking water to customers is a team effort between the certified water operator and the water system owner/responsible official, and clear communication about each person's responsibilities can help ensure this is achieved.

A water system owner/responsible official may employ a contract certified water operator ("Circuit Rider"), a company or individual who may serve at more than one water system. All process control decisions need to be made by an available operator. These decisions may be made on-site, from a remote site, by the use of standard operating procedures approved by the operator-in-responsible-charge, or by using programmable logic controls (PLC) and/or supervisory control and data acquisition systems (SCADA) in a manner that is compliant with the regulations.

Once you have hired a certified operator, he or she should provide you with a General Work Plan and a System Specific Management Plan to ensure that the contracted company or individual can make process control decisions for your water system in a timely and appropriate manner.

The tables on the following pages outline categories of responsibilities and best practices of the water system owner/responsible official and the water system operator. You can use this information to facilitate a conversation between you and your operator to ensure that all aspects of managing and operating your public water system are addressed. You should document the decisions that you make regarding responsibilities and revisit them from time to time to make adjustments or improvements. Note that while some tasks may be interchangeable or shared, others will usually be performed by one party or the other. In addition, some tasks may only be applicable to community water systems (as noted in the table). Delegating specific tasks does not relieve either party of their legal responsibilities. These tables can assist you in developing a written agreement and/or contract for contract operator services.

If you are using this document in an electronic format, the buttons below (CTRL + click) can be used to navigate to specific sections of the tables.

Administration,
Staffing, and
Professional
Development

Written Plans,
Reports and
Recordkeeping

Water System
Planning

Water System
Maintenance

Emergency /
Security

Water System
Operations,
Water Quality
Assurance and
Regulatory
Compliance

What is an Operator-in-Responsible-Charge?

An operator-in-responsible-charge is an available operator designated by the system owner, whose duty is to approve any standard operating procedures developed for the system.

What is a Process Control Decision?

A process control decision is a decision that maintains or changes the water quality or quantity of a water system in a manner that may affect the public health or environment. Some examples include: changing chemical dosages, adjusting pump outputs, and repairing a main break.

What's in a General Work Plan?

- Circuit rider's primary business name and location
- The name and location of each system the circuit rider operates
- The classification and subclassification of each system circuit rider operates
- Estimated hours per week the circuit rider works at each system (time physically present), with the method of documenting each visit

What is a System Specific Management Plan?

- The names and contact information of the available operators for that system, with a copy of the operators' certificates to be prominently displayed at the system
- Standard operating procedures and a process control plan for the system
- Emergency contact information
- Estimate of the response time needed to be physically present at the system

Water System Owner/Responsible Official Responsibilities

Water System Operator Responsibilities and Potential Operator Duties

Administration, Staffing, and Professional Development

Summary: Owners/responsible officials should:

- Ensure there are enough qualified staff for proper operation of the public water system.
- Stay informed about best management practices and regulatory information in order to effectively manage their public water systems.
- Maintain good communication with the available operator(s).

Employ sufficient appropriate/qualified staff (e.g., a certified water operator):

- Understand licensing/certification requirements.
- If necessary, designate an operator-in-responsible-charge.
- Ensure the operator has appropriate experience and certification credentials for the public water system.
- Ensure appropriate onsite presence and/or offsite availability.

Increase knowledge about the best practices for managing a public water system. Stay updated about changes in drinking water regulations and safety regulations.

Maintain communication.

Summary: Water system operators should:

- Communicate with the owner/responsible official about staff needed to operate water system.
- Stay informed about the latest operational and regulatory information in order to maintain their certifications, operate the public water system more effectively and ensure water system compliance.
- Communicate with the owner/responsible official.

Recommend appropriate staffing levels .

- If designated as the operator-in-responsible-charge, develop and approve written Standard Operating Procedures for process control.
- Train and supervise other water system support staff in the performance of daily activities.

Develop a General Work Plan and a System Specific Management Plan.

- Maintain required certification (ensure sufficient contact hours are met to maintain certification).
- Obtain any other necessary training/education/certification as a result of (for example):
 - Equipment upgrades at the public water system
 - Changes in treatment processes at the public water system
 - New regulations

- Provide notice prior to terminating contract.
- Discuss regulatory correspondence with the owner/responsible official and maintain a filing system.
- Meet with owner/responsible official to report on work completed on the system, as well as short-term and long-term system needs.
- Respond to information requests.

Regularly attend scheduled Water Governing Board meetings.

Water System Owner/Responsible Official Responsibilities

Water System Operator Responsibilities and Potential Operator Duties

Written Plans, Reports and Recordkeeping

Summary: Responsible Officials oversee the development, maintenance and submission of required reports and plans to DEP. They also ensure copies of sampling results, inspections and any public notifications for the public water system are kept for the appropriate timeframes required by regulation.

Summary: Water system operators may develop, update and maintain plans and reports of public water system activities. They may also assist in other administrative recordkeeping.

Submit the Annual Operator Report designating the available operators and operator-in-responsible-charge for the public water system. Notify DEP in writing, within 10 calendar days, of the addition, loss, change, or replacement of any available operator(s).

