

Uninterrupted System Service Plan (USSP) for Community Water Systems serving ≤3300

Objectives

After this training, you will be able to:

- Understand the regulatory requirements for uninterrupted system service
- Describe the USSP required components
- Describe the USSP certification form
- Differentiate between the two different versions of the USSP form (versions “a” and “b”)
- Describe the importance and purpose of the deficiency assessment
- Complete a USSP and certification form, including the deficiency assessment, for your water system

§ 109.708. System service and auxiliary power

Chapter 109 § 109.708. System service and auxiliary power, outlines the requirements for uninterrupted system service, and is applicable to ALL community water systems (CWSs).

According to § 109.708(a), CWSs must “submit a certification on a certification form provided by the Department verifying completion of the uninterrupted system service plan (USSP) which was completed using the USSP form provided by the Department to ensure operation of the sources, treatment and pumping facilities necessary to ensure that safe and potable water is continuously supplied to users”.

COMPLIANCE TIP:

All CWSs **MUST** use the following two forms **provided by the Department:**

1. USSP Form (either version), which lists details of the CWS plan for providing uninterrupted service
2. USSP Certification Form, which verifies completion of the USSP Form

The certification form must be submitted no later than:

- 1) August 19, 2019 for systems serving 3,300 or fewer persons
- 2) August 17, 2020 for systems serving 3,301 – 10,000 persons
- 3) August 17, 2021 for systems serving greater than 10,000 persons.

§ 109.708(a) goes on to specify that “A continuous supply of safe and potable water is one that meets all applicable MCLs, MRDLs, and treatment techniques ... and is sufficient to maintain system pressure... throughout the distribution system.”

COMPLIANCE TIP:

Existing regulations establish water quality and water quantity requirements:

- §109.202 establishes water *quality* requirements
- §109.607 establishes water *quantity* requirements

Why is § 109.708 important?

Water outages caused by power failures or other emergencies can cause adverse effects including:

- Increased risk to public health – when water systems experience a sharp reduction in supply, public health is at risk due to the low or no pressure situations that are caused in the distribution system.
- Decreased pressure can allow intrusion of contaminants in distribution system piping from leaks and backflow of contaminants from cross connections.
- Dewatering of the distribution system can result in physical damage to pipes when the system is re-pressurized. This is exacerbated due to aging distribution piping.

Systems with redundancy and adequate planning are able to maintain operations until power is restored with little negative impact to customers. Therefore, **improvements in resiliency should reduce the number of water supply warnings systems need to issue, thereby making water operators' jobs easier.**

Several Northeastern states also have requirements for auxiliary power:

- New Jersey and New York have existing design standards for auxiliary power.
- New York requires standby power.
- Connecticut is in the process of updating its regulations to incorporate generator and emergency contingency and response plan requirements.

Chapter 109 § 109.708(b) *Auxiliary power and alternate provisions*, requires systems to provide uninterrupted service through one or more of the following methods:

- 1) Connection to at least two independent power feeds from separate substations
- 2) Onsite auxiliary power sources (that is, generators or engines)
- 3) A combination of alternate provisions, such as finished water storage capacity, interconnections with another public water system, portable generators, and other system specific alternate provisions to meet the requirements of subsection (a).

Corrective Action Schedule:

