

Water Management Guide for Facility Managers

Handbook AS-554-A

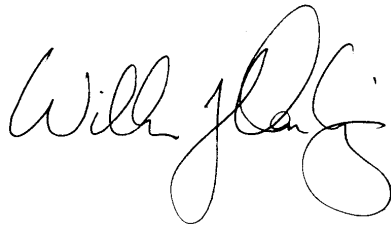
March 2000
Transmittal Letter 1

- A. Purpose.** The United States Postal Service is committed to providing its employees and customers with a safe and healthy environment and complying with applicable environmental laws and regulations. This handbook is intended to be used as a water management reference tool for Postal Service facility and site managers. This handbook provides guidance to Postal Service facility and site managers to define, implement, and monitor an efficient and cost-effective water management program.
- B. Disclaimer.** Handbook AS-554-A, *Water Management Guide for Facility Managers*, is only intended to enhance the internal management of the Postal Service and is not intended to, nor does it, create any right, benefit, or trust responsibility, substantive or procedural, enforceable at law or equity by any party against the United States Postal Service. These are not Postal Service regulations; they concern internal procedures and practices that do not affect individual rights and obligations, and they do not create any right to judicial review involving compliance or noncompliance with the procedures established by this handbook.
- C. Contents.** This handbook presents water management issues and provides guidance on water issues that are relevant to the Postal Service. It also outlines practices that are either required or recommended for the management of water at a postal facility. This handbook discusses the following key water issues: water sources, water distribution systems, water use, collection system components, wastewater treatment systems, and pollution prevention.
- D. Revisions.** This handbook will be revised to modify water program policies and strategies as needed to reflect new legislation and regulations.
- E. Distribution.** This handbook is being distributed on the Postal Service Intranet at <http://blue.usps.gov/environmental>.

F. Comments and Questions. If you need further clarification of the procedures outlined in this handbook, send your request to:

MANAGER
ENVIRONMENTAL MANAGEMENT POLICY
UNITED STATES POSTAL SERVICE
475 L'ENFANT PLAZA SW
WASHINGTON DC 20260-2810
(202) 268-5595

G. Effective Date. These instructions are effective immediately.



*William J. Dowling
Vice President
Engineering*

Contents

Chapters

1	Introduction	1-1
1-1	Purpose	1-1
1-2	Postal Service Environmental Protection Policy	1-2
1-3	Supporting Structure	1-3
1-4	Water Cycles	1-3
1-5	Water Issues	1-4
1-6	Leadership Role and Facility Manager’s Responsibilities	1-4
2	Water Sources	2-1
2-1	Public Water Supply Systems	2-1
2-2	Self-Supply Water Systems	2-2
3	Water Distribution Systems	3-1
3-1	Typical Distribution Components	3-1
3-2	Cross-Connection	3-1
3-2.1	Causes of Backflow	3-2
3-2.2	Cross-Connection Control	3-2
3-2.3	Control Measures	3-2
4	Water Use	4-1
4-1	Drinking Water	4-1
4-2	Domestic Water	4-2
4-3	Process Water	4-3
4-4	Vehicle Wash Water	4-3
4-5	Irrigation Water	4-4
4-6	Water Conservation	4-4
4-6.1	Conservation Methods	4-5
4-6.2	Water Utility Bill Monitoring	4-5



5	Collection System Components	5-1
5-1	Employee Awareness	5-1
5-2	Sand and Oil/Water Separators	5-1
5-3	Grease Traps	5-2
5-4	Lift Stations	5-2
5-5	Battery Rooms	5-3
5-6	Stormwater	5-3
6	Wastewater Treatment Systems	6-1
6-1	Publicly Owned Treatment Works	6-1
6-2	On-Site Wastewater Treatment Systems	6-2
6-2.1	Septic Systems	6-2
6-2.2	Package Plants	6-2
6-3	Treatment of Process Water	6-3
7	Leadership Role	7-1
7-1	Pollution Prevention	7-1
7-1.1	Goals	7-1
7-1.2	Best Management Practices	7-2
7-1.3	Vehicle Maintenance Facilities	7-2
7-1.4	Fueling Operations	7-2
7-1.5	Storage Areas	7-3
7-1.6	Groundwater	7-3
7-1.7	Snow and Deicing	7-3
7-1.8	Spills	7-4
7-1.9	Elimination of Targeted Chemicals	7-4
7-2	Siting	7-5
7-3	Education and Outreach	7-5
8	Facility Manager's Responsibilities	8-1

Appendix

A	Glossary of Terms and Acronyms	A-1
---	--------------------------------------	-----



Exhibits

Exhibit 1-4 Water Cycles	1-6
Exhibit 2-1 Water Sources: Public Water Supply Systems	2-3
Exhibit 2-2 Water Sources: Self-Supply Systems (Wells, Springs, Cisterns)	2-4
Exhibit 3-2.2 Water Distribution Systems: Facility Cross-Connection Control Program	3-4
Exhibit 3-2.3 Water Distribution Systems: Backflow Prevention Devices	3-5
Exhibit 4-6 Water Use: Water Conservation	4-6
Exhibit 5-1 Sink Posting	5-4
Exhibit 5-2 Collection System Components: Sand and Oil/Water Separators and Grease Traps	5-5
Exhibit 5-6 Collection System Components: Stormwater	5-6
Exhibit 6-1 Wastewater Treatment Systems: Publicly Owned Treatment Works	6-4
Exhibit 6-2.1 Wastewater Treatment Systems: On-Site Wastewater Treatment Systems	6-5
Exhibit 7-1.3 Pollution Prevention: Stormwater Systems	7-6
Exhibit 7-1.6 Pollution Prevention: Groundwater	7-7
Exhibit 7-1.8 Pollution Prevention: Spills	7-8



1 Introduction



With approximately 750,000 employees at 38,000 facilities, the United States Postal Service uses billions of gallons of water per year at a cost of tens of millions of dollars. This water is used in a variety of postal operations including:

- Personal uses — drinking, washing, toilet flushing.
- Facility uses — equipment cleaning, vehicle washing, facility cleaning.
- Operational uses — irrigation, cooling water supply.
- Emergency uses — fire protection.



The annual water bill for the Postal Service is in the tens of millions of dollars.

1-1 Purpose

As a Postal Service facility manager, you are responsible for managing facility operations both efficiently and cost-effectively. Efficient management of the water used at your facility and the resulting lower costs make good business sense. The purpose of this guide is to present water management issues and guidance on water issues that are relevant to the Postal Service.



Water issues are constantly changing. As a facility manager, you must stay informed about these dynamic situations.

This guide is designed to be a reference for you. It also outlines practices that are either required or recommended for the management of water at your facility. The guide is structured to help direct you through these various water-related issues. Information in the sidebars emphasizes key points. This information includes:



Notes



References



Actions



Policies



Tips



Checklists



Summaries



Definitions





You can make a difference by:

- Reducing costs associated with water consumption.
- Reducing the risk of transporting contaminants.
- Minimizing potential health and safety hazards for employees.
- Ensuring compliance with regulations.

In keeping with the Postal Service's *CustomerPerfect!* program, the Voice of the Business, the Voice of the Customer, and the Voice of the Employee provide an overall framework for developing and implementing leadership roles in water-related issues and activities that comply with regulations. The integration of water conservation issues into the *CustomerPerfect!* program is shown as follows:

- Voice of the Business:
 - Cost savings.
 - Compliance with regulations.
- Voice of the Customer:
 - Preservation of water as a natural resource through pollution prevention, waste reduction, recycling, and reuse.
 - Enhanced public image for environmental sensitivity.
- Voice of the Employee:
 - Enhanced drinking water quality.
 - Safe and healthy work environment.

1-2 **Postal Service Environmental Protection Policy**

The Postal Service is committed to providing employees and customers with a safe and healthy environment. Environmental protection is the responsible thing to do and makes for sound business practices. The Postal Service developed seven guiding principles, presented in *Postal Bulletin* 21843, that address the Postal Service's commitment to a comprehensive environmental policy. These guiding principles of the Postal Service are to:

- Meet or exceed all applicable environmental laws and regulations in a cost-effective manner.
- Incorporate environmental considerations into the business planning processes.
- Foster the sustainable use of natural resources by promoting pollution prevention, reducing wastes, recycling, and reusing materials.
- Expect every employee to take ownership and responsibility for our environmental objectives.
- Work with customers to address mutual environmental concerns.
- Measure our progress in protecting the environment.
- Encourage suppliers, vendors, and contractors to comply with similar environmental protection policies.



Proper water management is guided by the first four principles listed above. By following these principles, the Postal Service can be an environmental leader in the area of water resources.

1-3 **Supporting Structure**

The Postal Service has created a support system to help you make informed decisions regarding environmental issues. A district environmental compliance coordinator (DECC) is available in each district to assist you in implementing environmental programs and complying with applicable federal, state, and local regulations. Area environmental compliance coordinators (AECCs) work together with DECCs to establish consistent environmental policies and programs throughout the Postal Service.

The facilities service office (FSO), major facilities office (MFO), and the district Administrative Support unit provide assistance with maintenance, repairs, and operation of facilities. The facilities environmental specialists (FESs) can also provide assistance with facility-related issues.

In addition, safety and maintenance support structures exist to assist you in addressing specific issues. The Maintenance Technical Support Center (MTSC) can provide further information on maintenance-related issues. The National Center for Employee Development (NCED) is available to you for training and assistance on water-related issues.



A support structure exists to assist you in the proper handling of water-related issues. This structure includes the following support personnel and groups:

- DECC.
- AECC.
- FSO, MFO, and Administrative Support.
- FES.
- Safety officer.
- Maintenance manager.
- MTSC.
- NCED.

1-4 **Water Cycles**

An understanding of water cycles is key to effective water management at your facility. There are two types of water cycles: hydrologic cycle and facility water cycle. The hydrologic cycle describes the movement of water from the oceans, to the atmosphere, to the land, and back to the sea. The facility water cycle addresses water flow to, from, and within a postal facility and includes five basic components:

- Water sources that provide water to the facility.
- Water distribution at the postal facility.
- Water use within the facility.
- Stormwater and wastewater collection and discharge.
- Wastewater treatment.

The hydrologic and facility water cycles are illustrated in Exhibit 1-4.



SUM The following key water issues are discussed in detail:

- Water sources:
 - Public water supply systems.
 - Self-supply systems.
- Water distribution systems:
 - Facility cross-connection control program.
 - Backflow prevention devices.
- Water use: water conservation.
- Collection system components:
 - Sand and oil/water separators and grease traps.
 - Stormwater.
- Wastewater treatment systems:
 - Publicly owned treatment works.
 - On-site wastewater treatment systems.
- Pollution prevention:
 - Stormwater systems.
 - Groundwater.
 - Spills.

1-5 Water Issues

Chapters 2 through 7 of this guide present the most relevant information on water-related issues and give a general discussion about these issues as related to the Postal Service. The guide includes flowcharts that illustrate selected topics and serve as decision trees in certain cases. These flowcharts are included in the implementation portion of the exhibits and are intended to assist you to:

- Understand the water-related issues.
- Assess the need for action to comply with regulations or implement cost efficiencies.
- Identify the Postal Service technical and administrative personnel who can provide support or assume responsibility for the problem.

The exhibits can help you develop information to make informed decisions and develop plans to make improvements. They present supplementary information on:

- Recordkeeping.
- Laws and regulations.
- Benefits.
- Issues.

1-6 Leadership Role and Facility Manager's Responsibilities

The Postal Service is committed to being a good environmental neighbor. In fact, the Postal Service is a leader in environmental issues among government agencies and large businesses. Through our pollution prevention program, siting practices, and education and outreach program, the Postal Service is demonstrating our environmental stewardship. Leadership issues and roles are summarized in Chapter 7.

In fulfilling this leadership role, you have a responsibility for regulatory, environmental, health and safety, and economic issues related to water. Generally, you have a responsibility to ensure safe drinking water, comply with water regulations, reduce the risk of transporting contaminants, and reduce costs associated with water consumption. An overview of your responsibilities is presented in Chapter 8. Specific questions on water-related issues should be directed to the DECC or other support personnel or groups, such as safety and maintenance.



You are responsible for the following:

- a. Coordinating with DECCs, FSOs, MFO, Administrative Support, and facility personnel to ensure that appropriate permits are obtained and maintained.
- b. Providing information to DECCs, FSOs, MFO, and Administrative Support, as requested, for evaluation of compliance with permits and their requirements.
- c. Carrying out the procedures in this guide to obtain the appropriate permits and payment of permit fees.
- d. Complying with Postal Service goals and policies related to permit requirements.