Provide copy of your Water Operator License to owner so that he or she may designate you as an available operator and post it in the work area.

Verify completion of monthly operating reports.

Complete and retain monthly operating reports, which should include the following at a minimum:

- Water produced daily
- Chemical added daily
- Daily physical and chemical determinations
- Water-level monitoring data
- Maintenance performed
- Operational problems

Verify completion of daily log of process control decisions.

Maintain a daily log of process control decisions to:

- Establish a baseline and history of operations throughout the years
- Assist operators in running the system given different seasonal weather conditions
- Serve as a useful training tool
- Assist in developing standard operating procedures
- Establish more effective and efficient procedures for running the system

A daily log can serve as a tool and record for the operator and the owner in any enforcement matters.

Work with the operator to develop Consumer Confidence Report (CCR) and other public notification. Ensure delivery of the CCR and public notification to customers within regulatory guidelines and ensure certification form is submitted to DEP Sanitarian.
(Community and Consecutive Water Systems)

Compile data and prepare or help prepare and deliver CCRs and public notification. Prepare or help prepare certification form and submit to DEP Sanitarian.

Water System Owner/Responsible Official Responsibilities

Water System Operator Responsibilities and Potential Operator Duties

Written Plans, Reports and Recordkeeping (continued)

Ensure the Chapter 110 Report is completed and submitted to DEP on time.

(Regulatory requirement for PWS withdrawing more than 10,000 gallons/day water)

Compile monthly master meter readings of source water, treated water quantity entering the distribution system, and customer/plant/fire usage to develop and submit the Chapter 110 Report electronically.

Ensure that the plans and logs listed to the right are developed and kept up-to-date for the water system (as applicable).

Develop and/or update the following plans and logs for the water system (as applicable):

- Cross-connection control plan and backflow prevention device records
- Source Water Protection Plan
- Customer Complaint log

Ensure that representative site sampling plans are developed and are available for review and approval, as necessary, by the regulatory agency. Verify monitoring plans are updated appropriately.

Develop and maintain site sampling plans in accordance with regulatory guidance. Assist with determinations of representative monitoring.

Ensure water system schematics and distribution maps are developed and verify that schematics are updated appropriately.

Develop or assist with development and update of water system schematics and distribution system maps.

The distribution system map (or mapping program) should show pump stations, finished water storage reservoirs, pressure reducing valves (PRVs), pipe (date installed, diameter and material) locations, valve locations (especially pressure zone breaks), blow-offs, hydrants, and sampling station locations.

Ensure documents related to monitoring results, actions taken to address violations, written reports and communication, plans and permits, and public notification are maintained in accordance with regulatory requirements in 109.701(d), 302.1201, and 302.1202.

Work with owner/responsible official to develop and maintain a records retention repository.

Ensure that an Operation and Maintenance Plan¹ is developed and implemented. **(Community and Consecutive Water Systems)**

Develop or assist with development and update of the Operation and Maintenance Plan.¹ Implement accordingly.

Ensure an Emergency Response Plan² is developed. **(Community and Consecutive Water Systems)**

Work with owner/responsible official to develop an Emergency Response Plan².

¹ An **Operation & Maintenance (O&M) Plan** contains a discussion of a public water system's components and explains how a public water system is to be operated and maintained to ensure the provision of safe drinking water and compliance with regulations. For a template, visit www.elibrary.dep.state.pa.us and search for Document 3900-FM-BSDW0301.

² An **Emergency Response Plan** contains procedures for providing safe and adequate drinking water under emergency circumstances. For a template, visit www.elibrary.dep.state.pa.us and search for Document 3900-FM-BSDW0300.

Water System Owner/Responsible Official Responsibilities

Water System Operator Responsibilities and Potential Operator Duties

Written Plans, Reports and Recordkeeping (continued)

Maintain and update public water system profile information and keep the regulatory agency informed and updated about items such as:

- Population and number of service connections
- Legal contacts -- mailing and physical addresses
- History of operators in direct responsible charge

Provide information to the owner/responsible official in order for him/her to maintain updated public water system profile information.

Water System Planning

Summary: Responsible officials are responsible for planning needs related to capital improvements, future maintenance, asset management and contingency plans.

Summary: Water system operators provide input to the owner/responsible official to address planning needs related to capital improvements, future maintenance, asset management and contingency plans.

Develop a budget and provide adequate funding to properly construct, operate and maintain the public water system and to maintain the delivery of a safe supply of water using information provided by the operator. Review annually.

Collect and provide public water system owner/ responsible official with information to develop a budget for the public water system, for example:

- Likely capital expenditures needed
- Condition and operational status of assets
- Needed asset repair or rehabilitation projects
- Operational costs, including power, treatment chemicals, and monitoring

Develop and maintain an Asset Management Plan³ using information provided by the operator.

Collect and provide information necessary for the owner/responsible official to develop and maintain an Asset Management Plan.³

Obtain any necessary operation and construction approvals and permits and provide copies to the operator. Make the operator aware of any Special Conditions that are included in the permit.

