pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

DRAFT

Comprehensive Monitoring Plan

PART 1: GENERAL SYSTEM INFORMATION

PWS Name:			PWSID:
PWS Type:	☐ CWS ☐ NTNCWS ☐ TNCWS	Population Served:	
Mailing Address:			
Contact Person:			
Phone:		Email:	
Source Types: (check all that apply)	☐ **Surface Water** ☐ **Ground Water** ☐ **GUDI – GW under direct influence of SW**	☐ **Purchased Surface Water** ☐ **Purchased Ground Water** ☐ **Purchased GUDI – GW under direct influence of SW**	**Is PWS selling finished water to any other public water system?** ☐ **Yes** ☐ **No**

PART 2: SOURCE & ENTRY POINT (EP) INFORMATION

Availability and Type Codes

Availability Codes	Source Type Codes	
P = Permanent	G = Groundwater	GUDI = Groundwater Under Direct Influence (of SW)
S = Seasonal	W = Purchased GW	
E = Emergency *(purchased sources only)*	S = Surface Water	Z = Purchased GUDI
	P = Purchased SW	

Table 2A – System-owned Sources

Source ID	Source Name	Source Availability	Source Type	EP ID	EP Name	EP Availability

Table 2B – Purchased Sources

Source ID	Source Name	Source Availability	Source Type	EP ID	EP Availability	Seller's PWS ID	Distribution Disinfectant Used by Seller

PART 3: NUMBER OF SAMPLES REQUIRED

EP ID	No. Sources	Source Contribution	Description of How Sources Used	No. Samples Req'd
		☐ Alternated ☐ Blended ☐ Both ☐ N/A		
		☐ Alternated ☐ Blended ☐ Both ☐ N/A		
		☐ Alternated ☐ Blended ☐ Both ☐ N/A		
		☐ Alternated ☐ Blended ☐ Both ☐ N/A		
		☐ Alternated ☐ Blended ☐ Both ☐ N/A		
		☐ Alternated ☐ Blended ☐ Both ☐ N/A		
		☐ Alternated ☐ Blended ☐ Both ☐ N/A		
		☐ Alternated ☐ Blended ☐ Both ☐ N/A		
		☐ Alternated ☐ Blended ☐ Both ☐ N/A		
		☐ Alternated ☐ Blended ☐ Both ☐ N/A		

NOTES:

- If only 1 source contributes to EP or sources are blended at a consistent ratio, then only 1 sample/EP is needed for each set of compliance monitoring.
- If multiple sources are used that are alternated where each source is operated by itself, then the number of samples needed for each set of compliance monitoring is equal to the number of sources at that EP.
- If multiple sources are used that are alternated differently or that are blended at different ratios then describe how the sources are used and identify the number of samples that will be required for each set of compliance monitoring to ensure all sources are included.
    - If alternated, what conditions determine when the sources are switched (such as a set schedule)? Is the switchover automatic or manual?
    - If blended, how are the sources used and what conditions determine the blending ratio?

PART 4: TREATMENT INFORMATION

For *each* EP ID, check the appropriate box(es) for the contaminant(s) for which treatment has been installed. If no treatment has been installed, check the N/A box for that contaminant group.