You are ultimately responsible for all water permitting requirements, whether the facility is owned or leased. If you occupy a rented facility, you should never assume that the owner is responsible for a requirement and that you are therefore exempt from it. You should always consult the DECC if you have any questions concerning who will handle a particular environmental permitting requirement.

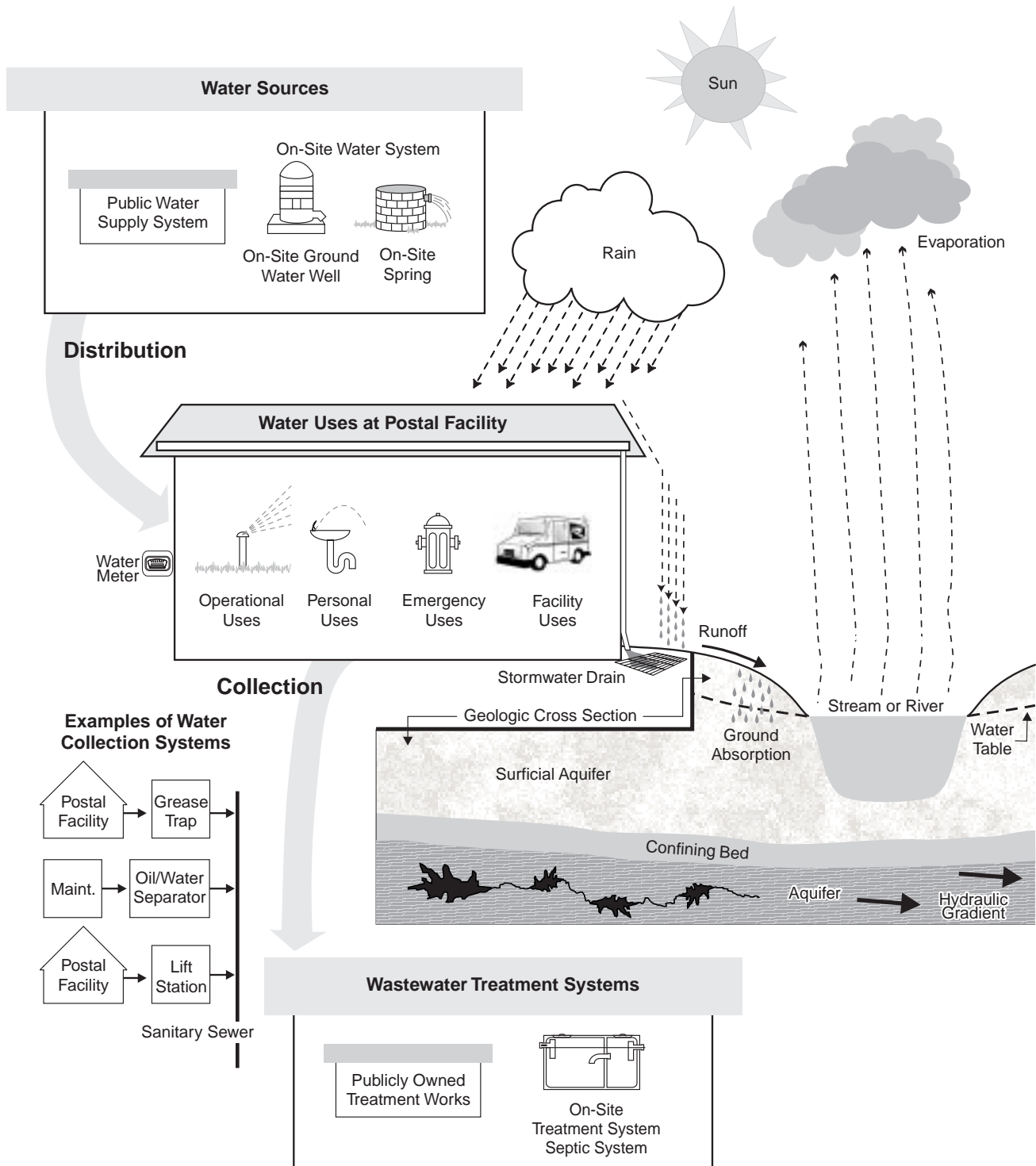


Handbook
AS-554-D, *Water
Permitting Guide*,

provides detailed
information about permitting
requirements and postal
responsibilities.



Exhibit 1-4
Water Cycles



2 Water Sources



Water used for drinking and other domestic uses is called potable water. Water used for irrigation and industrial processes commonly does not need to be as high a quality as potable water. However, the water supplied to a facility usually comes from a single source. That source must meet drinking water quality standards to be safe and reliable for public consumption. There are commonly two sources of water supply: public water supply systems and self-supply water systems.



Potable water is water that is safe for human consumption.

2-1 Public Water Supply Systems

Public water supply systems, in general, are those city, county, state, or investor-owned systems that provide water supply to the public. Those systems serving 25 or more people must meet water quality standards, must be routinely monitored, and must have a permit from local or state environmental and water management agencies.

Public water is a reliable source of drinking water that is protected by the Safe Drinking Water Act (SDWA). In rare cases, accidents may occur that could threaten the quality and quantity of the supply. When an emergency situation occurs, the public water supply system will issue notices on water bills or in the local media to warn the public about using the water. Stay informed about public water quality or supply so that you can take the necessary timely actions to inform postal employees and patrons about an emergency.

Use Exhibit 2-1 to help you assess whether or not the public water supply system is reliable for use by employees and the public. The information includes recommended best management practices (BMPs) for these systems and support personnel or groups to contact for further information.



You should post notices from the water utility about all current water quality problems and remove all out-of-date notices.



2-2 Self-Supply Water Systems



Self-supply water systems use on-site water sources such as wells, springs, and cisterns.

Self-supply water systems use on-site water sources such as wells, springs, and cisterns for potable water supply. Self-supply systems may have to be registered with the local public health department as a public water system. This occurs if the system has the addition of any treatment (excluding water softeners and in-line filters at point sources such as sinks and water fountains) to the water supply and provides water to either of the following:

- 25 or more users.
- 15 or more service connections.

Self-supply water systems can often be affected by nearby sources of contamination; therefore, routine monitoring and testing of the self-supply must be performed to ensure that the water quality meets primary and secondary drinking water standards. Primary drinking water standards specify those contaminants that may have any adverse effect on public health. Secondary drinking water standards specify other factors, such as odor and appearance of water, to protect public welfare.



Check whether or not your self-supply water system is subject to SDWA requirements.

Be aware of water quality standards and monitoring requirements for self-supply systems. For specific requirements on registration, periodic sampling, monitoring, and compliance issues of self-supply water systems, contact your safety officer and DECC. Use Exhibit 2-2 to determine what actions should be taken to maintain a safe and reliable source of water from a self-supply system. The information includes applicable regulations such as the SDWA and BMPs associated with self-supply systems. The exhibit also indicates which support personnel or groups you should contact for further information.

Additional discussion on water quality is found in section 4-1, Drinking Water.



Water Sources: Public Water Supply Systems

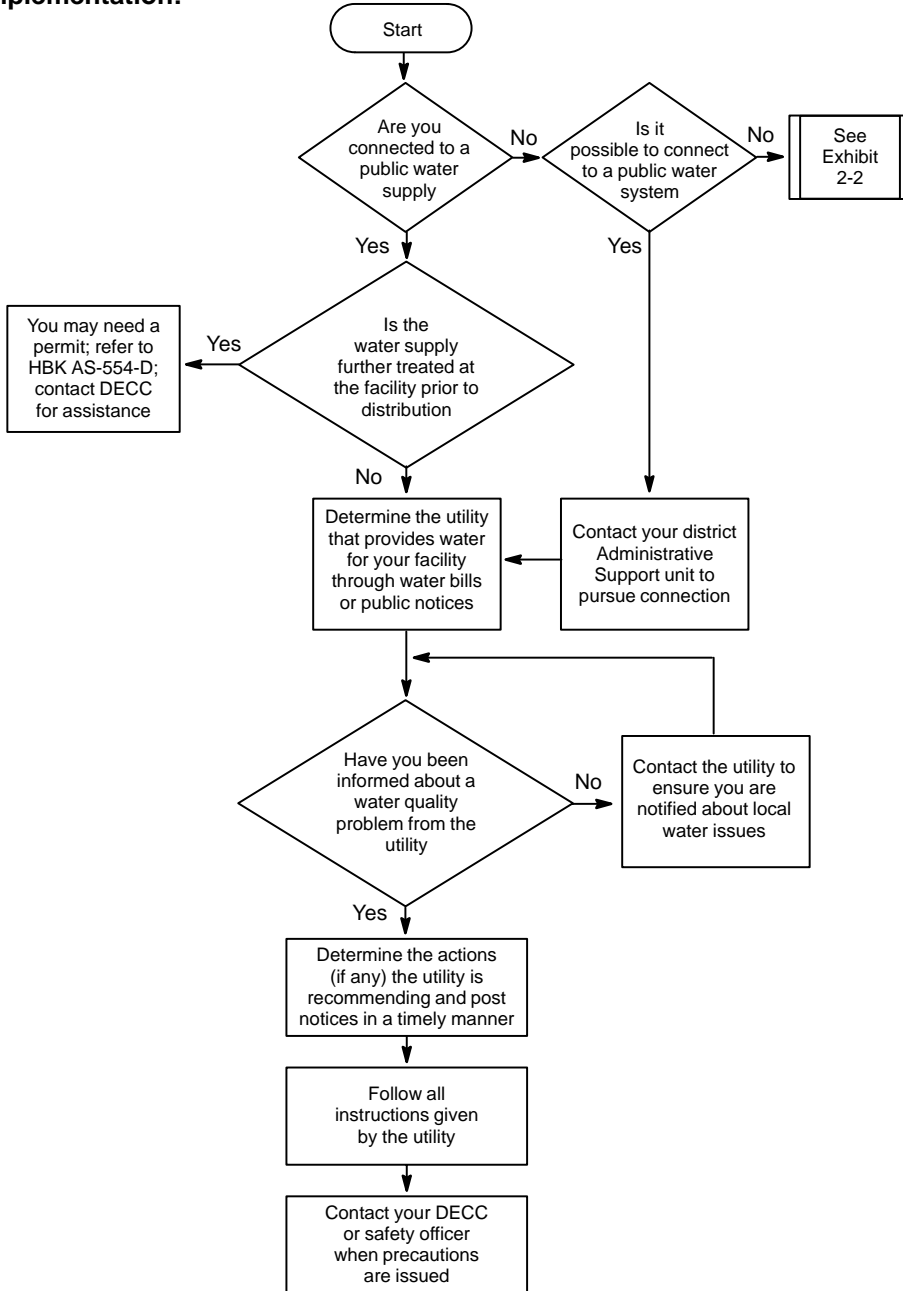
Water Issue:

Public water supply systems must meet SDWA requirements.

Goal:

Protect the health and safety of customers and employees.

Implementation:



Public Water Supply System

Recordkeeping:

- Water bills.
- Public notices regarding problems with the public water supply system.

Laws and Regulations:

- SDWA.
- Occupational Safety and Health Administration (OSHA).

Benefits:

Protects the health and safety of employees and customers.

Issues:

- Requires funding to find alternative water sources if the public water supply is unusable.
- Requires staying informed about current local water issues.