- Confirm that any necessary operation and construction approvals and permits have been obtained prior to the start of construction/ operation and prior to making any changes in operations.
- Collect and provide information necessary for the permit application.
- Operate the water system in compliance with any Special Conditions that are included in the permits.

³ **Asset management** is the practice of managing infrastructure capital assets to minimize the total cost of owning and operating them, while delivering the service level customers desire. An asset management plan serves as a tool to record all of a system's asset management practices and strategies. For more information, visit <http://www.epa.gov/dwcapacity/asset-management-resources-small-drinking-water-systems> or www.epa.gov and search for "Asset Management."

Water System Owner/Responsible Official Responsibilities

Water System Operator Responsibilities and Potential Operator Duties

Water System Planning (continued)

Obtain additional approved supply of water or implement drought contingency plans when there is a shortage of water and/or emergency that affects the quality or quantity of water.

Identify potential solutions (document in Emergency Response Plan) in case of a water outage, such as:

- Alternative water sources (permitted sources)
- Purchasing water through a permitted interconnection or bulk water hauler
- Water restriction and conservation strategies

Water System Operations, Water Quality Assurance and Regulatory Compliance

Summary: Owners/responsible officials should be knowledgeable about the fundamental aspects of water system operations and what is needed to maintain day-to-day operational and process integrity of the public water system to deliver a safe and adequate supply of water. Owners/responsible officials should ensure that the water system is in compliance with all federal and state requirements.

- Verify that the operator has performed operational treatment and monitoring requirements to meet drinking water standards and treatment technique requirements.
- Ensure that appropriate treatment chemicals, testing equipment and materials are available and properly maintained and calibrated to ensure operational and process integrity of the public water system.

Summary: Water system operators should be knowledgeable about all operational aspects of the water system and maintain day-to-day operational and process integrity of the public water system to deliver a safe and adequate supply of water. Operators should maintain communication with the owner/responsible official and regulatory agency to ensure that the water system is in compliance with all federal and state requirements.

- Make all treatment process control decisions (e.g., adjusting chemical dosage) to ensure water supplied to customers meets drinking water standards and treatment technique requirements.
- Maintain a sufficient supply of chemicals approved for drinking water treatment (within recommended shelf-life).
- Conduct process control testing to include performance and compliance monitoring (e.g., calculating disinfection and disinfectant levels to insure inactivation of pathogens).
- Maintain and calibrate water treatment plant monitoring instruments and chemical feed equipment to insure data integrity.
- Analyze operational data to determine changes and improvements that will lead to more efficient operation and optimized treatment.

Water System Owner/Responsible Official Responsibilities

Water System Operator Responsibilities and Potential Operator Duties

Water System Operations, Water Quality Assurance and Regulatory Compliance (continued)

Ensure that compliance monitoring is completed:

- Using a certified laboratory.
- Verifying collection and electronic reporting of sample results to DEP.

Ensure all samples are:

- Collected at the correct time and location in accordance with the site sampling plans.
- Analyzed by a certified laboratory for the appropriate contaminant(s).
- Collected in accordance with laboratory chain-of-custody procedures.
- Delivered to the laboratory to allow sufficient time for testing and reporting.
- Reported to DEP electronically (by verifying through electronic reporting system).
- Reviewed for compliance with drinking water standards and water quality trending.
- Followed up with repeat or confirmation samples if triggered by routine sampling results.

Ensure that customer connection activities are managed.

Oversee customer connection activities, such as:

- Performing routine customer meter reading
- Completing customer shut-offs/turn-ons (e.g., for nonpayment, customer vacancies, new connections)
- Identifying and addressing illegal connections
- Locating water mains for utility location requests
- Responding to and logging complaints

Ensure that a sanitary survey (source, treatment, distribution system) is conducted annually or as problems are identified.

Conduct annual or, if necessary, investigative sanitary survey (assessment) of water system, to include source, treatment and distribution.

- Promptly report any deficiencies to the owner/responsible official and arrange to take corrective action, as needed.
- Make note of any activities that may impact water quantity or quality or public water system operation, such as:
 - Potential sources of contamination,
 - Low source yield, and
 - Security breaches of the water system.

Ensure that one-hour notification is made to DEP as required.

Report to DEP within one hour when:

- A primary MCL or an MRDL has been exceeded or a treatment technique requirement has been violated under Subchapter B, K, L or M of 25 Pa. Code, Chapter 109. Safe Drinking Water.
- Circumstances exist which may adversely affect the quality or quantity of drinking water.

Water System Owner/Responsible Official Responsibilities

Water System Operator Responsibilities and Potential Operator Duties

Water System Operations, Water Quality Assurance and Regulatory Compliance (continued)

Ensure that follow-up actions are taken to respond to violations or circumstances adversely affecting the quality or quantity of drinking water.

Carry out follow-up activities to respond to violations or circumstances adversely affecting the quality or quantity of drinking water, within the required timeframe, such as:

- Collecting check samples if triggered by routine sample results
- Performing public notification
- Implementing emergency response plan
- Correcting significant deficiencies or sanitary defects

Ensure appropriate steps (as listed in the Emergency Response Plan) are taken to ensure that a continuous supply of safe and potable water is provided to customers (e.g., public notification, additional sampling, alternate water source, etc.).