EP ID	IOCs ☐ N/A	VOCs ☐ N/A	SOCs ☐ N/A
	☐ Antimony ☐ Cyanide ☐ Arsenic ☐ Fluoride ☐ Asbestos ☐ Mercury ☐ Barium ☐ Nitrate ☐ Beryllium ☐ Nitrite ☐ Cadmium ☐ Selenium ☐ Chromium ☐ Thallium **RADs ☐ N/A** ☐ Gross Alpha ☐ Radium 226 ☐ Radium 228 ☐ Uranium	☐ 1,1-Dichloroethylene* ☐ Benzene ☐ cis-1,2-Dichloroethylene ☐ Carbon Tetrachloride ☐ trans-1,2-Dichloroethylene* ☐ Dichloromethane ☐ 1,2-Dichloroethane* ☐ Ethylbenzene ☐ 1,1,1-Trichloroethane* ☐ Monochlorobenzene ☐ 1,1,2-Trichloroethane* ☐ Styrene ☐ 1,2,4-Trichlorobenzene ☐ Toluene ☐ 1,2-Dichloropropane ☐ Trichloroethylene* ☐ o-Dichlorobenzene ☐ Tetrachloroethylene* ☐ para-Dichlorobenzene ☐ Xylenes (total) ☐ Vinyl Chloride	☐ 2,4-D ☐ Endrin ☐ 2,4,5-TP ☐ EDB ☐ Alachlor ☐ Glyphosate ☐ Atrazine ☐ Heptochlor ☐ Benzo(a)pyrene ☐ Heptachlor epoxide ☐ Carbofuran ☐ Hexachlorobenzene ☐ Chlordane ☐ Hexachlorocyclopentadiene ☐ Dalapon ☐ Lindane ☐ Di(ethylhexyl)adipate ☐ Methoxychlor ☐ Di(ethylhexyl)phthalate ☐ Oxamyl (Vydate) ☐ DBCP ☐ PCBs ☐ Dinoseb ☐ Pentachlorophenol ☐ Dioxin ☐ Picloram ☐ Diquat ☐ Simizine ☐ Endothall ☐ Toxaphene
EP ID	**IOCs ☐ N/A**	**VOCs ☐ N/A**	**SOCs ☐ N/A**
	☐ Antimony ☐ Cyanide ☐ Arsenic ☐ Fluoride ☐ Asbestos ☐ Mercury ☐ Barium ☐ Nitrate ☐ Beryllium ☐ Nitrite ☐ Cadmium ☐ Selenium ☐ Chromium ☐ Thallium **RADs ☐ N/A** ☐ Gross Alpha ☐ Radium 226 ☐ Radium 228 ☐ Uranium	☐ 1,1-Dichloroethylene* ☐ Benzene ☐ cis-1,2-Dichloroethylene ☐ Carbon Tetrachloride ☐ trans-1,2-Dichloroethylene* ☐ Dichloromethane ☐ 1,2-Dichloroethane* ☐ Ethylbenzene ☐ 1,1,1-Trichloroethane* ☐ Monochlorobenzene ☐ 1,1,2-Trichloroethane* ☐ Styrene ☐ 1,2,4-Trichlorobenzene ☐ Toluene ☐ 1,2-Dichloropropane ☐ Trichloroethylene* ☐ o-Dichlorobenzene ☐ Tetrachloroethylene* ☐ para-Dichlorobenzene ☐ Xylenes (total) ☐ Vinyl Chloride	☐ 2,4-D ☐ Endrin ☐ 2,4,5-TP ☐ EDB ☐ Alachlor ☐ Glyphosate ☐ Atrazine ☐ Heptochlor ☐ Benzo(a)pyrene ☐ Heptachlor epoxide ☐ Carbofuran ☐ Hexachlorobenzene ☐ Chlordane ☐ Hexachlorocyclopentadiene ☐ Dalapon ☐ Lindane ☐ Di(ethylhexyl)adipate ☐ Methoxychlor ☐ Di(ethylhexyl)phthalate ☐ Oxamyl (Vydate) ☐ DBCP ☐ PCBs ☐ Dinoseb ☐ Pentachlorophenol ☐ Dioxin ☐ Picloram ☐ Diquat ☐ Simizine ☐ Endothall ☐ Toxaphene

PART 5: WAIVER INFORMATION

For *each* EP ID, check the appropriate box(es) for the contaminant(s) for which a waiver has been approved. If no waivers have been approved for that contaminant group, check the N/A box.