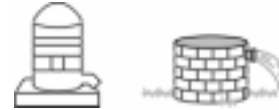
Water Sources: Self-Supply Systems (Wells, Springs, Cisterns)

Water Issue:

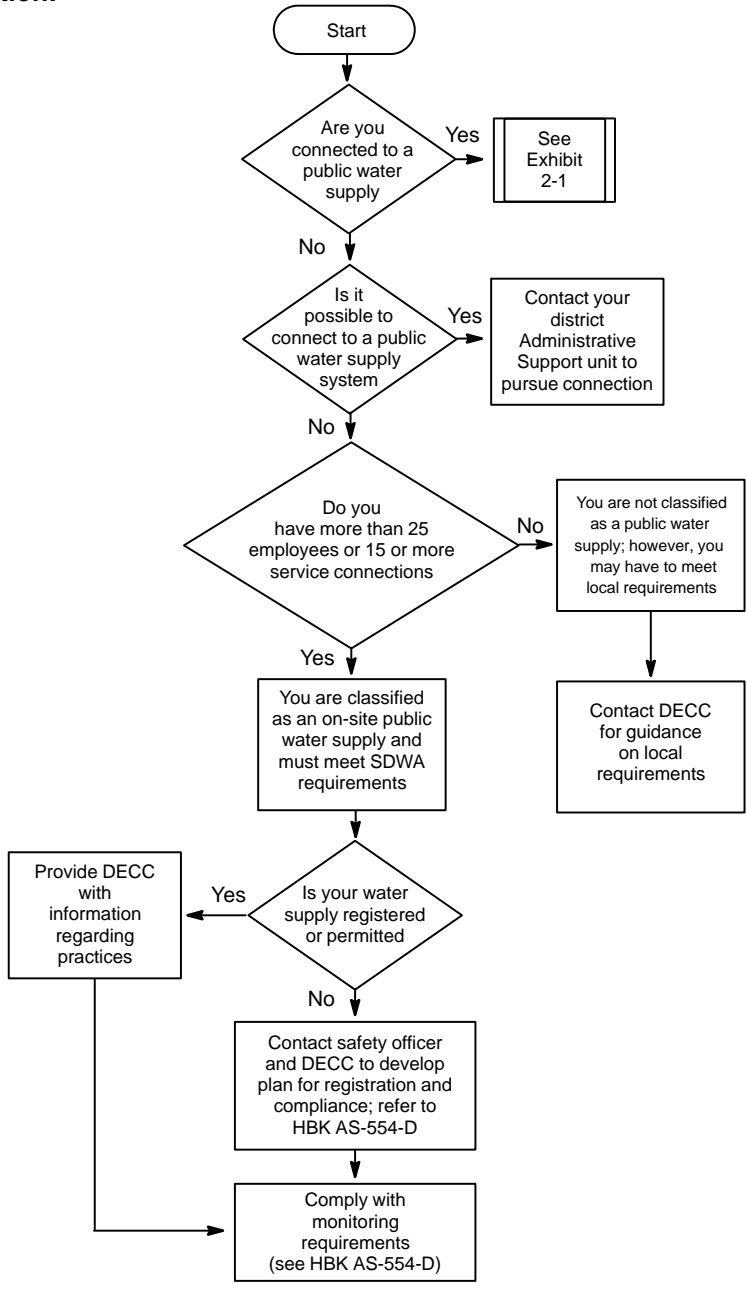
Self-supply systems may be regulated under SDWA and/or federal, state, and local agencies.

Goal:

Comply with regulations.



Implementation:



Recordkeeping:

- Public water supply registration.
- Sampling results.

Laws and Regulations:

- SDWA — Primary and secondary drinking water regulations.
- OSHA standards.

Benefits:

- Ensures safe drinking water supply.
- Avoids fines and penalties.

Issues:

- May require certified operators.
- May be less reliable and thus present higher health and safety risks.
- May have maintenance costs associated with maintaining the self-supply system. These costs may include monthly testing, record-keeping, and other costs.



3 Water Distribution Systems



Potable water, regardless of its source, is distributed to and throughout the facility by a network of pipes. The distribution system also includes a system of valves and backflow prevention (BFP) devices. This system must be properly maintained to avoid wasting water through leaks or contaminating the water by cross connecting potable water pipes with wastewater pipes.

3-1 Typical Distribution Components

Water distribution systems within a postal facility typically consist of piping, meters, valves, and BFP devices. The piping systems are commonly made of steel, cast iron, copper, cement, or plastic. BFPs are installed in the piping systems to prevent a reversal in the normal direction of water flow that would cause contamination of drinking water. BFPs are usually installed at the service connection located directly downstream of the meter at the facility property line. Individual meters may be installed for separate facility uses such as irrigation, potable water, and fire service connections. Each of these meters may also have a separate BFP.

3-2 Cross-Connection

Contamination of the potable water supply can occur if the potable distribution system is inadvertently linked or cross-connected to a system of lower water quality. Cross-connection is an arrangement of the distribution system whereby the potable water supply is connected, directly or indirectly, to a nonpotable water supply that may contaminate the potable water supply as a result of backflow. Cross-connections typically occur at the following locations in a postal facility:

- Utility sinks.
- Boilers and chillers.
- Fire protection systems.



Cross-connection is any unprotected connection between any part of a potable water system and any part of a system containing water or substances not safe for human consumption. Cross-connection is commonly caused by changing pipe configurations without proper inspection.



3-2.1 Causes of Backflow

Backflow may be caused by accidents or unexpected circumstances such as:

- **Back Siphonage.** Back siphonage is caused by reduced or negative pressure created in the supply piping. Common causes of back siphonage include pipe repairs or breaks, undersized pipe, or low water pressure due to high water withdrawal from firefighting and water main breaks.
- **Back Pressure.** Back pressure may occur when a potable water pipe is inadvertently connected to a pipe carrying nonpotable water, and the pressure in the nonpotable system is higher than in the potable system. Common causes of back pressure include:
 - Potable water connection to boilers and other pressure systems without backflow prevention devices.
 - Potable water connection with other systems that may have higher pressure.
 - Water storage in tanks or plumbing systems that could cause backflow if the pressure in the potable system were lowered.

3-2.2 Cross-Connection Control

Cross-connection may occur when a pipe carrying nonpotable water is connected by mistake to a potable water pipe, resulting in contamination of the potable water. Cross-connection control is a method to eliminate the potential for nonpotable water to enter the potable water system. A cross-connection control program prevents waterborne diseases and contaminants from entering drinking water in the potable water system.

Follow the steps in Exhibit 3-2.2 to ensure that a program to inspect the cross-connection controls is developed for your facility, that an employee awareness program is developed, and that any problems are corrected.

3-2.3 Control Measures

BFPs must be installed at certain points to prevent contaminants from entering the potable water supply. Certified personnel are often required to install the BFPs and to conduct annual inspections. Contact a local plumbing contractor or Maintenance for further information regarding the proper installation and inspection of BFPs.



Ascertain if
your facility

cross-connection control
program prevents
contaminants from entering
the potable water system.



Exhibit 3-2.3 presents the key issues and BMPs associated with cross-connection control measures. Use the flowchart in the exhibit to determine if you need to install any BFPs, if your facility has BFPs, if the BFPs have been tested, and if any maintenance is required on the BFPs.

Some BMPs that you can implement to prevent cross-connection include:

- Do not attach hoses to utility sinks.
- Maintain an air gap between the water in the sink and the faucet.
- Install BFPs on the following devices:
 - Boilers and chillers.
 - Irrigation systems.
 - Utility sinks.
 - Fire protection systems.
 - Outside faucets.



Use BFPs as a key element of your facility cross-connection control program.



Water Distribution Systems: Facility Cross-Connection Control Program

Water Issue:

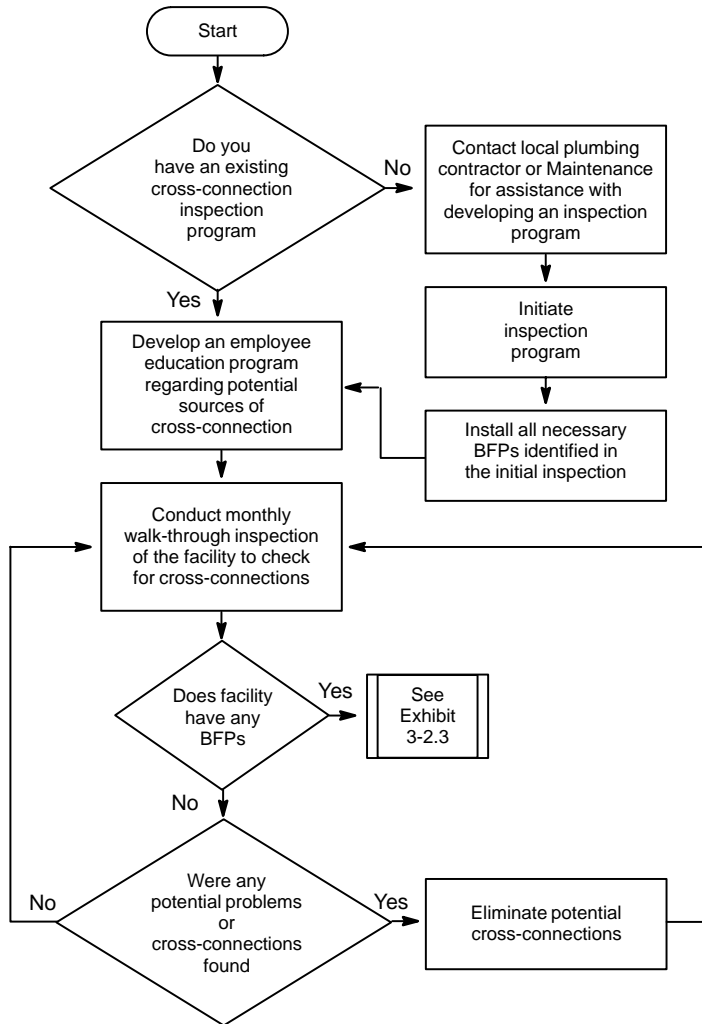
Periodic inspection of site water uses is necessary to eliminate potential cross-connection between the potable water and nonpotable water systems.

Goal:

Protect public and employee health and safety.



Implementation:



Recordkeeping:

Log of inspections, findings, and all remedial actions.

Laws and Regulations:

Where appropriate:

- State regulations.
- Local utility regulations.

Benefits:

Protects public health and safety.

Issues:

- Requires periodic inspection.
- Requires necessary maintenance.



Water Distribution Systems: Backflow Prevention Devices

Water Issue:

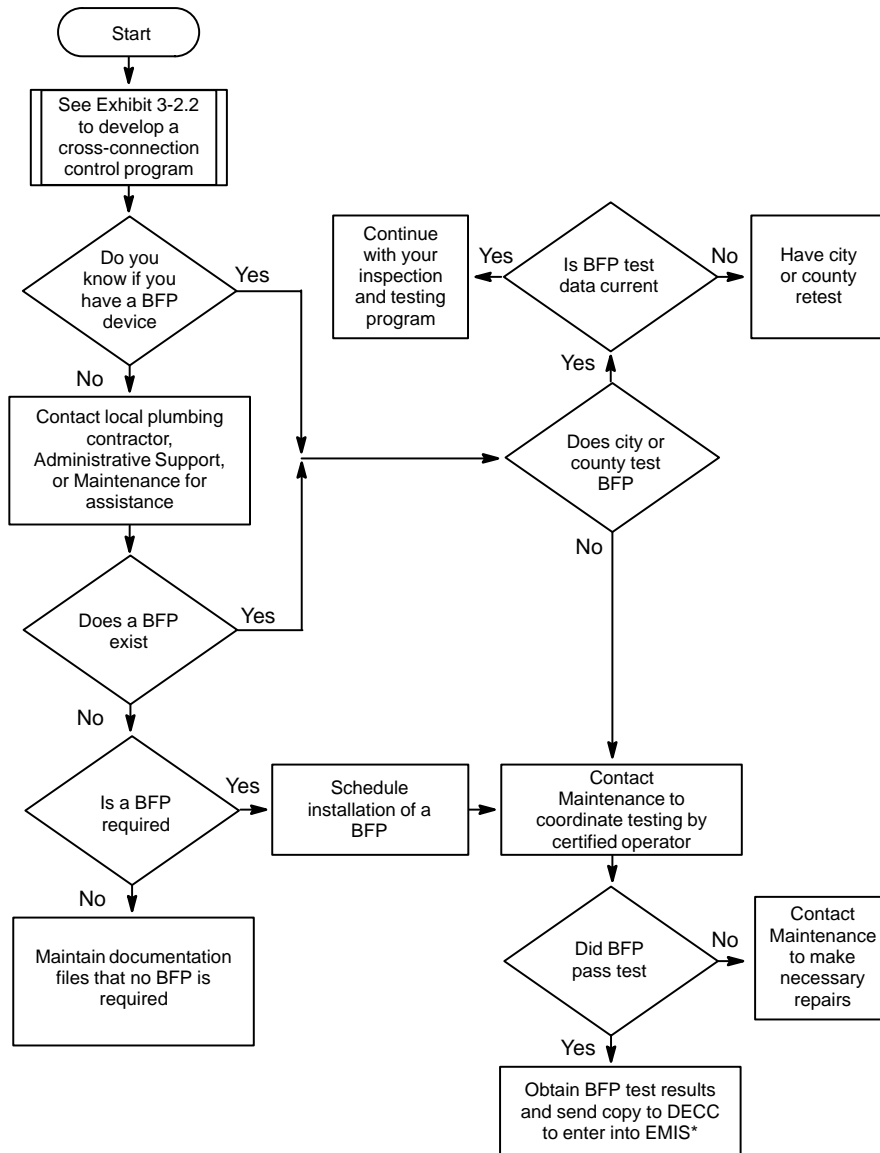
Periodic inspection or testing must be conducted on all backflow prevention devices at the source.

Goal:

Protect public health and comply with regulations.



Implementation:



Recordkeeping:

- Inspection records as required by regulations.
- Testing records as required by regulations.