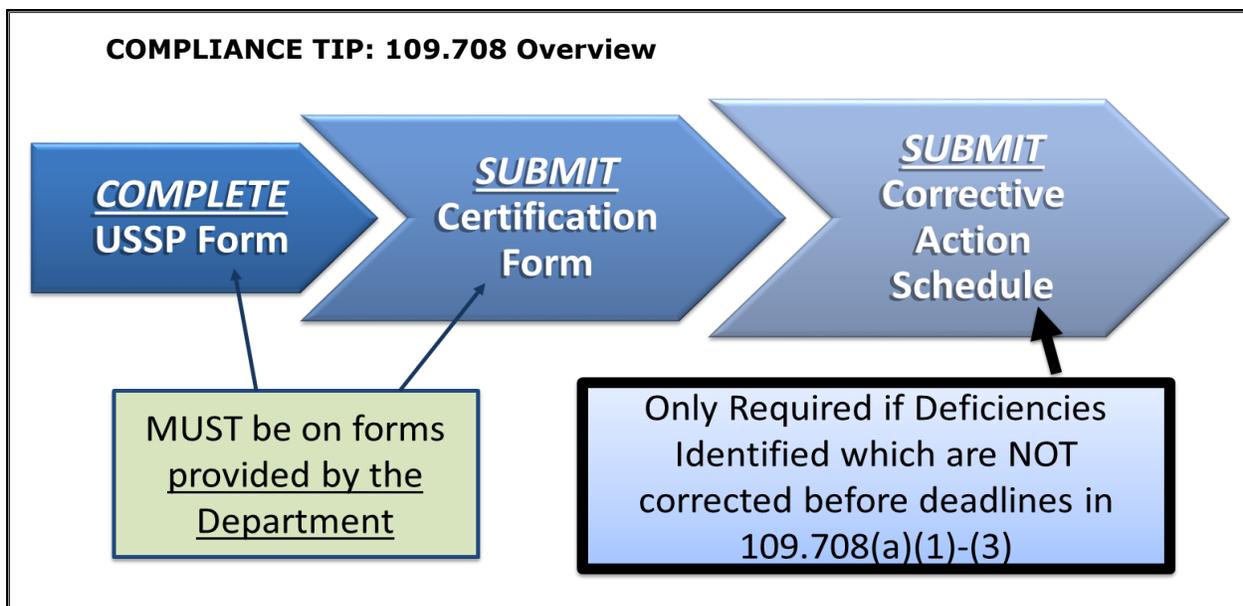
According to § 109.708(c) *Corrective action schedule*, "If the USSP and certification form completed in subsection (a) identify that deficiencies exist ... a community water supplier shall submit ... within 6 months ... a schedule which includes detailed corrective actions to address these deficiencies, including corresponding completion dates."

Deficiencies are identified and summarized on the USSP and certification form. For any deficiencies *not* corrected by the date the certification form is due, a corrective action schedule must be submitted:

- By February 19, 2020 or systems serving 3,300 or fewer persons
- By February 17, 2021 for systems serving 3,301 – 10,000 persons
- By February 17, 2022 for systems serving greater than 10,000 persons

The corrective action schedule must be “commensurate with the complexity of the associated corrective action.” This means that a relatively complex corrective action would be expected to require more time to complete than a simpler corrective action.

A corrective action schedule form is in development. Water systems can use their own form, as long as it contains all of the same information.



Uninterrupted System Service Plan (USSP) Certification Form

As a reminder, § 109.708(a) requires CWSs to “submit a certification on a certification form provided by the Department”. The purpose of the certification form is to verify to the Department that the USSP was completed as required. Certification forms are due by the following dates, which are specified in § 109.708(a)(1) through (3):

Population	Due Date
3,300 or less	August 19, 2019
3,301 – 10,000	August 17, 2020
Greater than 10,000	August 17, 2021

Small systems are required to comply first with the USSP regulations. That is due to the fact that in general, small systems are the least complex. Larger systems are generally more complex, and they may need to invest more time and money in order to comply.

The **Uninterrupted System Service Plan (USSP) Certification Form** (Document ID 3910-FM-BSDW0576) can be found on eLibrary.

A critical component of the USSP is the Deficiency Assessment, which will be covered later in this course. In addition to certifying completion of the USSP, a key element of the certification form is for the CWS to report whether any deficiencies were identified in the Deficiency Assessment, and therefore whether any additional corrective actions are needed for the plan to be considered adequate to provide uninterrupted service. If deficiencies were identified, the CWS should check "Yes" to answer this question:

Based on the Section III Deficiency Assessment of the USSP Form, are additional corrective actions needed in order for this plan to be considered adequate to provide uninterrupted system service for all critical facilities?

Yes No

I understand that if I answered "Yes", a detailed corrective action plan and corresponding completion date schedule must be submitted to the Department within 6 months of the dates specified in 109.708(a)(1) – (3).

If you answered "Yes" above, briefly summarize deficiencies identified that still require corrective actions:

Deficiency 1: _____
 Associated Critical Facility: _____

Deficiency 2: _____
 Associated Critical Facility: _____

Deficiency 3: _____
 Associated Critical Facility: _____

The system should also check the box in front of the statement below the question, which is to remind the system of the requirement to submit a corrective action plan. The corrective action plan must be submitted within 6 months after the certification form due date, or by the dates at the top of page 3.

The system also needs to list the deficiencies that were identified and the associated critical facility. The term critical facility as it relates to the USSP will be covered later in this course. There is space to list 3 deficiencies; if a system identifies additional deficiencies, they should attach *additional copies of the certification form* as needed.

Below the list of identified deficiencies, there is a space for the water system representative to certify by signing and dating the form. The expectation is that the PWS representative who had a lead role in completing the USSP should sign the certification form.