Take appropriate steps (as listed in the Emergency Response Plan) to appropriately respond to an emergency (e.g., public notification, additional sampling, alternate water source, etc.).

- Attend all sanitary survey inspections conducted by the regulatory agency.
- Ensure that any deficiencies identified during a sanitary survey are corrected within regulatory time frames.

- Attend all sanitary survey inspections conducted by the regulatory agency. Provide any existing information that will enable the regulatory agency to conduct a sanitary survey.
- Correct deficiencies and address areas of concern within regulatory timeframes.

Water System Maintenance

Summary: Owners/responsible officials should ensure that repairs and improvements are performed properly and in a timely manner by responding promptly to operator reports of system conditions that are, or may cause, violations.

Summary: Water system operators may oversee operation and maintenance to maintain the safety and reliability of water service by ensuring that repairs and improvements are performed properly and in a timely manner. They also notify the owner/responsible official about any repair and improvement needs.

Ensure that appropriate equipment and materials are available for routine maintenance of the public water system.

- Maintain an adequate spare parts inventory (pipe, valves, hydrants, pipe restraints, small metering pumps, water meters, small meter and valve vaults with lids, etc.) and a list of supplier contact information.
- Secure labor and materials for correcting any maintenance or operational problems.
- Ensure storage tanks and well pumps and pads are in good working order.
- Perform basic housekeeping/maintenance activities:
 - Keep interior floors free of mud, debris, trash, etc.
 - Properly store equipment, tools, etc.

Water System Owner/Responsible Official Responsibilities

Water System Operator Responsibilities and Potential Operator Duties

Water System Maintenance (continued)

Ensure the public water system's infrastructure (distribution system) is maintained and in good working order.

Perform or oversee ongoing and preventative maintenance activities in the **distribution system**.

- Repair or replace broken/non-functioning hydrants and valves that do not close properly or have broken stems.
- Repair or replace mains or equipment, as necessary, to quickly and efficiently restore the normal level of service.
- Protect the distribution system against cross-connection contamination.
- Test and maintain water meters regularly.
- Exercise all hydrants and valves on a regular basis.
- Clean, flush, disinfect and test the distribution system and storage tanks, as needed.
- Locate and mark lines for PA One Call (811).

Ensure the public water system's infrastructure (water source, pumps, pumping stations and treatment facilities) is maintained and in good working order.

Perform or oversee ongoing and preventative maintenance activities related to **water source**.

- Maintain well or spring. Maintain intake.

Perform or oversee ongoing and preventative maintenance related to **pumps and pump stations**.

- Regularly lubricate pumps and motors.
- Observe pump motors routinely to detect unusual noises, vibrations or excessive heat.
- Inspect, adjust and clean pump seals, packing glands and any mechanical seals when necessary.

Perform or oversee ongoing and preventative maintenance activities related to **treatment facilities**.

- Maintain filters.
- Maintain chemical feed pumps.

Provide a safe working environment.

Water System Owner/Responsible Official Responsibilities

Water System Operator Responsibilities and Potential Operator Duties

Emergency / Security

Summary: Owners/responsible officials should work closely with the operator to prepare for and respond to emergencies in the short-term and support returning the system to normal operating status. They should also ensure that the facility is secure from vandalism.

Summary: Operators should work closely with the owner/responsible official to prepare for and respond to emergencies in the short-term and support returning the system to normal operating status. They should also conduct activities to help ensure that the facility is secure from vandalism.

Be fully informed about any emergencies. Ensure that one-hour notifications are made to DEP.

Ensure owner/responsible official is fully informed about any emergencies and that one-hour notifications are made to DEP.

Implement Emergency Response Plan when necessary. Ensure emergency service contracts are in place.

- Implement Emergency Response Plan as needed.
- Maintain emergency service contracts for after-hours water main repair, pump repair or replacement, and emergency generators.

Ensure that a mechanism for direct delivery of public notification is in effect.

Conduct or assist with direct delivery of public notification when necessary.

Ensure that a certified operator is always available to respond to an emergency.

- Be available at all times for emergency situations.
- Respond to actual emergencies to ensure a continuous supply of potable water and, if necessary, protection of public health through direct delivery of public notification.
 - Work with federal, state and/or local agencies (incident command center, when activated) until the emergency is resolved and the public water system returns to normal operation.
 - If unable to respond within the required timeframe, provide for an alternate appropriately certified operator who can respond to the actual emergency.

- Ensure facility is secure and invest in any necessary upgrades (e.g., fences around system facilities, locks, live or remote surveillance).
- Ensure that proper security practices are followed.

- Ensure facility is secured at all times. Maintain integrity of locked areas and conduct periodic inspections.
- Store chemicals in locked areas with proper containment and safety equipment.
- Ensure that security equipment (e.g., fences, closed-circuit TV systems, and cybersecurity for supervisory control and data acquisition [SCADA] systems) is in good working condition.