EP ID	IOCs ☐ N/A	VOCs ☐ N/A		SOCs ☐ N/A	
	☐ Antimony	☐ 1,1-Dichloroethylene*	☐ Benzene	☐ 2,4-D	☐ Endrin
	☐ Arsenic	☐ cis-1,2-Dichloroethylene	☐ Carbon Tetrachloride	☐ 2,4,5-TP	☐ EDB
	☐ Asbestos	☐ trans-1,2-Dichloroethylene*	☐ Dichloromethane	☐ Alachlor	☐ Glyphosate
	☐ Barium	☐ 1,2-Dichloroethane*	☐ Ethylbenzene	☐ Atrazine	☐ Heptochlor
	☐ Beryllium	☐ 1,1,1-Trichloroethane*	☐ Monochlorobenzene	☐ Benzo(a)pyrene	☐ Heptachlor epoxide
	☐ Cadmium	☐ 1,1,2-Trichloroethane*	☐ Styrene	☐ Carbofuran	☐ Hexachlorobenzene
	☐ Chromium	☐ 1,2,4-Trichlorobenzene	☐ Toluene	☐ Chlordane	☐ Hexachlorocyclopentadiene
	☐ Cyanide	☐ 1,2-Dichloropropane	☐ Trichloroethylene*	☐ Dalapon	☐ Lindane
	☐ Fluoride	☐ o-Dichlorobenzene	☐ Tetrachloroethylene*	☐ Di(ethylhexyl)adipate	☐ Methoxychlor
	☐ Mercury	☐ para-Dichlorobenzene	☐ Xylenes (total)	☐ Di(ethylhexyl)phthalate	☐ Oxamyl (Vydate)
	☐ Selenium	☐ Vinyl Chloride		☐ DBCP	☐ PCBs
	☐ Thallium			☐ Dinoseb	☐ Pentachlorophenol
				☐ Dioxin	☐ Picloram
				☐ Diquat	☐ Simizine
				☐ Endothall	☐ Toxaphene
EP ID	**IOCs ☐ N/A**	**VOCs ☐ N/A**		**SOCs ☐ N/A**	
	☐ Antimony	☐ 1,1-Dichloroethylene*	☐ Benzene	☐ 2,4-D	☐ Endrin
	☐ Arsenic	☐ cis-1,2-Dichloroethylene	☐ Carbon Tetrachloride	☐ 2,4,5-TP	☐ EDB
	☐ Asbestos	☐ trans-1,2-Dichloroethylene*	☐ Dichloromethane	☐ Alachlor	☐ Glyphosate
	☐ Barium	☐ 1,2-Dichloroethane*	☐ Ethylbenzene	☐ Atrazine	☐ Heptochlor
	☐ Beryllium	☐ 1,1,1-Trichloroethane*	☐ Monochlorobenzene	☐ Benzo(a)pyrene	☐ Heptachlor epoxide
	☐ Cadmium	☐ 1,1,2-Trichloroethane*	☐ Styrene	☐ Carbofuran	☐ Hexachlorobenzene
	☐ Chromium	☐ 1,2,4-Trichlorobenzene	☐ Toluene	☐ Chlordane	☐ Hexachlorocyclopentadiene
	☐ Cyanide	☐ 1,2-Dichloropropane	☐ Trichloroethylene*	☐ Dalapon	☐ Lindane
	☐ Fluoride	☐ o-Dichlorobenzene	☐ Tetrachloroethylene*	☐ Di(ethylhexyl)adipate	☐ Methoxychlor
	☐ Mercury	☐ para-Dichlorobenzene	☐ Xylenes (total)	☐ Di(ethylhexyl)phthalate	☐ Oxamyl (Vydate)
	☐ Selenium	☐ Vinyl Chloride		☐ DBCP	☐ PCBs
	☐ Thallium			☐ Dinoseb	☐ Pentachlorophenol
				☐ Dioxin	☐ Picloram
				☐ Diquat	☐ Simizine
				☐ Endothall	☐ Toxaphene

PART 6: SAMPLING INFORMATION

Monitoring Status & Frequency Codes

Monitoring Status Codes	Monitoring Frequency Codes	
I = Initial/Increased	A = Annual	3 = Triennial (every 3 years)
S = Standard/Routine	Q = Quarterly	9 = Every 9 years
R = Reduced	W = Waiver Approved	6 = Every 6 years (RADs only)

NOTE: Samples may be composited for IOCs, VOCs and SOCs (RADs samples may *not* be composited). If the population is greater than 3,300, compositing may only be done at sampling points within a single system. If the population is less than or equal to 3,300, samples may be composited among different systems. No more than 5 samples may be included in the composite sample.

Table 4A – Inorganic Chemicals (IOCs) *Year Waiver Expires:*_____

EP ID	Monitoring		Year Due	Sampling Schedule	Included in Composite?	EPs Included in Composite Sample
	Status	Frequency				

NOTE: Compliance monitoring for contaminants for which treatment has been installed must be conducted at least annually, unless increased monitoring is required. For *each* EP, identify in a separate row any individual contaminants that are on a monitoring frequency that is different from the group frequency.

Table 4B – Volatile Organic Chemicals (VOCs) *Year Waiver Expires:*_____

EP ID	Monitoring		Year Due	Sampling Schedule	Included in Composite?	EPs Included in Composite Sample
	Status	Frequency				

NOTE: Compliance monitoring for all VOCs must be conducted at least annually if any VOC removal treatment has been installed or if any VOCs were previously detected, unless increased monitoring is required.

Table 4C – Synthetic Organic Chemicals (SOCs) *Year Waiver Expires:_____*

EP ID	Monitoring		Year Due	Sampling Schedule	Included in Composite?	EPs Included in Composite Sample
	Status	Frequency				

NOTES: Compliance monitoring for contaminants for which treatment has been installed or that were previously detected must be conducted at least annually unless increased monitoring is required. For *each* EP, identify in a separate row any individual contaminants that are on a monitoring frequency that is different from the group frequency.