COMPLIANCE TIP:

In general, as system size increases, so should the size of the group of staff involved in reviewing the USSP to discuss potential deficiencies. Larger systems should not rely on only one person (operator or manager) to conduct the deficiency assessment. Multiple staff should provide input.

USSP Form "a" (Word Version)

The **Uninterrupted System Service Plan (USSP)** Word Version (a) (Document ID 3910-FM-BSDW0575a) can be found on eLibrary.

Instructions:

The first page of the form contains instructions for completion and some basic information about the USSP requirement. The first paragraph discusses a few examples of potential emergencies, the intent of § 109.708, and a review of the existing requirements in § 109.202 and § 109.607.

The last sentence of this first paragraph contains an important note:

"The Department recognizes that it is especially challenging to maintain uninterrupted system service during extreme and prolonged emergency events, and circumstances may arise that are outside of the control of the CWS."

The purpose of this statement is to point out that this requirement is not intended to be a way to generate violations for systems that may experience an extreme event. Water systems should consider emergencies that have happened in the past or that may potentially be likely to happen, with a goal of creating a plan that would cover those events.

The next section goes on to discuss Developing a Plan, and further emphasizes that point:

"CWSs should focus on developing a feasible plan **for the most likely emergency events historically experienced by that water system.**"

The plan should demonstrate the following 3 key elements. The expectation is that systems create a plan with these key elements in mind. These key elements provide a framework for reference for systems when considering what additional provisions may be needed and will be the basis for the Deficiency Assessment (covered later in this course).

1. Initial switchover to auxiliary power and/or implementation of alternate provisions **before** water quantity/quality is negatively impacted.
2. The combination of auxiliary power and/or alternate provisions will supply a quantity of water **equal to** average daily demand to **all** pressure zones throughout the distribution system
3. The combination of critical facilities should be operated in a manner that maintains adequate water quantity and quality for **at least the duration of** the most likely emergency events *historically experienced* at that water system.

As a reminder, water systems are required by regulation to use a form provided by the Department to complete the USSP. Small systems will most likely find the word version "a" to be the easiest to use. Version "b", which is an excel format that will be covered briefly in this course, may be the best option for larger water systems that have a large number of critical facilities and/or multiple pressure zones. However, each system, regardless of size, can choose which version of the form they prefer. It is important to note that **systems are NOT required to complete BOTH versions of the form.**

COMPLIANCE TIP:

- CWSs with detailed information in their updated Emergency Response Plan (ERP) that correlates with a section of the USSP can reference that section of their ERP when completing the USSP.
- They should reference specific sections and page numbers within the ERP (e.g *Section 5-1, Page 2*).
- This may be especially useful for SOPs that were recently updated.

COMPLIANCE TIP:

- **CWSs are not required to submit the completed USSP to the Department.** The USSP should be incorporated into the ERP as an attachment and kept onsite for Department review.

Part I. General Information:

As with most Department forms, Part I is for basic system specific information. However, with this form, the general information required includes some additional statistics:

- Critical Facility information (name, capacity, description, address)
- Hours of finished storage available
- Power required for critical facility operation in KWH
- Distribution system pressure zones

For the purposes of the USSP, “**critical facility**” is defined as **any facility necessary to supply an adequate quantity and quality of water**. There are different types of critical facilities. Examples of critical facilities include water treatment plants, raw and finished water pump stations, finished water storage tanks, booster chlorination facilities, etc. In general, critical facilities treat water, store finished water, or provide water from another area (i.e. interconnections). Water systems are responsible for identifying their critical facilities.

ALL CWSs have at least one critical facility – the treatment plant. Storage tanks are divided into the two categories of pumped and gravity fed; pumped storage requires power and gravity fed storage does not. This will be an important consideration when completing the USSP. A gravity fed tank may be used to supply water for a limited period of time while the treatment plant is inoperable. Interconnections that are used routinely to supply demand are a critical facility. Emergency use interconnections may be considered a provision that the system will use during an emergency to supply water. An important consideration with interconnections is whether it requires a pump and power or whether it can operate by gravity flow based on system pressures on both sides of the interconnection.

All critical facilities must be considered and included when completing your USSP and deficiency assessment. In general, small water systems will find it most straight forward to

complete one USSP per critical facility. Systems with multiple pressure zones may find it more efficient to complete the USSP by grouping and evaluating critical facilities by the pressure zones they supply water to.