CONTRACT OPERATOR INTERVIEW TOOL

It is important to make sure that the operator you hire is a good match for your public water system, and that he/she has the knowledge and ability to ensure that safe drinking water is provided to your customers. The Operator Interview Tool can help you as you interview and select an operator for your public water system. It includes a list of recommended interview questions, as well as Yes/No checkboxes and spaces to write answers during the interview. You should review the Tool prior to performing the interview to ensure that you have a complete understanding of the questions. Beneath some questions is information that explains the intent of the question and can help guide your interview.

Part I – Operator License/Certification

1. Does the candidate possess the required level of certification for your system? Note the class and subclasses for which the candidate is certified and when the certification expires. Ask the candidate to provide you with a photocopy of his/her current license/certification.

<input type="checkbox"/> Yes <input type="checkbox"/> No	<ul style="list-style-type: none">• The potential operator must possess the required level of licensure/certification for your particular water system classification and should have experience operating similar types of treatment processes and distribution systems.• Check with your DEP Sanitarian to determine the class and subclass(es) required for your system.• The candidate should provide you with a photocopy of his/her current license/certification. If you have questions regarding the level or type (treatment, distribution or both) of license/certification required for your particular system, contact your DEP Sanitarian.• If you are unsure whether an operator’s license/certification is current, contact your drinking water operator certification program staff at Phone: 717-787-5236 or Email: RA-OperatorWebsite@pa.gov .
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Class and subclass of license/certification:

Expiration date of license/certification:

Notes:

Does he/she meet qualifications? Yes No

Part II – Operator Experience

2. Does the candidate have experience operating your type and size of system (treatment components)?

Yes

No

- An operator may possess the correct level of licensure/certification, but not possess experience compatible with your particular type of system. Does the operator have experience with your particular treatment technologies?

How many years of operating experience does the candidate possess?

Number of years:

Notes:

Does he/she meet qualifications? Yes No

3. Has the candidate completed the required "Securing Drinking Water and Wastewater Facilities" course?

Yes

No

- Will the candidate be able to determine water system vulnerabilities and employ measures to reduce risk of tampering, accidental or intentional contamination, or cybersecurity breach? Does the candidate understand and employ safety practices for chemical handling, storage, and application? Does the candidate understand and employ safety practices for pumps and appurtenances and other tasks required for operation (confined space entry, trenching and shoring, traffic control, etc.)?

Yes

No

Notes:

Does he/she meet qualifications? Yes No

4. What systems has the candidate worked for previously? Does the candidate have references?

- Ask for references, including contact information. Verify all references.

Systems Previously Worked For

Contact Information

Reference?

a.

a.

Yes

No

b.

b.

Yes

No

c.

c.

Yes

No

Previous work restrictions:

Notes:

Does he/she meet qualifications? Yes No

5. Has the candidate ever:			
a. Installed a meter?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
b. Disconnected a delinquent customer?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
c. Installed, maintained and repaired a chlorine feed pump?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
d. Prepared a Consumer Confidence Report (CCR) ⁴ ?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
e. Been in attendance for a regulatory sanitary survey inspection?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
f. Developed an Emergency Response Plan ⁴ ?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
g. Developed an Operation & Maintenance Plan ⁴ ?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
h. Provided public notification?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
i. Located and repaired a suspected leak?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
j. Located lines for PA One Call (marking to prevent damage to underground utilities)?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
k. Developed written Standard Operating Procedures?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
l. Developed site sampling plans and conducted routine monitoring?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
m. Conducted process control or compliance monitoring?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
n.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
o.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
p.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
q.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
r.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
s.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
Notes:			
Does he/she meet qualifications? <input type="checkbox"/> Yes <input type="checkbox"/> No			

6. Ask the candidate to describe the requirements of the Revised Total Coliform Rule (RTCR).

Notes:

- Review your system’s RTCR Sample Siting Plan with the candidate.
- Can the candidate tell you the steps he/she would take if notified by the lab of a total coliform positive sample?
- Has the candidate developed a site sampling plan, and is the candidate familiar with provisions for routine and repeat sampling?
- Can the candidate tell you when Public Notification must be issued and what the time frames are for an acute violation?
- Can the candidate tell you the triggers and time frame for a Level 1 or Level 2 Assessment?
- Can the candidate conduct a Level 1 or Level 2 Assessment?
- Can the candidate identify sanitary defects and recommend corrective actions?

Does he/she meet qualifications? Yes No

7. Ask the candidate to describe the requirements of the Surface Water Treatment Rules and/or Ground Water Rule, as applicable based on the public water system’s source water type(s).

Notes:

- Can the candidate tell you the monitoring and reporting requirements for the rule?
- Can the candidate tell you when monitoring results would indicate a regulatory violation and the steps they need to take to protect public health, make the appropriate notifications, and return to compliance?

Does he/she meet qualifications? Yes No

8. Ask the candidate to describe the process for putting a main back into service after a loss of pressure. Is the candidate familiar with the DEP *Policy for Determining When Loss of Positive Pressure Situations in the Distribution System Require One-Hour Reporting to the Department and Issuing Tier 1 Public Notification*?