Laws and Regulations:

- SDWA.
- State regulations.
- Local utility regulations.

Benefits:

- Complies with regulations.
- Protects public health.

Issues:

- Adds to administrative time.
- Adds testing cost.
- Requires maintenance.
- Requires monitoring.

Note: Several meters (e.g., irrigation, fire, and domestic uses) may have backflow prevention devices. The process described in the flowchart needs to be followed for each of these devices.

*EMIS — Environmental Management Information System



4 Water Use



The Postal Service uses water in many facility operations including personal uses, facility uses, operational uses, and emergency uses. This chapter addresses the issues associated with the types of water used at a postal facility along with potential water conservation measures.

4-1 Drinking Water

The Occupational Safety and Health Administration (OSHA) requires that all permanent places of employment must supply potable water for drinking, hygiene, and other uses. Public water supply utilities are responsible for drinking water quality delivered to the consumer's tap. Even though it is rare, contamination could occur in piping or other sources within the facility. In these cases, the Postal Service may be responsible for the problem. If your water supply suddenly looks, tastes, or smells unusual, contact your safety specialist *immediately* and the building owner or manager if the building is leased.

To address water quality issues, your BMPs may include:

- Water quality testing, as appropriate. For leased facilities, coordinate activities with the building owner or manager.
- Practices such as running taps at sinks and fountains for a few minutes to drain the water stored in the water line, when not used for extended periods, or occasionally flushing the water lines for facilities at the end of the service line.

Concentrations of lead and copper contamination are normally not significant in water supply sources. Most such contamination is mainly a by-product of corrosive action of the water in contact with a facility's water system. The Postal Service issued Maintenance Management Order (MMO)-30-90, *Water Cooler Lead Level Testing*, to address testing water coolers for lead. Several models of water coolers manufactured by Halsey-Taylor were identified as using lead solder or lead-lined tanks that



OSHA requires that all permanent places of employment must supply potable drinking water for their employees.



If your water supply *looks, tastes, or smells unusual*, contact your safety specialist *immediately*.





Ensure that Halsey-Taylor coolers with the following serial number variations are removed:

- 015,000,0(A–M)8.
- 015,000,0(A–C)9.
- SCWT-14W.



The following model designations that fall within the serial number variations above do not need to be removed: BFC, S3D, S5D, S10D, SCWT (except SCWT-14W), WC-7, WM and SW series using a “-” followed by a single number (e.g., WM8A-1).

could pose a risk due to lead leaching into drinking water. Ensure that the following Halsey-Taylor models, as listed in MMO-30-90, are removed from your facility:

- Coolers without a letter in the serial number.
- Coolers with a letter in the serial number if the serial number is in the 015,000,000 series and includes either one of the following sequences:
 - The last digit of the serial number is an 8 preceded by any letter A through M.
 - The last digit of the serial number is a 9 preceded by the letter A, B, or C.

Note: However, water coolers that meet the above criteria do not need to be removed if they bear the following model designations:

- BFC.
- S3D.
- S5D.
- S10D.
- SCWT (all models except SCWT-14W).
- WC-7.
- WM series and SW series (if the model designation has a hyphen (-) followed by a single number).

In addition, other water coolers may have been manufactured using lead solder; therefore, ensure that all water coolers are tested once for lead in the delivered water. Check that all water coolers found to be safe are marked, including the date of the test and the results. Report all unlabeled coolers or Halsey-Taylor coolers of the above-referenced models to the safety specialist.

4-2 Domestic Water

Water may be used for domestic uses other than drinking. These uses may include washing or toilet flushing. Your facility must meet water quality standards for domestic water uses. For information regarding these standards, contact your safety specialist.



4-3 Process Water

Process water is water that is used for nondrinking purposes, such as restrooms, custodial uses, heating, ventilation, and air-conditioning (HVAC) systems, photographic dark rooms, and battery rooms. Process water generally comes from the potable supply, although some reclaimed or secondary water may be used as process water.

Ensure that outdoor surface cleaning water — wash water generated by cleaning concrete and asphalt surfaces, buildings, and decks — does not enter the stormwater collection system, because this wash water may be harmful to the environment from either the soap or cleaning solvents in the wash or from cleaning a surface that may have harmful substances such as lead-based paint. Implement a commonsense approach that eliminates the wash water from being transported into the stormwater collection system. Contact your DECC for more information on how to prevent surface wash water from entering the stormwater collection system at your facility.



Outdoor surface cleaning water may be harmful to the environment; implement BMPs to prevent its discharge into the stormwater collection system.

4-4 Vehicle Wash Water

The Postal Service operates a fleet of over 200,000 vehicles throughout the United States. Vehicle washing plays a significant role in public image and proper vehicle maintenance of this vast fleet. It is estimated that the Postal Service uses almost 100 million gallons (gal) of water each year in maintaining the fleet.

Vehicle wash water is an industrial wastewater and is subject to applicable regulations imposed by federal, state, and local agencies. In most states vehicle wash water:

- Cannot be discharged to stormwater collection systems or to the environment without a permit.
- Must be collected and discharged to a sanitary sewer or a combined system.
- May be regulated by a permit or pretreatment requirements.

Available vehicle washing technologies are:

- Permanent facility washing processes, such as:
 - Manual washing systems.
 - Mechanical brush systems.
 - Brushless systems.



The Postal Service has established a goal of zero discharge of vehicle wash water to stormwater collection systems.



Use Handbook AS-554-C, *Vehicle Washing Technologies*, for detailed guidance concerning your responsibilities pertaining to vehicle washing.



- Mobile washing processes, such as:
 - High-pressure spray systems.
 - Brush systems.
 - Dry washing.
 - Manual washing.
- Off-site washing options, such as:
 - Washing at a commercial facility.
 - Manual washing options.

4-5 Irrigation Water



Follow water restrictions that may limit the hours of irrigation.

Landscape irrigation can be the largest use of water during the peak growing season and dry weather conditions. Many communities implement irrigation restrictions to conserve water. These restrictions, often enforceable with fines and penalties, may limit the hours of irrigation application and specify the days of operation. Also, many utilities have implemented conservation water rates that are higher than normal rates and that are imposed when the facility exceeds a predetermined “normal” water usage at the facility. Be aware of local water restrictions to manage your water bills to conserve expenditures and water.

4-6 Water Conservation



When your facility practices water conservation, you:

- Save money.
- Preserve valuable water resources.

Water resources are becoming limited due to increasing populations and economic development. To limit the demand on water resources, consumers need to use water in an efficient manner and thus conserve the water resources. Water conservation measures can provide savings for your facility and reduce the demand on limited water resources. To realize substantial and permanent demand reductions, your facility needs to have a long-term commitment to conservation goals and programs.

Conservation is an important component of effective water management for your facility. Follow the steps in Exhibit 4-6 to assist you in determining the efficiency of your facility’s water system. This procedure includes evaluating your facility’s water bills and comparing the usage reported on the bill to an approximate usage calculated for your facility.



4-6.1 Conservation Methods

Conservation measures may include the following:

- a. Within your facility:
 - (1) Contact the local utility for a facility water audit or advice on conserving water.
 - (2) Install water-efficient plumbing fixtures or retrofit kits.
 - (3) Regularly inspect for leaks and repair them as appropriate.
 - (4) Review vehicle washing operations for conservation opportunities.
- b. Irrigation:
 - (1) Contact the local utility or agricultural extension service for an irrigation audit or advice.
 - (2) Follow local irrigation restrictions regarding hours, frequency, and duration of irrigation.
 - (3) Irrigate only to supplement rainfall.
 - (4) Turn off automatic irrigation systems during nongrowing (winter) seasons and wet weather conditions when supplemental irrigation is not needed.
 - (5) Install a rainfall cutoff device on automatic irrigation systems.
 - (6) Inspect in-ground irrigation systems for proper operation.
 - (7) Consider water-efficient landscaping (xeriscaping).



Easy-to-implement irrigation conservation measures include:

- Irrigating only to supplement rainfall.
- Turning off automatic irrigation systems during nongrowing seasons and wet weather conditions.
- Installing a rainfall cutoff device on automatic irrigation systems.
- Inspecting in-ground irrigation systems for proper operation.

4-6.2 Water Utility Bill Monitoring

If your facility is connected to a public water supply system, you can keep track of water consumption through monitoring your water utility bills. Information provided in the water utility bill generally includes the amount of water used, meter readings, and water usage history.

Use Exhibit 4-6 to determine approximately what the water bill for your facility should be and then compare it to the actual water bill for your facility. If the water utility bill is sent directly to Finance, arrange to have a copy forwarded to you. Also contact the local water utility for a water audit and leak inspection if you notice gross inconsistencies in the history of water usage.



If your facility is connected to a public water supply system, keep track of your water consumption by monitoring your water bills.



Water Use: Water Conservation

Water Issue:

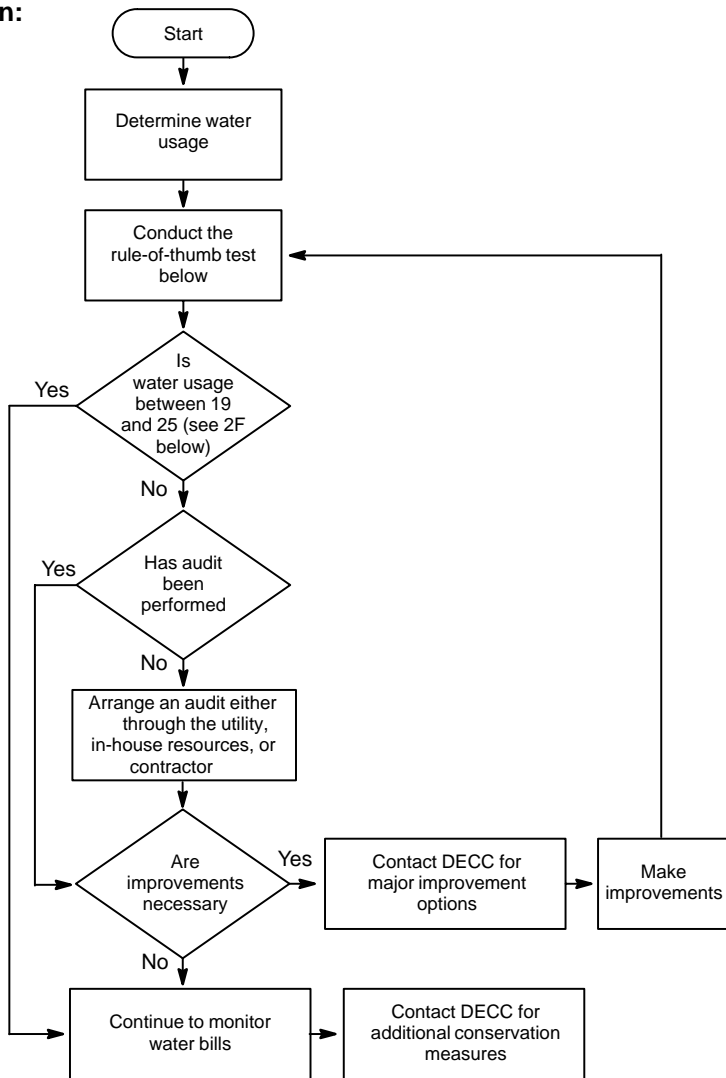
Facility managers should monitor the water bills in an attempt to conserve water.

Goal:

Save money expended on water.



Implementation:



Recordkeeping:

Water bills for at least 12 months.

Laws and Regulations:

Local ordinances regarding conservation measures.

Benefits:

- Saves money.
- Exhibits environmental sensitivity.

Issues:

May require initial costs to implement some conservation measures.

Rule-of-Thumb Test

1. From your water bill, determine the following:

- A. Water bill \$ _____
- B. Number of days in billing period _____ days
- C. Amount of water consumed in billing period _____ gallons
- D. Average daily consumption:
Divide C by B (C ÷ B) _____ gal/day

2. Conduct rule-of-thumb test:

- E. Number of employees at your facility _____ persons
- F. Calculate approximate daily consumption:
Divide D by E (D ÷ E) _____ gal/day

3. Analyze results:

- G. If F is less than or equal to 22, continue to monitor water bill and conduct rule-of-thumb test periodically.
- H. If F is greater than 22, contact your DECC for water conservation options.

4. Forward a copy of this test to your DECC.



5 Collection System Components



After water is used, inside or outside a facility, the spent water, called wastewater, is collected at sink drains, floor drains, toilets, and drinking fountains. The wastewater is collected and transported by pipes to sewers and eventually to a treatment system before discharge back into the environment. In some cases, the collected wastewater receives on-site pretreatment before the wastewater passes beyond the facility to a treatment works.