Part II. Plan to Provide Uninterrupted System Service:

Part II. begins with some brief instructions. Systems should complete all applicable sections, based on which provisions they are planning to use to provide uninterrupted service. Systems are encouraged utilize as many provisions as possible for each critical facility.

The sections are specific to each provision listed in the regulation. While not specifically stated on the form, it is important to note that any provisions listed on the form must be consistent with § 109.708(b)(1) through (3).

Here is an example of one of the sections:

(A) Auxiliary Power	Connection to at least two independent power feeds from separate substations	
Description of Independent Power Feed	SOP to Utilize Independent Power Feed	
Is each independent power feed capable of supplying 100% of needed power? <input type="checkbox"/> Yes <input type="checkbox"/> No If "NO", please identify percent (%) of power needs and kWh supplied by each: _____ % _____ kWh		
Production capacity provided via this auxiliary power: _____ MGD		
Amount of time needed to switch over to this auxiliary power option: _____ hours		
Date this auxiliary power was last tested: _____		
Critical internal CWS staff needed to utilize this option: _____		
Critical external staff needed to utilize this option: _____		
24/7 phone numbers for all critical staff: 1. Name and Number: _____ 2. Name and Number: _____ 3. Name and Number: _____		

Sections (A) through (H) are all set up similarly, with a description and SOP to utilize the provision at the top, followed by questions pertaining to switchover and capacity that are specific for each option. These questions that are posed are critical for a system to consider if they are expecting to use each option during an emergency situation.

For each section, the system also needs to list critical staff needed in order to utilize the option. The expectation is that systems should list actual names and phone numbers of staff needed, not just a minimum number of staff. The plan should be updated as needed following staff turnover.

(A) Auxiliary Power – Connection to at least two independent power feeds from separate substations

If a water system is planning on utilizing this option for uninterrupted service, they need to be able to answer the questions in this section.

- Is each power feed capable of supplying 100% of the needed power? – i.e. Will it supply enough power to support the needs of the critical facility?
- What is the production capacity in MGD that can be provided via this provision?
- How long will it take to switch over to this provision? – this will be an important consideration in the deficiency assessment
- When was it last tested? – i.e. Will it function properly and as expected when the emergency situation happens?

(B) Auxiliary Power – On-site auxiliary power sources – permanent generators

The questions in Section B are similar to those in Section A, with a few additions.

- Systems are asked to provide an estimate of the hours the generator can be operated before refueling or service is required.
- Also, systems are asked about testing plans and when it was last tested. If a generator is tested weekly, that schedule should be described here, since the date last tested will not remain current.

(C) Auxiliary Power – Off-site auxiliary power sources – reserved access to portable generators (PaWARN, Portable, or Rental)

An important note on portable generators is the ability of the water system to have reserved access to a portable generator, through PaWARN, a rental contract, etc.

The remainder of this section is similar to Section B, with a few additions. For example, this section requires systems to consider not just switch over time, but also transportation and set up time, as well as details on the rental agreement and information on the generator owner.

(D) Alternate Provisions – Gravity-fed* finished water storage capacity (*does not require auxiliary power during power outage)

This section specifically refers to storage tanks that do NOT require power to supply water. Some specific considerations for this alternate provision include:

- the actual volume of water that can be provided (i.e. effective volume) – this must take operating ranges and pressure zones into account (see the note below and the tip on the following page on effective storage);
- the hours of finished water that can be provided;
- and whether all pressure zones can receive water from this tank during a power outage.

IMPORTANT NOTE:

When considering gravity-fed storage tanks to complete their USSP, water systems should focus on effective storage, NOT total storage. (See tip on the following page.)



TIP: What is effective storage?

Consider a system with a 35-foot tall tank that feeds water to two pressure zones.

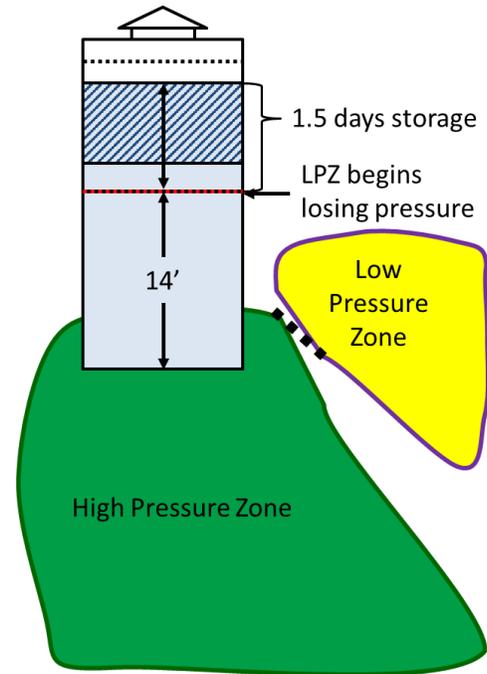
The tank overflows at 30 feet, and the normal operating range of the tank is 20 to 28 feet.