Notes:

- Is the candidate familiar with the DEP Loss of Positive Pressure Policy⁵, AWWA Standard C-651, and the steps necessary to protect public health if there is a loss of positive pressure in the distribution system?

Does he/she meet qualifications? Yes No

9. Ask the candidate to explain when it is necessary to make a One-Hour Report to DEP and issue Public Notification.

Notes:

- Can the candidate tell you which situations at your water system may require a One-Hour Report and which situations may require a Tier 1 or Tier 2 Public Notification?

Does he/she meet qualifications? Yes No

10. Ask the candidate what type of regulatory self-reporting he/she believes is required for this system.

Notes:

- Does the candidate understand how to use the Drinking Water Electronic Reporting System and the importance of reporting accurately and on time? Does the candidate experience any monitoring/reporting violations at water systems he/she manages? If so, how are these handled?

Does he/she meet qualifications? Yes No

⁵For a copy of the *Policy for Determining When Loss of Positive Pressure Situations in the Distribution System Require One-Hour Reporting to the Department and Issuing Tier 1 Public Notification*, visit www.elibrary.dep.state.pa.us and search for Document 383-2129-004.

Part III – Availability

11. Which other system(s) does the candidate currently work for and are there any work restrictions?

- Ask to see the General Work Plan, which includes the name and location of all systems currently employing the candidate, as well as the time spent at each system.

System Name	Location	Compliance Status

Work restrictions:

How much time does the candidate spend at the other water systems per week?

Hours per week:

Notes:

Does he/she meet qualifications? Yes No

12. How often will the operator visit the water system? What personnel will visit the water system?

Number of hours per visit:

Number of visits per week:

Will the visits be the same day each week or on random days?

Same Day Each Week Random days

Is there a backup operator that can manage the system in his/her absence?

Yes No

How does the candidate address weekends, holidays, vacations and illnesses?

Notes:

Who will be conducting the on-site visits?

Candidate Only Appropriately Certified Operator from Company Personnel working under standard operating procedures (SOPs) approved by Operator-in-Responsible-Charge

Notes:

Will you be able to provide names and picture IDs for all personnel visiting the plant (for security purposes)?

Yes No

Notes:

13. How quickly will the candidate be able to respond to an emergency?

Estimated response time to be physically present in an emergency:

- An appropriately certified operator must be available to make all process control decisions during all periods of system operation.

Notes:

Does he/she meet qualifications? Yes No

Part IV – Tasks Performed

14. Does the candidate have a standard Operation & Maintenance (O&M) strategy for each system he/she operates?

Yes No

Can the candidate provide an example of an O&M plan he/she has completed for a similar system?

Yes
 No

What specifically will be checked and recorded at the treatment plant during each visit?

- See the list of “Potential Operator Duties” starting on page 4 which identifies possible duties to discuss with the candidate.

Can the candidate provide an example of an operational log sheet that he/she has completed for a similar system?

Yes
 No

Can the candidate perform required operational testing (including routine equipment calibration)?

Yes
 No

Will the candidate provide the necessary testing equipment and reagents, or must the water system provide the equipment?

Candidate
 Water system

Can the candidate conduct basic troubleshooting and perform repairs and routine maintenance as needed?

Yes
 No

- It is desirable for the operator to be capable of performing operational testing and routine mechanical and electrical maintenance. This may provide cost savings versus hiring additional commercial services for testing and maintenance. However, commercial services and/or consulting engineering services may be required for maintenance that is more complex or to troubleshoot operational problems.

Does he/she meet qualifications? Yes No

15. Provide the candidate with a copy of the water system permit(s) (or Brief Description Form for Noncommunity Water Systems). Is he/she familiar with the permit special conditions and regulatory requirements for this system type and size?

Yes No

Notes:

Part V – Other Qualifications and Information

16. Does the candidate carry adequate liability insurance?

Yes
 No

- This helps protect the owner from potential lawsuits in case the contractor or a contractor's employee is injured.
- The owner may want to ask the contract operator to have the insurance company name the utility as an additional insured party.

Does the insurance cover personal injury and claims for bodily injury, death or personal property damage that may arise from the operation of the system?

Yes No

If yes, how much coverage and with which insurance company?

Coverage Amount:

Insurance Company Name:

Notes:

Does he/she meet qualifications? Yes No

17. Does the candidate have a tax identification number?

Yes
 No

Does he/she meet qualifications? Yes No

18. Does the candidate have a valid driver's license?

Yes No

Does the candidate have a license appropriate to the vehicle that he/she will use for the job?

Yes No

Are there any license restrictions?

Yes No

Notes:

Does he/she meet qualifications? Yes No

19. What is the candidate's fee and what does it include?

Fee:

Activities included:

Is time charged for travel or only for time spend on site?

Time for travel and on site Time on site

Is there an additional charge for after-hours or emergency visits?