Table 4D – Radiological Chemicals (RADs)

EP ID	Contaminant	Monitoring		Year Due	Sampling Schedule
		Status	Frequency		
	Gross Alpha				
	Ra 226/228				
	Uranium				
	Gross Alpha				
	Ra 226/228				
	Uranium				
	Gross Alpha				
	Ra 226/228				
	Uranium				

NOTE: Compliance monitoring for contaminants for which treatment has been installed must be conducted at least annually, unless increased monitoring is required.

PART 5: ATTACHMENTS

Attachment 1 – *Coliform Sample Siting Plan*
Attachment 2 – *Disinfectants/Disinfection Byproducts Monitoring Plan*
Attachment 3 – *Lead & Copper Sample Siting Plan*

3900-FM-BSDWxxxx xx/20xx

Date Received _____

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF SAFE DRINKING WATER

ANNUAL SOURCE WATER PROTECTION PROGRAM UPDATE

THIS FORM SHOULD BE COMPLETED IN ORDER TO MAINTAIN APPROVED STATUS OF A LOCAL SOURCE WATER PROTECTION PROGRAM.

REPORT FOR CALENDAR YEAR: JAN. 1 TO DEC. 31, _____ (Fill in ***previous*** year)

RETURN BY **MARCH 31** TO THE SAFE DRINKING WATER PROGRAM MANAGER AT THE REGIONAL OFFICE THAT SERVES YOUR COUNTY (See list on page 2)

1. System Name		**2. System Address**
3. PWSID#	**4. Municipality**	**5. System Phone #**
6. Source ID(s) # / Well ID(s) #		**8. County**
8. Contact Person Name		**9. Contact Person Address**
10. Contact Person Phone #		**11. E-mail Address**

Please answer the following questions as completely as possible, and include additional pages if necessary.

1. List any major changes in source water withdrawal, including new or abandoned sources.
2. Please describe any land use changes within the source water protection area.
3. List any new contaminant sources including the type, amount, and distance from each water source. Locate the contaminant source(s) on a map as well as the water source and attach to this form.

4. Include any contaminant sources that are no longer a threat to the water supply. Please explain. Locate the contaminant source(s) on a map and please attach to this form.
5. Describe resources that have been applied to the source water protection program (budget items, in-kind sources, materials, etc.).
6. Are you complying with your management implementation schedule? ☐ **Yes** ☐ **No** **If not, please explain:** **Describe any management techniques that have been implemented.**
7. Include future plans and implementation dates for the upcoming year.

8. Signature	**9. Title**	**9. Date**

DEP REGIONAL OFFICES		
Northwest Region - SDW 230 Chestnut St. Meadville, PA 16335-3481 814-332-6899 ***Counties:*** *Butler, Clarion, Crawford, Elk, Erie, Forest, Jefferson, Lawrence, McKean, Mercer, Venango and Warren*	**Northcentral Region - SDW** 208 W. Third St., Suite 101 Williamsport, PA 17701 570-327-3636 ***Counties:*** *Bradford, Cameron, Clearfield, Centre, Clinton, Columbia, Lycoming, Montour, Northumberland, Potter, Snyder, Sullivan, Tioga and Union*	**Northeast Region - SDW** 2 Public Square Wilkes-Barre, PA 18711-0790 570-826-2511 ***Counties:*** *Carbon, Lackawanna, Lehigh, Luzerne, Monroe, Northampton, Pike, Schuylkill, Susquehanna, Wayne and Wyoming*
Southwest Region - SDW 400 Waterfront Drive Pittsburgh, PA 15222-4745 412-442-4051 ***Counties:*** *Allegheny, Armstrong, Beaver, Cambria, Fayette, Greene, Indiana, Somerset, Washington and Westmoreland*	**Southcentral Region - SDW** 909 Elmerton Ave. Harrisburg, PA 17110 717-705-4708 ***Counties:*** *Adams, Bedford, Berks, Blair, Cumberland, Dauphin, Franklin, Fulton, Huntingdon, Juniata, Lancaster, Lebanon, Mifflin, Perry and York*	**Southeast Region - SDW** 2 E. Main Street Norristown, PA 19401 484-250-5900 ***Counties:*** *Bucks, Chester, Delaware, Montgomery and Philadelphia*

Note: CWS should incorporate this template into their existing Emergency Response Plan.