The water system estimates that they have 2.5 days of total storage at 28 feet, based on average daily demand.

However, the low-pressure zone customers begin to lose positive pressure when the tank drops to 14 feet.

Therefore, in reality, the system only has 1.5 days of effective storage in this tank.

- **Effective storage essentially refers to the ability to supply water to ALL pressure zones.**



(E) Alternate Provisions – Pumped* finished water storage capacity (*requires auxiliary power during power outage)

The difference between gravity fed and pumped finished water storage is that pumped storage requires power, so during an outage it will require auxiliary power, *IF it is going to be relied upon* during the outage.

(F) Alternate Provisions – Interconnection #1 with neighboring water system

This section is for the first interconnection. The description should include an overall description of the agreement with the selling system.

IMPORTANT NOTE: Multiple interconnections with the same water system can be grouped together *if they provide water to the same pressure zone*.

(G) Alternate Provisions – Interconnection #2 with neighboring water system

This section is for another interconnection and is identical to Section F.

(H) Alternate Provisions – “Other” – CWS should include any other alternate system specific provision(s) they have identified as valuable to maintain uninterrupted system service

Section H can be used by a water system that wishes to utilize an “other” alternate provision. This can be anything they have identified as valuable to maintain uninterrupted system service that is specific to their system.

Part III. USSP Form Deficiency Assessment and Certification of Completion:

In this section, the water system is asked to put their plans to the test with regard to how effectively they will be able to adequately provide uninterrupted service.

Note that the instructions for the deficiency assessment indicate that more than one person should be involved in this determination.

COMPLIANCE TIP:

- Determining if potential deficiencies exist is a very important decision.
- Even at small water systems, **more than one** individual should be involved in the deficiency assessment.
- Systems should consider if it may be beneficial for a water system staffer who did NOT complete the USSP to conduct the deficiency assessment.

The deficiency assessment is set up so that if the system answers “no” to any of the three questions, it indicates that the plan contains deficiencies. The three questions refer to the three key elements that must be considered when developing a plan, which are listed on page 1 of the instructions and were discussed on page 5 of this workbook.

1. The first part asks the system to consider the time it will take to switch over to auxiliary power and/or implement alternate provisions, compared to the hours of gravity fed storage available.

1a.) Hours needed to switch over to auxiliary power:	1c.) Hours gravity-fed finished water storage available:
1b.) Hours needed to implement alternate provisions:	
Deficiency Assessment Question #1: Are 1a and 1b < 1c?	

Early on in the emergency, if the hours of gravity fed storage is not greater than the amount of time needed to implement provisions, the water system will experience a loss of positive pressure BEFORE critical facilities are up and running to provide additional adequately treated water.

2. The second part asks the system to consider the total volume of water in million gallons per day (MGD) that will be provided via auxiliary power and alternate provisions compared to the average daily demand in MGD.

2a.) Total MGD provided via auxiliary power:	2c.) Average daily demand: MGD
2b.) Total MGD provided via alternate provisions:	
Deficiency Assessment Question #2: Is 2a + 2b ≥ 2c?	

If the average daily demand is greater than the quantity provided by emergency provisions, the water system will not provide an adequate quantity (MGD) of properly treated water to meet demand, therefore pressures will begin to drop and then the system will fail to meet the requirements of § 109.607.

3. The third part asks the system to consider the hours of consecutive operation of critical facilities provided via implementation of the completed USSP, compared with the duration of historical emergency events at the system (in hours).

3a.) Hours of consecutive operation of critical facilities provided via implementation of completed USSP:	3b.) Duration of historical emergency events at this water system? Hours
Deficiency Assessment Question #3: Is 3a ≥ 3b?	

If the duration of historical events is greater than the hours of service expected from emergency provisions, water quantity and/or quality will be compromised BEFORE the system is able to return to normal operations. The system will eventually fail to meet either § 109.202 or § 109.607.

COMPLIANCE TIP:

- The Deficiency Assessment is consistent with regulatory language in § 109.708 for a continuous supply of safe and potable water.
- A “No” answer to any of these three questions is indicative of a deficiency in the plan.