Yes No

Notes:

Does he/she meet qualifications? Yes No

20. Is the candidate part of a group (company), or is he/she an independent operator?

Group (company): _____

Independent

Notes:

Does he/she meet qualifications? Yes No

Topics for the Written Agreement with the Operator – Developing Terms of a Contract

It is important for owners/responsible officials to clearly document the expectations of the operator in the form of a written agreement, such as a contract or terms of employment. This type of documentation helps ensure that all legal responsibilities are met and reduces the possibility for miscommunication about water system responsibilities.

The owner/responsible official is responsible for insuring all process control decisions are made by a properly-certified available operator. This operator does not necessarily need to be on-site all the time. For practical purposes, there are a number of ways an owner/responsible official can comply with this requirement by hiring a contract operator (circuit rider), including:

- **Hire a contract operator (also known as a circuit rider) to fully operate the system.**
- **Designate an operator-in-responsible-charge who develops standard operating procedures (SOPs) for use by non-certified or other certified operators working at the system. These procedures must also define when an available operator must be contacted.**
- **Install a Programmable Logic Control (PLC) or Supervisory Control and Data Acquisition System (SCADA) to be used in combination with an appropriately certified operator.**

For contract operators (also known as Circuit Riders), additional documentation is required in the form of a General Work Plan and a System Specific Management Plan. Templates are provided in the *Drinking Water and Wastewater Systems Operator Certification Program Handbook*. Visit www.elibrary.dep.state.pa.us and search for Document 391-2300-001.

The Drinking Water and Wastewater Systems Operators' Certification Act and the EPA guidelines do not distinguish between the roles of an available operator and an operator-in-responsible-charge. Chapter 302 regulations, the *Administration of the Water and Wastewater Systems Operator Certification Program*, make a distinction between the two types of certified operators by requiring the operator-in-responsible-charge to approve any standard operating procedures developed for the system. If the system does not choose to use standard operating procedures as one method to ensure compliance with the requirement that all process control decisions be made by a certified operator, there is no need to designate an operator-in-responsible-charge. You should also note that designating an operator-in-direct-responsible-charge of your system does not transfer any of your legal responsibilities as an owner/responsible official for the public water system. The Water and Wastewater Systems Operators' Certification Act requires the owner/responsible official to notify DEP in writing, within 10 calendar days, of the addition, loss, change, or replacement of any available operator(s).

Once you have made the decision to contract with an operator, you may want to consider including the topics on the following pages in a written agreement. Your contract operator (circuit rider) should also provide you with a General Work Plan and a System Specific Management Plan. The elements of each of these plans are also described on the following pages.

Please note that this information is provided only as a guide. You should seek your own legal counsel to advise you on any contract or legal matters for your drinking water system.

Topics for Written Agreement with the Operator

Parties Involved

Name and address of operator.

Licenses/certifications held by operator.

Public water system name and address.

Description of the Water System

Provide a brief description of the public water system. Indicate the number of service connections, the type of treatment present, information about the water source, etc.

Purpose of the Written Agreement/Contract

The purpose statement can include goals, such as delivering safe drinking water to customers, protecting public health and complying with state and federal requirements.

Include a detailed scope of work for the written agreement/contract.

Contract Duration

Provide the effective starting date and the effective termination date of the contract.

List provisions to renew the contract.

Document an agreement of termination (by either party) by advanced, written notice of a specified number of days. Include conditions for termination, such as falsification of records by the operator, enforcement action by the licensing/certification or regulatory agency, or failure of the owner/responsible official to respond to a report by the operator of a known or potential violation.

Compensation

Compensation covers how much the operator will be paid for his/her services.

This may include a detailed fee structure for the contract. Depending on how the contract is structured, be aware that there may be additional fees for certain situations, such as emergency call services.

Specify a payment method. Consider things such as who will make the payments and whether or not the contractor will submit monthly invoices.

Operator Time

The owner/responsible official and operator should jointly designate the number of routine visits and the minimum number of hours spent per day, per week or per month at the public water system.

The owner/responsible official and operator should also jointly determine the maximum acceptable response time when responding to an emergency or to troubleshoot operational problems. The acceptable response time may vary depending on the treatment components and distribution system of the particular water system, remoteness of system and the nature and severity of the problem. Be cognizant of regulatory requirements pertaining to notification, emergency response, and operator availability.

Topics for Written Agreement with the Operator

Owner/Responsible Official and Operator Duties and Responsibilities

List duties and the frequency that each duty is to be performed by the operator. Information included in the list of **“Water System Operator Responsibilities and Potential Duties”** in this document can help you develop this section of the written agreement so that operator duties and owner/responsible official duties and responsibilities are clearly defined and documented.

The operator is responsible for maintaining a valid license/certification that is equal to or greater than the classification of the public water system being served.

The operator should take continuing education training courses on topics relevant to the facility (e.g., based on distribution or treatment characteristics).

The operator should annually provide a photocopy of his/her renewed operator’s license/certification to the owner/responsible official of the public water system, and upon renewal of the contract.

The operator is also responsible for providing a licensed/certified substitute operator during those times when the system is in operation and he/she is not available or is inaccessible. The substitute operator should also provide the owner/responsible official with a current photocopy of his/her license/certification.