5-1 Employee Awareness

The public and Postal Service employees should be aware that disposing of certain materials and chemicals through the facility collection system poses a serious threat to the collection system and the treatment system. Pipes can become clogged, causing flooding of drain areas. Caustics or acids can deteriorate pipes, causing leaks and failures. Your facility should increase employee awareness of wastewater collection through BMPs such as:

- Properly disposing of certain chemicals and materials. (Ensure that appropriate standard operating procedures (SOPs) are developed and followed in each area of concern.)
- Posting signs and other notices to inform employees of proper disposal procedures and materials that should not be disposed of in sinks and drains.

Post Exhibit 5-1 above sinks and drains or other posting locations based on site needs. Contact your DECC to determine the BMPs that should be implemented at your facility.



You should post signs and notices over sinks and drains to outline the types of materials employees should avoid disposing of in sinks and drains.

5-2 Sand and Oil/Water Separators

Sand and oil/water separators are chambers that separate sand and oil from water by allowing free oil to rise to the water surface and to be removed by a mechanical device, such as a skimmer, and sand to settle at the bottom to be removed later. Sand and oil/water separators are also commonly called oil interceptors, intercepting traps, oil/grease traps, oil/water



Check whether or not sand and oil/water separators are required as pretreatment devices for your VMFs.



separators, and sand/gasoline traps. State or local regulations may require the use of sand and oil/water separators at vehicle maintenance facilities (VMFs) as pretreatment devices for wastewater being discharged to publicly owned treatment works (POTWs). Sand and oil/water separators also require regular maintenance.

Make sure that employees know that they must avoid disposing of solvents, windshield washer fluids, gasoline, antifreeze, and degreasers in drains because these substances can inhibit the separation of oil and water. Exhibit 5-2 presents the key issues and BMPs associated with sand and oil/water separators. Use the process described in the exhibit to determine if your facility needs a pretreatment device, and develop an inspection and maintenance program if you have these devices.

5-3 Grease Traps



Check whether or not the local

POTW requires grease traps as pretreatment devices for your facility because of high grease and oil concentrations in the wastewater.

Similar to sand and oil/water separators, grease traps are small, watertight tanks used to prevent large quantities of oil and grease from being discharged to septic tanks or sanitary systems. If a waste stream regularly contains high concentrations of grease or oils, a grease trap may be required as a pretreatment device. Maintenance of grease traps is important because excess grease may cause failure of the treatment system.

Exhibit 5-2 highlights the key facts about and BMPs for grease traps. Use the process described in the exhibit to determine if your facility needs a device, and develop an inspection and maintenance program if you have these devices.

5-4 Lift Stations



Check whether or not maintenance

of a lift station is the responsibility of your facility.

Due to low elevations or long distances to treatment works, lift stations are often required to pump wastewater to treatment works or a collection system connection. If a lift station exists at your facility, you may be responsible for proper maintenance of the system. Maintenance requirements include inspection and repair of the pumps and controls.

If your facility is responsible for maintaining a lift station, contact a local plumbing contractor or Maintenance for assistance in developing an inspection and maintenance program.



5-5 **Battery Rooms**

Battery rooms at some VMFs and plants may have a collection area to neutralize spilled battery acid. The operation and maintenance of these systems are site-specific and may be regulated.

Ensure that documentation for a neutralization tank bypass is approved by a DECC or safety officer and is kept on record. Coordinate all issues through your DECC. Contact your safety specialist before making any modifications to the system if a system exists at your facility.



Coordinate with your DECC about all issues related to acid neutralization systems in battery rooms.

5-6 **Stormwater**

Stormwater at postal facilities is collected in curbs, gutters, and swales and is discharged off-site to public stormwater collection systems or to natural streams or creeks. In some cases, stormwater is collected in retention ponds and allowed to infiltrate into the ground.

Stormwater runoff from VMFs and fueling operations is regulated by federal or state agencies under the Clean Water Act (CWA) and requires a permit under the National Pollution Discharge Elimination System (NPDES). If no stormwater is discharged from the property or the discharge is to a combined sewer system, a permit is not required. Stormwater permits for a VMF commonly require the preparation of a Stormwater Pollution Prevention Plan (SWPPP). This plan requires the implementation of BMPs to reduce or eliminate contaminants in the stormwater discharge. An Underground Injection Control (UIC) permit may be required if stormwater is being discharged to groundwater through infiltration basins or retention ponds.

See Exhibit 5-6 and contact your DECC to determine whether or not your VMF or fueling operation requires a permit and if your facility is in compliance.



Check whether or not stormwater runoff from your VMF or fueling operation requires a NPDES permit and if the permit requires an SWPPP.



SINK POSTING

Do not dispose of the following cleaning, maintenance, and repair products into any system drains, such as floor drains and slop sinks, that discharge to the storm or sanitary sewer systems:

- Fluid Solvents
- Antifreeze
- Gasoline or Oil
- Ink
- Windshield Washer Fluid
- Paints
- Degreasers
- Diesel Fuel
- Acids (Corrosives)
- Glass or Sand



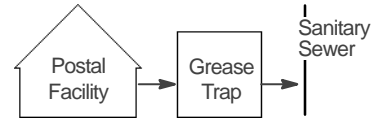
Collection System Components: Sand and Oil/Water Separators and Grease Traps

Water Issue:

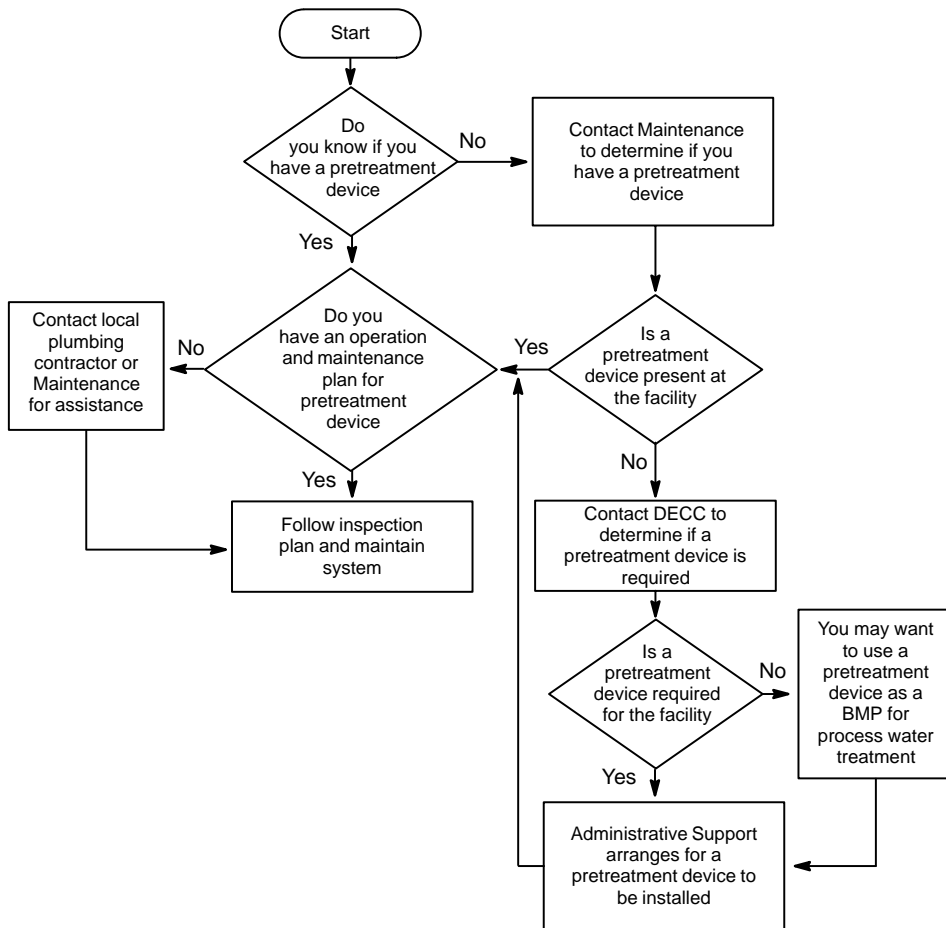
Sand and oil/water separators or grease traps are often required as pretreatment devices by state or local regulations.

Goal:

Comply with regulations and prevent pollution.



Implementation:



Recordkeeping:

- Operation and maintenance plan.
- Inspection plan.

Laws and Regulations:

- Local regulations.
- State regulations.

Benefits:

- Protects the environment.
- Avoids fines or penalties.
- Facilitates operation.
- Allows automatic collection of oil and grease.

Issues:

- Requires funding for the system.
- Requires funding for the maintenance program.



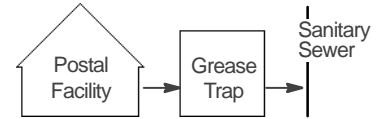
Collection System Components: Stormwater

Water Issue:

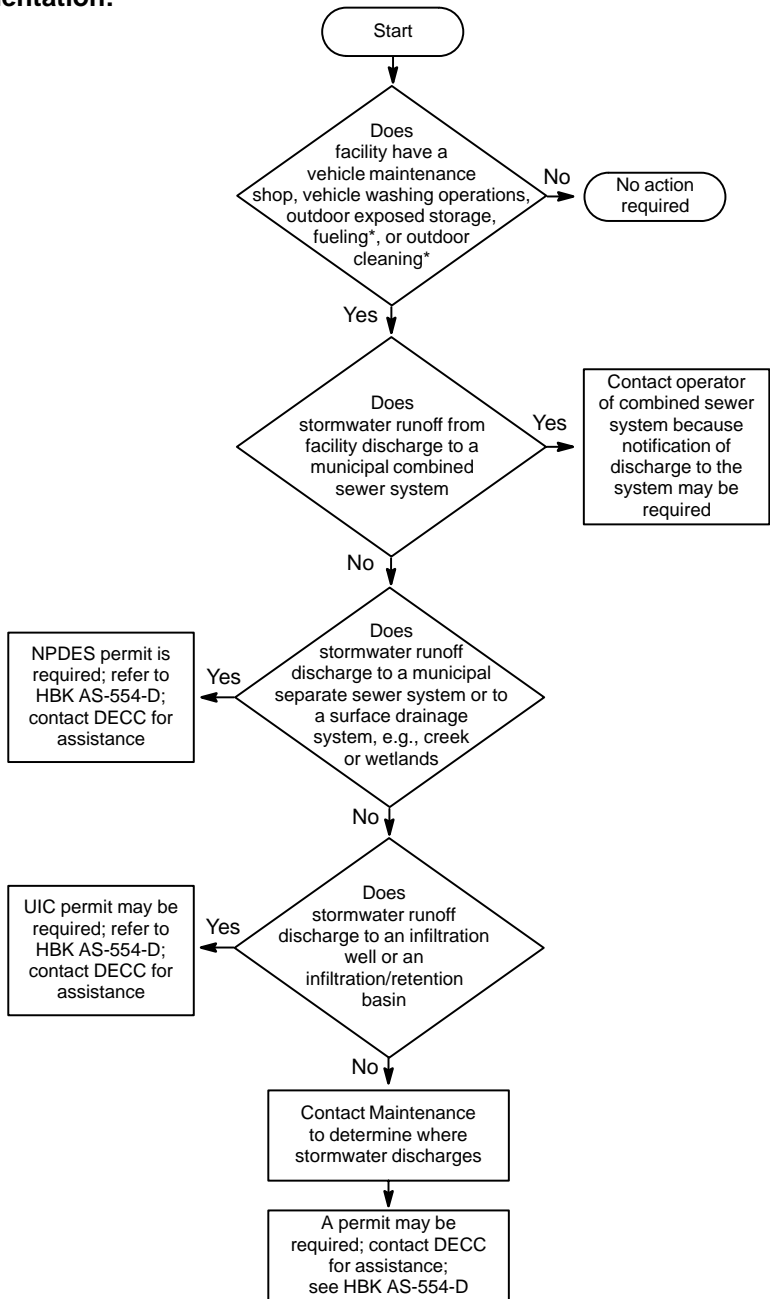
Surface water and groundwater resources could become contaminated by activities at Postal Service facilities.

Goal:

Comply with regulations and prevent pollution.



Implementation:



Recordkeeping:

Inspection, maintenance, and monitoring records retained for at least 5 years as required by regulations and Postal Service policies.

Laws and Regulations:

- Pollution Prevention Act of 1990.
- CWA Amendments of 1987.

Benefits:

- Prevents pollution.
- Complies with regulations.

Issues:

Requires permit to be in compliance.