If a system answers “NO” to any of the three questions, they should NOT submit a certification form indicating deficiencies do not exist.

COMPLIANCE TIP:

The sooner a system completes their USSP plan and associated deficiency assessment, the more time they will have to:

- Begin working to correct the deficiencies
- Develop their corrective action schedule

It is important to note that some corrective actions that water systems propose to address USSP deficiencies may require a permit. Some examples of additions that may be proposed that would most likely require a permit include gravity-fed storage, pumped finished water storage, and an interconnection with neighboring water system.

Part IV. Training, Review and Update:

Finally, Part IV of the USSP form includes a place for the system to document staff training efforts on the USSP and implementation, as well as updates to the USSP.

COMPLIANCE TIP:

Water systems should consider their completed USSP to be a valuable tool. They should consider the potential benefits of:

- annual in-house trainings for staff which are based on implementation of the USSP; and
- using the results of those trainings to update portions of the USSP that did not work as expected and to add details to existing SOPs as needed.

Knowledge Check: Deficiency Assessment Workshop

Scenario:

- XYZ Water Town is a small CWS with one treatment plant using sodium hypochlorite to treat ground water.
- The system relies upon one gravity fed finished water storage tank.
- Larry Lead-Operator completes the USSP plan, then schedules a meeting with the backup operator and system engineer to review the plan and complete the deficiency assessment.
- You are the backup operator participating in that meeting.

Answer Deficiency Assessment Questions 1, 2, and 3 below, based on the applicable portions of the USSP completed by Larry, provided on the following page.

Complete the Deficiency Assessment for XYZ Water Town’s USSP:

USSP Plan – Deficiency Assessment	
1a.) Hours needed to switch over to auxiliary power: <input type="text"/>	1c.) Hours gravity-fed finished water storage available: <input type="text"/>
1b.) Hours needed to implement alternate provisions: <input type="text"/>	
Deficiency Assessment Question #1: Are 1a and 1b < 1c? <input type="text"/>	
2a.) Total MGD provided via auxiliary power: <input type="text"/>	2c.) Average daily demand: <input type="text"/> MGD
2b.) Total MGD provided via alternate provisions: <input type="text"/>	
Deficiency Assessment Question #2: Is 2a + 2b ≥ 2c? <input type="text"/>	
3a.) Hours of consecutive operation of critical facilities provided via implementation of completed USSP: <input type="text"/>	3b.) Duration of historical emergency events at this water system? <input type="text"/> Hours
Deficiency Assessment Question #3: Is 3a ≥ 3b? <input type="text"/>	

I. General Information

PWS Name: XYZ Water Town		PWSID #: 0123456
Critical Facility Name: XYZ Treatment Plant	Critical Facility Capacity: MGD	
Critical Facility Description: Primary/Only treatment plant	Average Daily Demand: 0.20 MGD	
Critical Facility Address: 789 River Road	Available Finished Storage: 0.08 MG	
Completed By (Name): Larry Lead-Operator	Hours of Finished Storage: 9	
Date Completed: 6/3/2019	Date(s) Updated:	
Power Required for Critical Facility Operation (KWH): ?	Distribution Sys Pressure Zones: 1	

(C) Auxiliary Power	Off-site auxiliary power sources – reserved access to portable generators (PaWARN, Portable, or Rental)	
Description of Portable Generator		SOP to Utilize Portable Generator
See Emergency Response Plan Section 5C - page 4		See Emergency Response Plan Section 5C - pages 1-3
What percentage of critical facility power needs can be met by generator? 100 % kWh		
Production capacity provided via this generator: 0.25 MGD		
Estimated duration of generator operation before refueling is required: 4 hours		
Duration generator can be operated before basic service required (fuel filter change, etc.): 72 hours		
Amount of time needed to transport / setup this auxiliary power option: 3 hours		
Date this auxiliary power rental agreement was established: 2/25/19		
Date this auxiliary power rental agreement was last updated:		
Entity who owns / will supply the auxiliary power rental equipment: Tom's Tractor and Rentals		
Critical internal CWS staff needed to utilize this option: Jane Smith - Operator with V8 truck		
Critical external staff needed to utilize this option: Tom or one of his employees		
What efforts were made to help insure that during an area wide emergency your system will be a priority to obtain this portable generator before another user (e.g. rental contract)? Paid down payment - contract specifies right of first refusal		
24/7 phone numbers for all critical staff:		
1. Name and Number: Jane Smith (555-234-5768)		
2. Name and Number: Larry Lead-Operator (555-124-6810)		
3. Name and Number: Tom's Rental cellphone # (555-012-3456)		

USSP Form “b” (Excel Version)

The **Uninterrupted System Service Plan (USSP)** Excel Version (b) (Document ID 3910-FM-BSDW0575b) can also be used by PWSs to complete their USSP.