The operator is responsible for maintaining adequate records to document that all agreement provisions are being met and to assure that the agreed-upon duties are performed. This can include a log that will document tasks accomplished. These records will be kept at the system and available to the owner/responsible official at all times.

The operator is responsible for having telephone numbers, email addresses or other relevant means of communication on behalf of the owner/responsible official. The owner/responsible official is responsible for having telephone numbers, email addresses or other relevant means of communication on behalf of both the designated operator and any substitute operators.

The operator is responsible for informing the owner/responsible official of any duties performed by a subcontractor at the site. They should be given prior approval by the owner/responsible official.

The owner/responsible official will notify the operator of any unplanned operational problems, repairs or modifications that arise in the operator’s absence.

The operator and owner/responsible official are jointly responsible for providing a safe working environment.

Insurance

Specify whether the contract operator will provide comprehensive general liability insurance to cover bodily injury and property damage resulting from negligent performance of the service covered in the contract. The owner/responsible official is responsible for providing a safe working environment and should have his/her own insurance.

The contract operator should provide a copy of proof of insurance to the owner/responsible official.

Signatures of all Parties Involved

The agreement should be signed by all parties, including the owner/responsible official and the operator.

In cases where the contractor is a firm or company, an official of the firm or company employing the operator should also sign the agreement.

The following provides additional guidelines for the General Work Plan and System Specific Management Plan that need to be prepared by contract operators (circuit riders) and provided to you as the owner/responsible official.

Elements of a General Work Plan and System Specific Management Plan

Refer to Appendix F of the

Drinking Water and Wastewater Systems Operator Certification Program Handbook for a Template

General Work Plan Should Include:

Name and location of circuit rider business

Name and location of all water systems that operator is serving as an available operator or operator-in-responsible-charge

Class and Subclass requirements for each water system the circuit rider operates

Class and Subclass certifications held by certified operator

The number of estimated hours per week the circuit rider works at each system (time physically present at a system; not including travel time), with the method of documentation to be used for each visit

System Specific Management Plan Should Include:

The names and contact information of the available operators for that system, with a copy of the operators' certificates to be prominently displayed at the system

The standard operating procedures and a process control plan for the system

The name and method of contacting the circuit rider in case of an emergency

An estimate of the response time needed to be physically present at the system

ADDITIONAL STATE CONTACTS AND RESOURCES

Need help finding information on drinking water system issues?

Drinking Water Information	Website Links
Operator Training and Technical Assistance	http://www.dep.pa.gov/Business/Water/BureauSafeDrinkingWater/OperatorCertification or www.dep.pa.gov Search "Operator Certification"
Drinking Water Division – Regulatory information, water quality reporting	http://www.dep.pa.gov/Business/Water/BureauSafeDrinkingWater/DrinkingWaterMgmt or www.dep.pa.gov Search "Drinking Water"
Capability Enhancement Program - Technical, Managerial and Financial Assistance; Professional Engineering Services	http://www.dep.pa.gov/Business/Water/BureauSafeDrinkingWater/CapabilityEnhancement or www.dep.pa.gov Search "Capability Enhancement Program"
Operator Outreach Assistance	http://www.dep.pa.gov/Business/Water/BureauSafeDrinkingWater/Pages/OperatorOutreach.aspx or www.dep.pa.gov Search "Operator Outreach"
Consumer Confidence Reports (CCRs)	http://www.dep.pa.gov/Citizens/My-Water/PublicDrinkingWater/Pages/Consumer-Confidence-Reports.aspx or www.dep.pa.gov Search "CCR"
Public Notification	http://www.dep.pa.gov/Citizens/My-Water/PublicDrinkingWater/Pages/Public-Notification.aspx or www.dep.pa.gov Search "Public Notification"
State Revolving Loan Fund - Infrastructure Finance	http://www.dep.pa.gov/Business/Water/PointNonPointMgmt/InfrastructureFinance/Pages/default.aspx or www.dep.pa.gov Search "Infrastructure Finance"
<i>Drinking Water and Wastewater Systems Operator Certification Program Handbook</i>	http://www.elibrary.dep.state.pa.us/dsweb/Get/Document-94656/391-2300-001.pdf or www.elibrary.dep.state.pa.us Search "391-2300-001"
Operation & Maintenance Plan Template	http://www.elibrary.dep.state.pa.us/dsweb/View/Collection-12477 or www.elibrary.dep.state.pa.us Search "3900-FM-BSDW0301"
Emergency Preparedness	http://www.dep.pa.gov/Business/Water/BureauSafeDrinkingWater/EmergencyPreparedness/Pages/default.aspx# or www.dep.pa.gov Search "Emergency Preparedness"
Emergency Response Plan Template	http://www.elibrary.dep.state.pa.us/dsweb/View/Collection-8776 or www.elibrary.dep.state.pa.us Search "3900-FM-BSDW0300"
Drinking Water Information System	http://www.drinkingwater.state.pa.us/dwrs/HTM/Welcome.html
Earthwise Academy	http://www.earthwise.dep.state.pa.us/edu/
Asset Management	https://www.epa.gov/sustainable-water-infrastructure/asset-management