* Fueling and outdoor cleaning activities alone, without the performance of vehicle maintenance, may be regulated under NPDES stormwater regulations. See HBK AS-554-D or contact the DECC.



6 Wastewater Treatment Systems



Wastewater from postal facilities is either discharged to a POTW for treatment or treated on-site and then discharged into the environment.

6-1 Publicly Owned Treatment Works

When accessible to your facility, the use of a POTW is the preferred means of treatment and disposal. A permit or a letter of connection may be required to connect to a POTW, and such documentation should be maintained on file at your facility for future reference. Pretreatment of wastewater is often required because of its strength or composition. Several pretreatment devices that may exist at your facility are discussed in Chapter 5, Collection System Components.



Your facility should discharge wastewater to a POTW as the preferred means of treatment and disposal.

When your facility discharges to a POTW, you must:

- Adhere to POTW permit conditions.
- Maintain records of permits or related connection documentation.
- Use BMPs such as not disposing of certain materials (paints, gasoline, etc.) in sinks and drains.
- Regulate and inspect your facility disposal system, especially sewer drains.

Exhibit 6-1 presents the key issues and BMPs associated with POTWs. Follow the decision-making process to determine if the wastewater that is being discharged to the POTW needs to be pretreated prior to discharge. Ensure that the systems are being inspected and maintained.



6-2 On-Site Wastewater Treatment Systems



Septic systems include:

- Septic tanks.
- Drainfields.
- Grease traps.
- Distribution boxes, dosing tanks, or lift stations.



Ensure that your on-site treatment

system has routine maintenance and check whether or not it requires microbial additives to supplement the treatment process.



Ensure that your facility's package

plant has the required permits and is operated by a state-certified operator.

6-2.1 Septic Systems

Septic systems are commonly used systems for on-site treatment. Septic systems include a septic tank for settling and partial digestion of the wastes and a drainfield for additional treatment as the wastewater is discharged into the ground. Regular maintenance of a septic system will extend the life of the system and maintain compliance with regulations. Maintenance of a septic system includes pumping out the septic tank, grease traps, and dosing tanks on a regular basis. Other types of in-ground treatment units, such as cesspools, may be found at older facilities. These units may require special maintenance or should be considered for replacement.

Contact your local public health department for guidelines on pumping frequency for various flows and tank capacities. Contact the local health agency and the DECC for other guidance on septic systems.

Operational practices can also extend the life of the septic system. Avoid disposing of the following items in septic systems:

- Food items (garbage disposals should not be used).
- Bleach-based chemicals.
- Detergents.
- Paint.
- Nonbiodegradable items.

Exhibit 6-2.1 presents the key issues and BMPs associated with septic systems. Ensure that a maintenance and inspection program is established to maintain compliance with regulations and that the system is operating effectively.

6-2.2 Package Plants

For some facilities, package plants may be the means of on-site treatment. Package plants are prefabricated units used to treat wastewater. The treated wastewater from a package plant must be disposed of in systems such as drainfields or, if treatment is adequate, reused as process water or for irrigation. Package plants require an operations permit, might require a discharge permit, and must be operated by a state-certified operator.

Do not install or operate package plants at your facility prior to the review and approval of the AECC in coordination with Maintenance and Facilities specialists. If your facility has a package plant, ensure that it is being operated in accordance with the permit.



6-3 Treatment of Process Water

Process water, such as from HVAC equipment, photographic dark rooms, etc., commonly produces a waste stream that may require a permit before discharging. In many postal facilities, this water is discharged to the local POTW by agreement. In some cases a POTW is unavailable for the discharge of process water, and the process water is therefore discharged to the environment or a stormwater collection system. In these cases a permit (NPDES) may be required for the discharge of process water. This permit often requires chemical or physical treatment of the water prior to discharge.

If your facility discharges process wastewater, check that it is being discharged in accordance with state and/or local regulations. Check that your facility has the required permits and is complying with permit provisions, including pretreatment.



Check that treatment and discharge of process wastewater are in accordance with local and state regulations.



Wastewater Treatment Systems: Publicly Owned Treatment Works

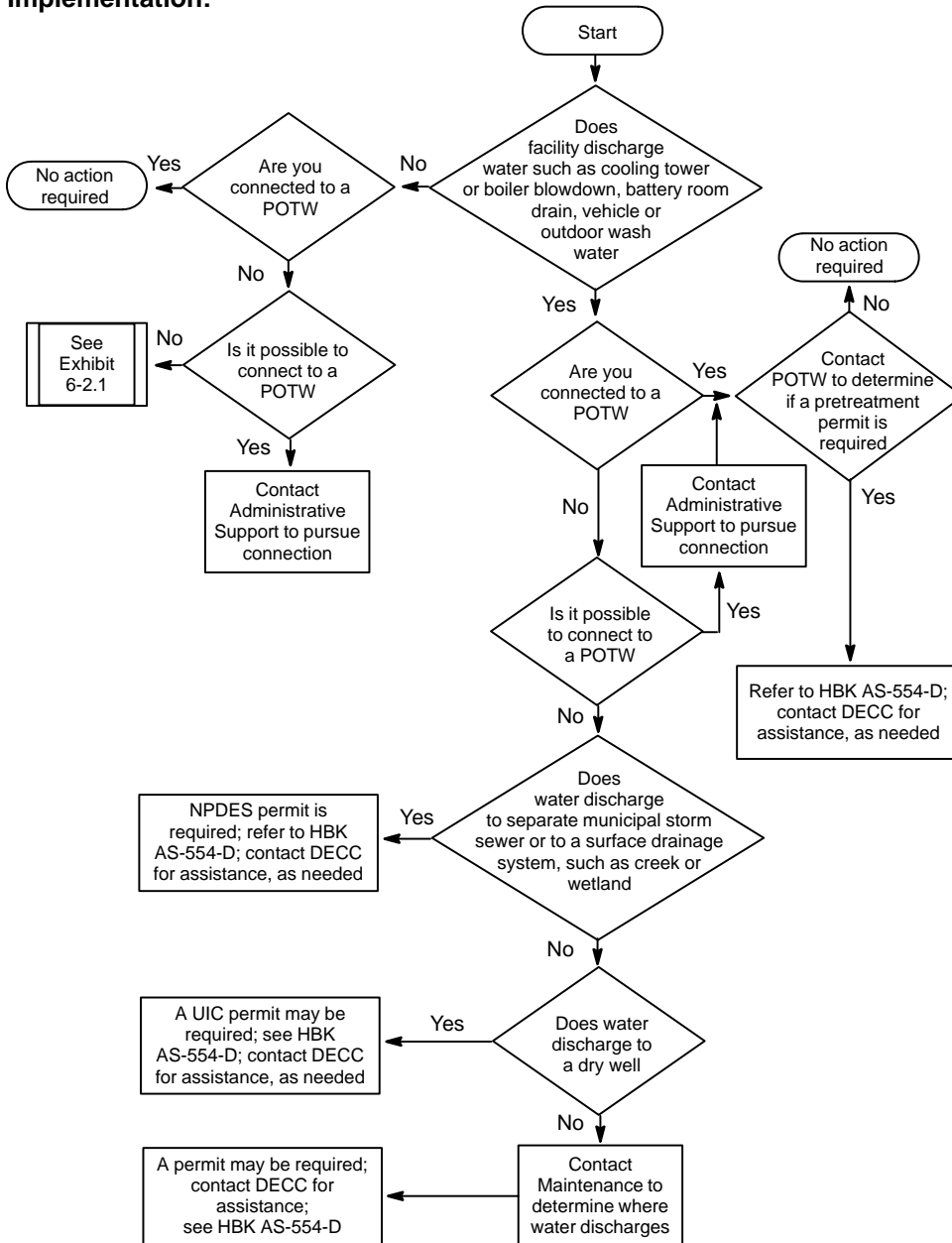
Water Issue:

Discharges to publicly owned treatment works must meet federal, state, and local requirements.

Goal:

Comply with regulations.

Implementation:



Recordkeeping:

- Data regarding concentration levels of the discharge if wastewater is pretreated on-site.
- Records of permits or related connection documentation.

Laws and Regulations:

Clean Water Act — Pretreatment Ordinances.

Benefits:

Complies with regulations.

Issues:

- Requires funding for pretreatment systems.
- Requires funding for inspections and maintenance.

Note:

Pretreatment may require:

- Sand and oil/water separators.
- Grease traps.
- Chemical dosing.
- Other requirements by POTW.



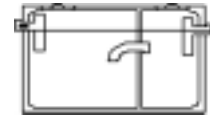
Wastewater Treatment Systems: On-Site Wastewater Treatment Systems

Water Issue:

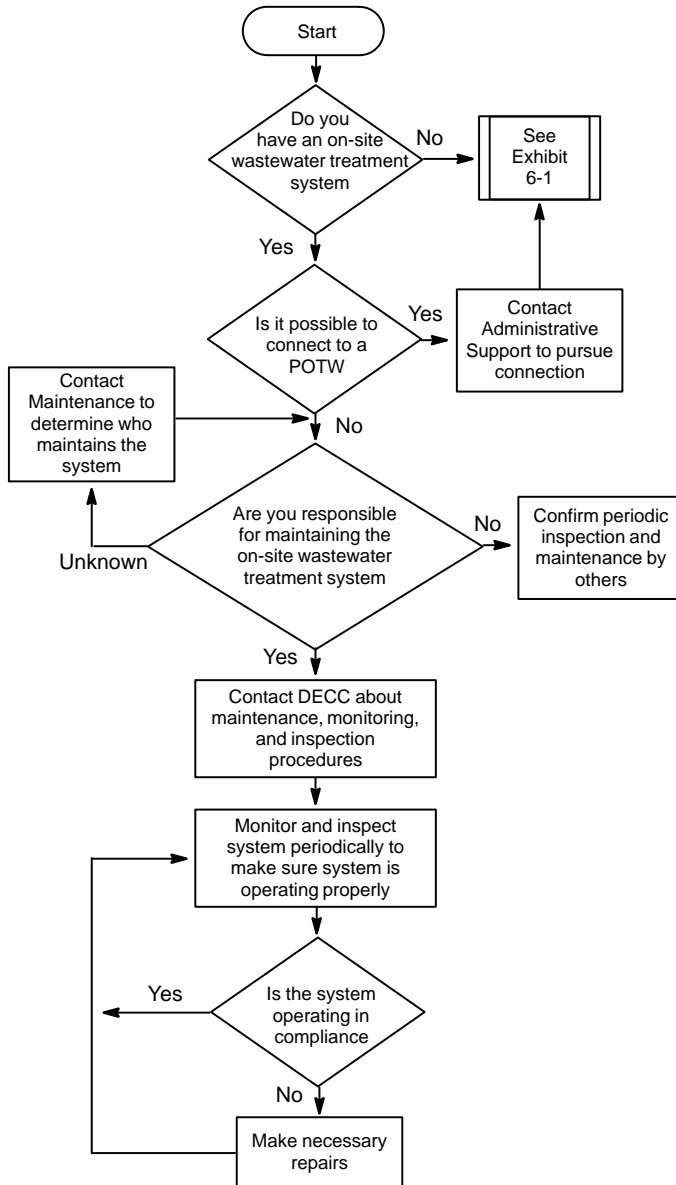
On-site wastewater treatment systems require routine maintenance.

Goal:

Comply with regulations and operate efficiently.



Implementation:



Recordkeeping:

- Permit.
- Inspection and maintenance records.

Laws and Regulations:

- State regulations regarding septic systems.
- Local regulations regarding septic systems.

Benefits:

Complies with regulations.

Issues:

- Requires funding for inspection and maintenance.
- Requires funding if the system needs to be replaced.



7 Leadership Role



The Postal Service is committed to being a good environmental neighbor. In fact, the Postal Service is a leader in environmental issues among government agencies and large businesses. Through our pollution prevention program, siting practices, and education and outreach program, the Postal Service is demonstrating our environmental stewardship.

7-1 Pollution Prevention

Pollution prevention is the prevention of pollutants by reducing types and quantities of pollutants at the source and/or by using environmentally sound recycling. Pollution prevention practices encompass many aspects of your facility operations. This section addresses those prevention practices associated with water quality.

7-1.1 Goals

Through Executive Orders, several Environmental Protection Agency (EPA) goals have been implemented to provide for pollution prevention by federal agencies. The Postal Service has issued policy statements and made a national commitment to meet these goals. In addition, the Postal Service established several other goals that support overall pollution prevention and waste minimization:

- The Postal Service is committed to conducting all of our activities in a manner that protects human health and the environment.
- The Postal Service will promote the sustainable use of natural resources and protection of the environment through conservation, recycling, and reuse of materials.
- The Postal Service encourages the use of nonpolluting technologies and waste minimization in the development of equipment, products, and operations.