As noted earlier, most if not all small systems will find the word version “a” of the USSP Form easiest to use. Therefore, small systems should begin working on their plan as soon as possible using the word version of the form.

COMPLIANCE TIP:

Large water systems with multiple pressure zones containing multiple critical facilities within each pressure zone may find it beneficial to complete the spreadsheet **one pressure zone at a time**, grouping critical facilities that will be relied upon to provide water within that specific pressure zone.

The spreadsheet version of the form contains all of the same information as the word version, just in a different format. A screenshot example from the spreadsheet is shown below. The spreadsheet is set up with multiple tabs. This screenshot is from the Critical Facility tab, where the water system lists their critical facilities in the first column, followed by all of the related information about each critical facility in the next several columns.

Critical Facility Name	Critical Facility Description	Critical Facility Address	Power Required for Critical Facility Operatoin (KWH)	Critical Facility Capacity (MGD)	Avg Daily Demand for this System (MGD)	Available Finished Storage (MG)	Hours of Finished Water Provided (Hour)	Distribution System Pressure Zones Served by this Critical Facility	(A) Independent Power Feeds	(B) Permanent Generators	(C) Reserved Portable Generators	(D) Gravity Fed Finished Storage	(E) Pumped Finished Storage	(F) Interconnection w/Another System	(G) Other Alternate Provision
Treatment Plant	Primary treatment plant for muskrat river	512 River Road	2000	3	2	0.35	4.2	Pressure Zone #1		x		x	x	x	
Interconnect 1	Interconnect w/ ABC Municipal Authority		NA	0.25	2	NA	NA	Pressure Zone #1						x	

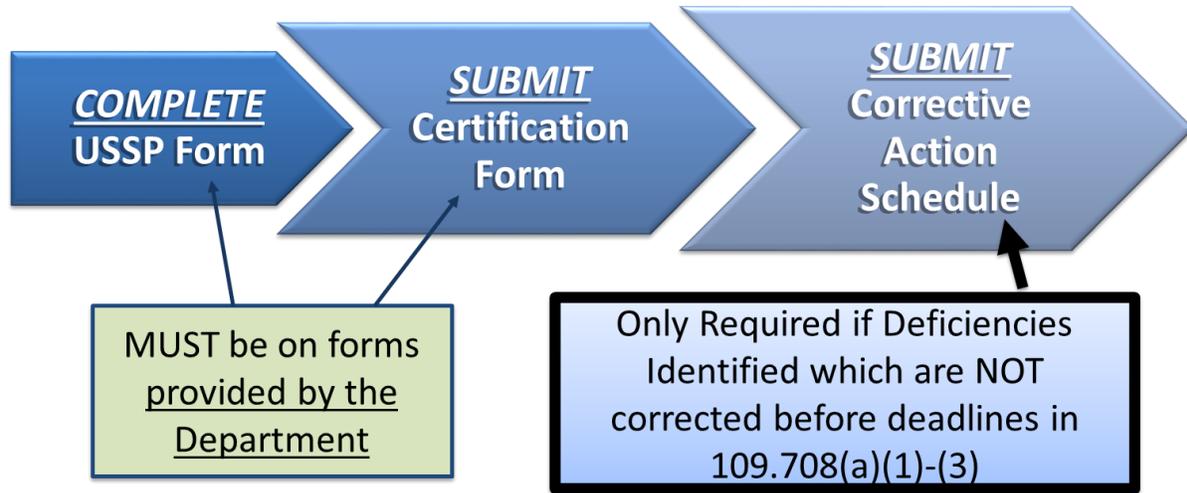
To the right, the system would indicate which provisions are applicable for that critical facility by putting an “x” under the appropriate column. Each provision also has its own tab on the spreadsheet. On each tab for the individual provisions, the system completes the information, which is the same as the word version of the form.

The spreadsheet also has an instructions tab, with specific instructions on how to complete the excel form.

When using the USSP Form spreadsheet, water systems are encouraged to look for relationships and overlap of critical facilities and alternate provisions. They should then consider and discuss how those relationships and overlaps strengthen and/or weaken their ability to provide uninterrupted system service.