DRAFT
Uninterrupted System Service Plan (USSP) Template

Pennsylvania's Community Water System (CWS) sources and treatment facilities are susceptible to emergency situations resulting from both natural and man-made disasters. Examples of emergencies include tropical storms, flooding, high winds, ice, snow, industrial chemical plant runoff, pipeline ruptures, and transportation corridor spills. Chapter 109.708 (a) – (c) amendments are focused on improving the reliability of service provided to all consumers by requiring the development of a feasible plan to consistently supply an adequate quantity of safe and potable water during emergency situations. This Uninterrupted System Service Plan (USSP) Template is provided to help develop this important plan. To minimize the reporting burden and for maintaining security of sensitive documents, the completed USSP will not be required to be reported to the Department; rather, this information should be incorporated into existing Emergency Response Plans and kept onsite for Department review upon request.

I. General Information

PWS Name:		**PWSID #:**	
Critical Facility Name:		**Critical Facility Capacity:**	MGD
Critical Facility Description:		**Average Daily Demand:**	MGD
Critical Facility Address:		**Available Finished Storage:**	MG
Completed By (Name):		**Hours of Finished Storage:**	
Date Completed:		**Date(s) Updated:**	

II. Plan to Provide Uninterrupted System Service

Please complete all of the below sections which your CWS is prepared to utilize to provide adequate quantity and quality of water during emergency situations. Systems are encouraged to be prepared to utilize as many methods as possible to maximize their capability to provide uninterrupted system service for each critical operational facility. The most effective plans carefully consider both the duration of time needed to switchover to a particular system service option as well as the efficacy of each option to provide adequate quantity of safe and potable water. Developing detailed Standard Operating Procedures (SOPs) for utilizing each alternative is critical to insuring efficient and effective implementation during emergency situations. When determining hours of operation or adequacy of finished water storage, systems should consider finished water volumes necessary to maintain adequate operating pressures throughout all portions of the distribution system. A separate template should be completed for each critical facility utilized by the CWS. For the purposes of this template, "critical facility" is defined as any facility necessary to supply adequate quantity and quality of water (e.g. water treatment plants, raw and finished water pump stations, finished water storage tanks, booster chlorination facilities, etc).

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

Description of Auxiliary Power	SOP to Utilize Auxiliary Power

Additional production capacity provided via this auxiliary power: MGD
Additional hours of operation provided by this auxiliary power: Hours
Amount of time needed to switchover to this auxiliary power option: Hours
Date this auxiliary power was last tested:
Critical 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

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

Description of Equipment	SOP to Utilize Equipment

Additional production capacity provided via this auxiliary power: MGD
Additional hours of operation provided by this auxiliary power: Hours
Amount of time needed to switchover to this auxiliary power option: Hours
Date this auxiliary power was last tested:
Critical 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

(C) Auxiliary Power	Off-site auxiliary power sources – portable generators (PaWARN or Rental)
Description of Equipment	**SOP to Utilize Equipment**

Additional production capacity provided via this auxiliary power: MGD
Additional hours of operation provided by this auxiliary power: Hours
Amount of time needed to switchover to this auxiliary power option: Hours
Date this auxiliary power was last tested:
Critical 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**

(D) Alternate Provisions	Finished Water Storage Capacity
Description of Storage	**SOP to Utilize Storage**

Additional quantity of finished water provided by this alternate provision: MGD
Additional hours of finished water supply provided by this alternate provision: Hours
Amount of time needed to switchover (valves) to this alternate provision: Hours
Date finished water storage capacity was last relied upon during an emergency:
Critical 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

(E) Alternative Provision	Interconnection #1 with neighboring water system
Description of Interconnection	**SOP to Utilize Interconnection**

Additional finished water supply provided via this interconnection: gpm and psi
Additional hours of operation provided by this interconnection: Hours
Amount of time needed to switchover (valves) to this interconnection: Hours
Date this interconnection was last tested under actual operating pressures:
Critical 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

(F) Alternative Provision	Interconnection #2 with neighboring water system
Description of Interconnection	**SOP to Utilize Interconnection**

Additional finished water supply provided via this interconnection: gpm and psi
Additional hours of operation provided by this interconnection: Hours
Amount of time needed to switchover (valves) to this interconnection: Hours
Date this interconnection was last tested under actual operating pressures:
Critical 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

(G) Alternative Provision	"Other" - CWS should include other alternative provisions they have identified as valuable to maintaining uninterrupted system service

Description of Alternate Provision	SOP to Utilize Alternate Provision

Additional production capacity provided via this option: MGD
Additional hours of operation provided by this option: Hours
Amount of time needed to switchover to this option: Hours
Date this option was last tested:
Critical 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

III. Training Review and Update

The following staff have been trained on implementation of the USSP:

- **Name/ Training Date**

During the training, the SOPs to implement were reviewed and updated as necessary, along with the overall USSP.

Next scheduled training / update: Date:

USSP Completed By Signature:	**Date:**
USSP Reviewed By Signature:	**Date:**