Adopt pollution-oriented BMPs to prevent or reduce pollution.



Be aware that the following are potential stormwater contaminants:

- Oil and grease.
- Parts cleaners.
- Solvents.
- Batteries.
- Gasoline and diesel fuel.
- Antifreeze.



Ensure that an inspection and testing program for ASTs and/or USTs is in place.

7-1.2 **Best Management Practices**

BMPs can be used to prevent or reduce pollution. These methods include scheduling activities, prohibiting specified practices, and implementing other management practices designed to control pollution.

Adopt facility or behavioral modifications at your facility to prevent pollutants from being released into the environment. In most cases, you can accomplish this simply by establishing good housekeeping procedures.

7-1.3 **Vehicle Maintenance Facilities**

VMFs are considered potential sources of stormwater contamination due to the large number and diverse types of chemicals used during maintenance processes. Most VMFs have SWPPPs to help reduce or eliminate the risk of stormwater contamination. Good housekeeping and proper storage of waste oil and hazardous materials are necessary at all times. This includes the proper storage of spent solvents, batteries, paint, salt, and other deicing materials inside and outside the facility. Vehicle washing water must be disposed of as a process wastewater in accordance with state or federal regulations.

Use Exhibit 7-1.3 to determine the necessary actions to take for stormwater management. Ensure that your facility has a NPDES permit, if required, and that your facility is complying with its provisions. Ensure that preventive maintenance and good housekeeping are conducted on an ongoing basis. See Chapters 5 and 6 for additional information on stormwater and wastewater collection and treatment.

7-1.4 **Fueling Operations**

Some postal facilities have on-site fueling areas. Fueling operations often result in the spills of gasoline, oils, antifreeze, etc. The fueling areas should be properly maintained, and good housekeeping practices should be observed. Some facilities may have mobile fueling stations. When fueling activities are occurring with mobile stations, special caution must be taken to ensure that spills do not occur while attaching fuel hoses to the vehicles. Underground storage tanks (USTs) or aboveground storage tanks (ASTs) may be present at a facility in association with the fueling areas. The USTs and ASTs should be tested and inspected on a routine basis to ensure leakage has not occurred.



Contact your maintenance specialist to establish an inspection and testing program for ASTs or USTs. Use Exhibit 7-1.3 to determine the necessary actions to take for stormwater management. Ensure that your facility has a NPDES permit, if required, and is complying with its provisions. Ensure that preventive measures and good housekeeping are conducted on an ongoing basis.

7-1.5 Storage Areas

Ensure that good housekeeping practices are maintained in storage areas:

- Provide trash containers where practical to minimize littering.
- Label and store hazardous materials in appropriate containers.
- Secure storage areas and provide secondary containment, if required.
- Cover and secure outdoor storage areas to avoid contact with the elements or accidental discharge from breakage.

7-1.6 Groundwater

Pollutants can enter the groundwater system from direct infiltration into the ground and through runoff into surface water bodies. Polluted wastewater or stormwater runoff can infiltrate into the subsurface and contaminate the groundwater. Contaminants released from leaking storage tanks and spills can also pollute the groundwater by infiltration. In addition, pollutants can enter the groundwater through the on-site dumping of hazardous wastes, solid wastes, or other contaminants. Each state is required to prepare a wellhead protection program pursuant to the SDWA.

Contact your DECC to obtain more information on wellhead protection boundaries and specific ordinances that address physical, microbial, and chemical threats to groundwater sources. Exhibit 7-1.6 presents the key issues associated with wellhead protection, including siting issues, and good housekeeping practices for solid and hazardous wastes. Ensure that potential contaminants are handled and disposed of properly.

7-1.7 Snow and Deicing

Snow removed from parking areas can contain salt or other deicing materials. If they are applied improperly, higher than normal concentrations of these materials can occur in runoff. The Postal Service's commitment to being a leader in environmental issues requires the proper application of deicing materials. Some states are initiating programs that require permits for piled snow areas.



Maintain good housekeeping practices:

- Clean and orderly storage of chemicals.
- Fast cleanup of small spills.
- Periodic and proper removal of wastes generated at the facility.



Wellhead protection is the protection of the area surrounding a well.





Check whether or not snow piles containing salt or deicing materials and outdoor salt storage require a permit.



Determine what plans may exist or the type of plans that may be needed to respond to spills.



Check into all usage of the 17 chemicals targeted for elimination.

Contact your DECC to determine if your state has initiated these programs, and contact Maintenance concerning programs for deicing practices. Discuss outside storage of salt with your DECC. Ensure that employees are educated as to the proper application rates in order to minimize concentration levels of deicing materials in runoff.

7-1.8 Spills

During the course of operations, spills of substances harmful to the environment may occur at your facility. You should have a process to respond to these events. These procedures may be a formal or specific plan, depending on your facility's operations and activities. Some postal facility operations may need spill contingency plans, and those facilities that store significant quantities of petroleum products may need Spill Prevention Control and Countermeasures (SPCC) Plans as well as Emergency Action Plans (EAPs).

Contact your DECC to determine what plans may exist or the type of plans that may be needed. Safety specialists can facilitate the development of plans where necessary and are then responsible for the implementation of the required plans. You should become familiar with these plans. Follow the process in Exhibit 7-1.8 to determine if your facility requires a response and/or prevention plan for spills, and to establish BMPs to reduce the occurrence of spills.

7-1.9 Elimination of Targeted Chemicals

Seventeen chemicals have been targeted for elimination by EPA and the Postal Service Environmental Strategic Plan. These 17 chemicals are:

- Benzene.
- Carbon tetrachloride.
- Chromium and compounds.
- Lead and compounds.
- Methyl ethyl ketone.
- Methyl isobutyl ketone.
- Tetrachloroethylene.
- Trichloroethane (methyl chloroform).
- Xylenes.
- Cadmium and compounds.
- Chloroform (trichloromethane).
- Cyanide and compounds.
- Mercury and compounds.
- Methylene chloride.



- Nickel and compounds.
- Toluene.
- Trichloroethylene.

Avoid using these products whenever possible. Contact Maintenance for suggested alternatives to these products.

7-2 Siting

Federal, state, and local laws and regulations should be considered when the site for a new facility is planned. An environmental study of the site is conducted before any property is procured. The availability of off-site water supply and wastewater treatment are preferable, especially for large facilities. These siting activities are conducted under the supervision of the Administrative Support unit and the FSO.

Numerous water-related issues need to be considered when picking the site for a new facility or when acquiring an existing facility. These factors include, but are not limited to,:

- Flood zones.
- Watershed protection areas.
- Wellhead protection areas.
- On-site and off-site wetlands.
- General site conditions and hydrology.

The DECC and the FES should be included in the site selection process to assist in addressing environmental concerns.



When you are planning the siting of new facilities, you should consider federal, state, and local laws and regulations.

7-3 Education and Outreach

Ensure that your employees are made aware that the Postal Service has assumed a proactive leadership role in pollution prevention and compliance with national policies, Presidential Executive Orders, and other applicable laws and regulations. Take advantage of opportunities to inform the community of this leadership role in pollution prevention.

The NCED in Norman, Oklahoma, offers environmental and OSHA training. It provides courses via the Postal Satellite Training Network (PSTN), the Postal Audio Training Network (PATN), classroom instruction, on-site training, and outside contractors. For information on course listings, dates, and on-site scheduling, contact the NCED at (405) 366-4390.



Pollution Prevention: Stormwater Systems

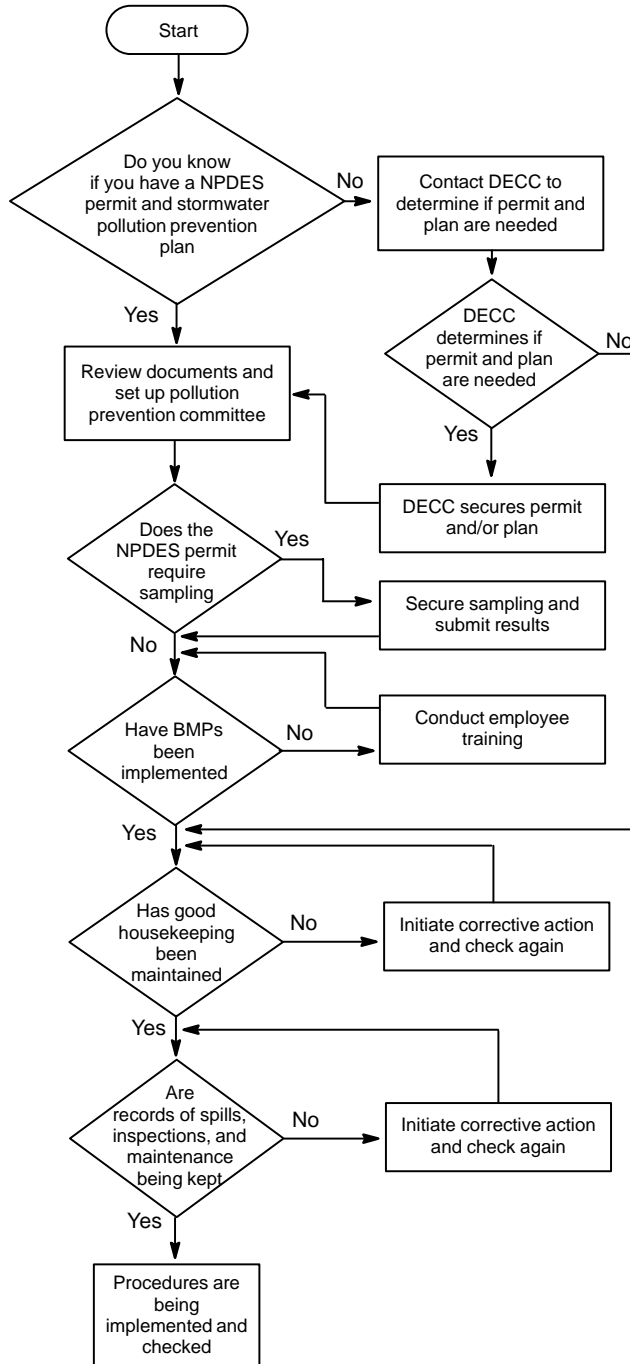
Water Issue:

Surface water and groundwater resources could become contaminated by activities at postal facilities.

Goal:

Prevent pollution.

Implementation:



Recordkeeping:

Inspection, maintenance, and monitoring records retained for at least 5 years as required by regulations and Postal Service policies.

Laws and Regulations:

- Pollution Prevention Act of 1990.
- Clean Water Act Amendments of 1987.
- NPDES.

Benefits:

- Prevents pollution.
- Complies with regulations.

Issues:

Requires permit to be in compliance.



Pollution Prevention: Groundwater

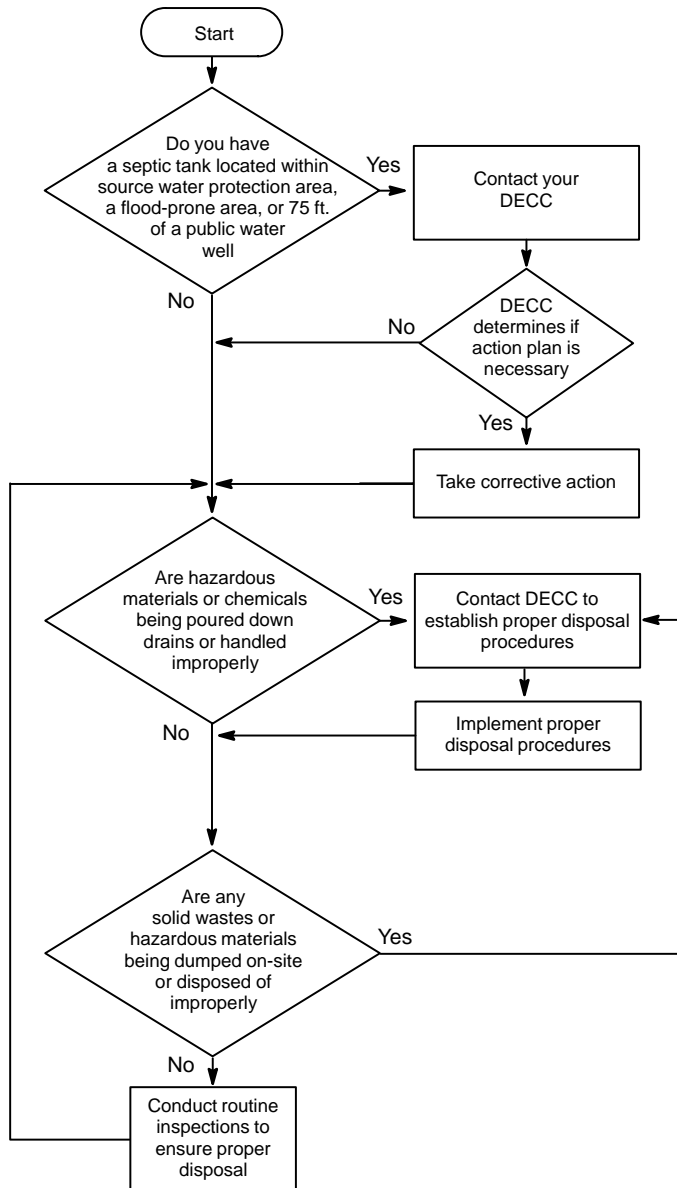
Water Issue:

Surface water and groundwater resources could become contaminated by activities at postal facilities.