Compliance Assistance

As a reminder, the figure below summarizes the requirements of § 109.708:



Compliance checklist:

Below is a checklist water systems may find helpful for complying with these requirements.

	Yes	No	NA
Did I use the USSP form (version a or b) provided by the Department?	<input type="checkbox"/>	<input type="checkbox"/>	
Did I use the USSP certification form provided by the Department?	<input type="checkbox"/>	<input type="checkbox"/>	
Did I submit the USSP certification form to the Department by August 19, 2019 (for systems serving ≤3,300)?	<input type="checkbox"/>	<input type="checkbox"/>	
For the Deficiency Assessment (Part III of the USSP form), did multiple staff review the USSP to look for deficiencies? Number of staff contributing to review of USSP: _____	<input type="checkbox"/>	<input type="checkbox"/>	
In the Deficiency Assessment, did I identify any deficiencies with my USSP that would prevent the water system from providing uninterrupted system service during an emergency?	<input type="checkbox"/>	<input type="checkbox"/>	
Did I list all deficiencies identified on my USSP certification form?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Have I corrected all deficiencies identified by August 19, 2019?*	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p>*IMPORTANT REMINDER: If I answered "No" to the above question:</p> <ul style="list-style-type: none"> I must submit a corrective action schedule to the Department within 6 months, or by February 19, 2020. I must also complete all corrective actions by the scheduled dates. 			

When completing the checklist, answering “No” to certain questions (indicated by the gray shading in the check box) is an indication that the water system has **not** fully complied with the requirements of § 109.708.

For the last question, answering “No” means that you have additional steps to take in order to be fully compliant. Remember that if you identify deficiencies within your USSP, and those deficiencies still exist as of August 19, 2019 (the date the certification form is due for systems serving ≤3,300), then you will need to submit a corrective action schedule to the Department. The corrective action schedule for small systems is due by February 19, 2020; it must include detailed corrective actions to address the deficiencies, and corresponding completion dates. In addition, you must subsequently complete all corrective actions by the scheduled dates.

Evaluating the effectiveness of a USSP:

The true test of the USSP will be during and immediately following the next emergency at the water system. For systems that did not identify deficiencies (or that indicated that all deficiencies were corrected), a failure to provide uninterrupted service during the next emergency may be an indication that the USSP does in fact contain deficiencies that were not previously identified or corrected. In order to prevent a reoccurrence during a future emergency, PWS staff and operators should review the emergency situation after the fact, to look for deficiencies by answering several questions. For example:

1. Did we adequately follow each section of our USSP during this emergency?
2. Which staff responded during this emergency?
3. Which critical facilities experienced problems?
4. What specific problems occurred at each of these critical facilities?
5. Do deficiencies exist in our USSP that resulted in a failure to provide uninterrupted system service during this emergency? If yes, what are they?
6. What revisions will be needed to update our USSP and when will they be completed?
7. What corrective actions do we need to take to improve our ability to provide uninterrupted system service in the future, and when will they be completed?

Evaluating the emergency event after the fact to complete responses to these questions and evaluate and update the USSP will be critical for the system to move forward and prevent a similar occurrence.

Key Points

- According to § 109.708(a), all CWSs must use the following two forms provided by the Department:
 - USSP Form (either version “a” or “b”)
 - USSP Certification Form
- The certification form must be submitted to the Department by no later than:
 - August 19, 2019 for systems serving 3,300 or fewer persons

- August 17, 2020 for systems serving 3,301 – 10,000 persons
- August 17, 2021 for systems serving greater than 10,000 persons
- The USSP Form must describe how the CWS plans to provide uninterrupted system service, according to § 109.708(b), through one or more of the following methods:
 - Connection to at least two independent power feeds from separate substations
 - Onsite auxiliary power sources
 - A combination of alternate provisions
- If the USSP form contains deficiencies, the CWS must submit a corrective action schedule to the Department within 6 months of the certification form due date, in accordance with § 109.708(c).
- Systems may use either the word version “a” or the excel version “b” of the USSP Form. In general, small systems may prefer the word version and large systems may prefer the excel version, but they can choose to use either. They do not need to complete both.
- Both versions of the USSP include a Deficiency Assessment, which evaluates three key elements of the plan:
 - Whether the initial switchover to auxiliary power or alternate provisions will occur before water quantity or quality is negatively impacted;
 - Whether the auxiliary power or alternate provisions will supply a quantity of water equal to the average daily demand to all pressure zones;
 - Whether the critical facilities will be able to maintain adequate water quantity and quality for at least the duration of the most likely emergency events.