Goal:

Prevent pollution.

Implementation:



Recordkeeping:

Inspection and maintenance records retained for at least 5 years as required by regulations and Postal Service policies.

Laws and Regulations:

- Pollution Prevention Act of 1990.
- SDWA.
- Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA).
- Resource Conservation and Recovery Act (RCRA).
- Underground injection control regulations.

Benefits:

- Prevents pollution.
- Complies with regulations.

Issues:

- Increases administrative time for implementation of BMPs and SPCCs.
- Increases disposal costs.



Pollution Prevention: Spills

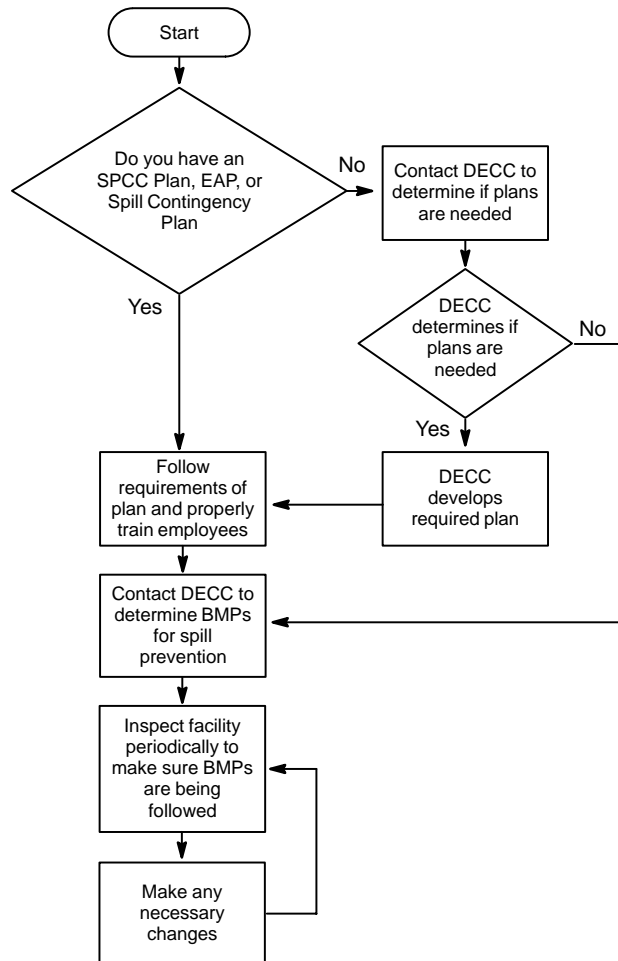
Water Issue:

Surface water and groundwater resources could become contaminated by activities at postal facilities.

Goal:

Prevent pollution.

Implementation:



Recordkeeping:

Inspection and maintenance records retained for at least 5 years as required by regulations and Postal Service policies.

Laws and Regulations:

Pollution Prevention Act of 1990.

Benefits:

- Prevents pollution.
- Complies with regulations.
- Minimizes cleanup costs.

Issues:

Increases administrative time for implementation of BMPs and plans.



8 Facility Manager's Responsibilities



The following outline summarizes your responsibilities as a facility manager concerning the use of water at your facility. These items address the regulatory, environmental, health and safety, and economics of water-related issues. Generally, you are responsible for ensuring safe drinking water, complying with water regulations, reducing the risk of transporting contaminants, and reducing costs associated with water consumption, as summarized below:

a. Water Sources:

- (1) Determine the source of the drinking water supply.
- (2) Post notices about current water quality problems and remove all out-of-date notices.
- (3) Register self-supply water systems in accordance with the SDWA.
- (4) Maintain records of all permits or pertinent documents at the facility.
- (5) Contact the DECC for compliance procedures for monitoring self-supply water quality.
- (6) For self-supply systems, contact a local plumbing contractor or Maintenance for assistance in arranging inspection schedules.

b. Water Distribution Systems:

- (1) Determine whether or not backflow prevention devices are required and, if so, where they should be installed.
- (2) Determine location(s) of existing backflow prevention devices.
- (3) Contact Maintenance to coordinate a BFP inspection, testing, and maintenance program.
- (4) Develop an employee awareness program.
- (5) Maintain records of inspections, testings, findings, and remedial actions.



As the facility manager, you are responsible for water-related issues at your facility:

- Have you read this manual?
- Do you understand the issues that apply to your facility?
- Have you implemented the required and recommended practices?
- Have you contacted the proper support personnel and groups?



- c. Water Use:
 - (1) Verify or conduct water cooler lead inspection and certification.
 - (2) Ensure that your facility meets water quality standards for domestic water uses.
 - (3) Monitor all process water runoff to ensure that it does not harm the environment by entering the stormwater collection system.
 - (4) Follow vehicle washing wastewater disposal guidelines.
 - (5) Follow local water use restrictions.
 - (6) Monitor water usage on water utility bills to determine if you need to implement water conservation measures.
 - (7) Coordinate a water audit and leak inspection as required.
- d. Collection System Components:
 - (1) Post signs above sinks and drains identifying substances prohibited for disposal.
 - (2) Ensure that SOPs to dispose of chemicals of concern are developed as required.
 - (3) Follow state and local regulations requiring on-site pretreatment prior to wastewater discharge.
 - (4) Develop an inspection and maintenance plan for pretreatment devices.
 - (5) Contact your DECC to determine whether or not your VMF or fueling operation must notify the sewer system about discharges or must obtain a NPDES or UIC permit and is in compliance with them.
- e. Wastewater Treatment Systems:
 - (1) Determine the type of sanitary wastewater disposal system — that is, POTW or on-site treatment system.
 - (2) If you are not hooked up to a POTW, inquire about hookup options.
 - (3) Maintain records of all permits or pertinent documents at your facility.
 - (4) Adhere to POTW permit conditions, such as pretreating the wastewater. Develop required inspection and maintenance procedures.
 - (5) If applicable, maintain permits and develop an inspection and maintenance plan for your septic system.
 - (6) If your facility has a package plant, ensure that it has the required permits and is being operated in accordance with the permit provisions.



(7) If your facility discharges process water wastewater that must be pretreated in accordance with a permit requirement, make sure that your facility is in compliance.

f. Leadership Role:

- (1) Implement BMPs and take necessary actions to prevent pollution from VMFs, fueling operations, improper storage, snow and deicing, and spills or improper dumping or disposing of substances harmful to the environment.
- (2) Try to eliminate use of the 17 chemicals targeted for elimination.
- (3) Maintain records of inspection schedules and corrective actions.
- (4) Educate employees about environmental policies.
- (5) Obtain required permits and ensure compliance with permit provisions, including prevention plans.



A Glossary of Terms and Acronyms



AECC	area environmental compliance coordinator.
AST	aboveground storage tank.
BFP	backflow prevention.
BMPs	best management practices — schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of U.S. waters, including treatment requirements, recycling, reduction, reuse, operating procedures, and practices to control facility site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act.
combined system	See sewer.
cross-connection	An unprotected connection between any part of a potable water system and any part of a system containing water or substances not safe for consumption.
CWA	Clean Water Act — redesignated name for the Federal Water Pollution Control Act following the 1987 amendments; the national law under which stormwater discharge is regulated.
DECC	district environmental compliance coordinator.
EAP	Emergency Action Plan.
EMIS	Environmental Management Information System.
EPA	Environmental Protection Agency.
facility water cycle	This cycle addresses the flow of water to, from, and within a postal facility including any treatment of potable water or wastewater.



FES	facilities environmental specialist.
FSO	facilities service office.
gal	gallon.
groundwater	Water located below the earth's surface in the zone of saturation.
hazardous waste	By-products of society that can pose a substantial or potential hazard to human health or the environment when improperly managed; they possess at least one of four characteristics (ignitability, corrosivity, reactivity, or toxicity) or appear on special EPA lists.
HVAC	heating, ventilation, and air-conditioning.
hydrologic cycle	This cycle describes the movement of water from the oceans, to the atmosphere, to the land, and back to the sea.
MFO	major facilities office.
MMO	maintenance management order.
monitoring	The measurement, sometimes continuous, of environmental quality.
MTSC	Maintenance Technical Support Center.
NCED	National Center for Employee Development.
NPDES	National Pollutant Discharge Elimination System — the system of permits issued by EPA or by states with EPA-approved programs.
OSHA	Occupational Safety and Health Administration — a federal organization that oversees the implementation of the Occupational Safety and Health Act of 1970 that strives to save lives, prevent injuries, and protect the health of American workers.
PATN	Postal Audio Training Network.
permit	A registration, license, or equivalent control document issued by EPA, authorized state agency, or authorized local agency to implement the environmental requirements.



pollutant	Dredged soil, solid waste, incinerator residue, filter backwash, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials (except those regulated under the Atomic Energy Activities of 1954, as amended), heat, wrecked or discharged equipment, rock, sand, cellar dirt, and industrial, municipal, and agricultural waste discharged to water.
potable water	Water that is safe for human consumption.
POTW	Publicly Owned Treatment Works — any device or system that is used to treat wastes from any facility whose operator is not the operator of the treatment works and is not a publicly owned treatment works.
process wastewater	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, by-product, or waste product.
process water	Water that is used in HVAC equipment, photographic dark rooms, and battery rooms. Water used for domestic processes, such as in restrooms, kitchens, or for custodial purposes, may also be considered process water.
PSTN	Postal Satellite Training Network.
RCRA	Resource Conservation and Recovery Act — the federal statute that regulates the generation, treatment, storage, disposal, or recycling of solid hazardous waste.
SDWA	Safe Drinking Water Act — the national law under which drinking water supplies are regulated.
self-supply water systems	On-site water sources such as wells, springs, and cisterns.
sewer	A channel or conduit that carries wastewater and stormwater runoff from the source to a treatment plant or receiving stream — sanitary sewers carry household, industrial, and commercial wastes; storm sewers carry runoff from rain or snow; combined sewers are used for both purposes.
solid waste	Nonliquid, nonsoluble materials ranging from municipal garbage to industrial wastes that contain complex, and sometimes hazardous, substances; solid wastes also include sewage sludge, agricultural refuse, construction and demolition wastes, and mining residues.



solvent	A substance (usually liquid) capable of dissolving or dispersing one or more other substances.
source water protection	Protection of waters (ground and surface) that are used for drinking water supply. Groundwaters are protected under the Safe Drinking Water Act, and surface waters are protected under the Clean Water Act. Management of source water quality is the science and practice of protecting the quality of these waters.
SOP	standard operating procedure.
SPCC Plan	Spill Prevention Control and Countermeasures Plan — required by CWA for any facility that, due to its vicinity, could discharge harmful amounts of petroleum products into navigable waters. The plan is designed to control spills through facility-specific prevention systems and to establish proper operating procedures, preventive maintenance, and appropriate containment and removal procedures.
stormwater	Rainwater runoff, snowmelt runoff, surface runoff, and drainage.
surface water	Any visible stream or body of water.
SWPPP	Stormwater Pollution Prevention Plan.
toxic	A substance harmful to living organisms.
treatment	Any method, technique, or process, including neutralization, designed to change the physical, chemical, or biological character of the composition of any hazardous waste so as to neutralize such wastes, to recover energy or material resources from the waste, or to render such waste nonhazardous or less hazardous; safer to transport, store, or dispose of; or amenable to recovery, storage, or reduction in volume.
UIC	Underground Injection Control — the program under the SDWA that regulates the use of wells to pump fluids into the ground.
UST	underground storage tank.
VMF	vehicle maintenance facility.
waste	Any material discarded as worthless, defective, or of no further use that, when disposed of, may pose a threat to human health or the environment.



wastewater

Spent or used water of a community comprising water-carried wastes from residences, institutions, commercial buildings, and industries.

wellhead protection program

A federal program for the protection of the area surrounding a well from physical, microbial, and chemical threats to groundwater sources.

