New Jersey Department of Environmental Protection
Division of Water Supply and Geoscience

Water Quality Parameter Sampling Plan Guidance

February 2018

The Lead and Copper Rule (LCR) under the Federal Safe Drinking Water Act is applicable to public community water systems(CWS) and non-transient non-community water systems (NTNCWS). The LCR requires that certain Water Quality Parameters (WQP) be monitored in regard to a water system's vulnerability to corrosion. This monitoring is intended to determine whether a water supply is corrosive, identify appropriate corrosion control treatment (CCT) options if needed, and determine whether CCT is being properly operated and maintained following installation (40 CFR 141.87). For most water systems that exceed the lead/copper Action Level, corrosion control is the primary mechanism for reducing lead and copper levels in the distribution system.

The NJDEP is requiring all small and medium water systems (systems serving less than or equal to 50,000) that use CCT for lead and copper to conduct ongoing WQP monitoring after the installation of CCT. All large water systems (serving greater than 50,000) must conduct ongoing WQP monitoring once they are determined to be optimized per the LCR.

Appropriately characterizing a system and understanding the sources of water and the accompanying treatment, is necessary to determine the appropriate WQPs to be sampled at a water system's entry point to the distribution system (EPTDS), and throughout the distribution system (DS). This document provides guidance on how to prepare an acceptable WQP Sampling Plan (WQPSP). A template along with additional guidance, and all applicable forms are available on our webpage (http://www.nj.gov/dep/watersupply/dwc-lead-public.html). Water systems may need to expand sections of the template as necessary to tailor their WQPSP to meet the State requirements, and the needs of their water system.

Acknowledgements: This document was prepared using various resources including EPA's Lead and Copper Rule Monitoring and Reporting Guidance for Public Water Systems (March 2010)

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1. Sampling Plan Certification

The WQPSP is required to be certified by the plan preparer, water system owner, and licensed operator. As all three parties have a responsible role in developing and/or implementing the WQPSP, these parties shall review and sign off on the WQPSP to acknowledge that the information provided is true and accurate to the best of their knowledge and belief. The signature certification shall also include the date of certification, the title of the person providing certification, and applicable license number (for licensed operators).

Each time the WQPSP is updated it must be re-certified by the plan preparer, water system owner, and licensed operator.

2. General Water System Information

Information that is required includes:

- Water system name;
- PWSID number;
- Water system type (CWS, NTNCWS); *Transient/Non-Public Daycares may also be following this guidance to comply with the Division of Childcare and Families licensing process.*
- NTNCWS sensitive population served (daycare, school, hospital);
- Water system source type (GW, SW, GUDISW, SWP, GWP);
- Total number of service connections (for NTNCWS this equals the number of buildings served);
- Water system size under the LCR based on the residential and non-transient populations they serve, as shown in the table below:

System Size	Population
Large	> 50,000
Medium	3,301 to 50,000
Small	< 3,301

- Population served (excluding transient populations).

2.a Contact Information

For the water system owner and licensed operator including:

- Name and title;
- Phone number;
- Email; and
- License classification and number (for licensed operator).

2.b List of Sources and Treatment Facilities

Must include a complete listing of all facilities, including:

- List of treatment plants with facility ID (i.e., TP001001) indicating whether the treatment plant is year-round, seasonal, or emergency;
- List of sources (i.e., wells (WL), intakes (IN), interconnections (CC)) with source ID (i.e., WL001002, IN001002, CC001002) that flow to each treatment plant;
    - Identify if the source is year-round/emergency/seasonal use. If seasonal, identify the seasonal operating period.

- If the source is an interconnection, either permanent or seasonal, identify percentage of water received.
- List all installed corrosion control treatment used for lead and/or copper; and
- Location of any additional corrosion control treatment (CCT) used for lead and/or copper that does not have a facility ID, such as booster stations.

An example of how to display this information is shown below and is available in Table 2.b. of the WQPSP template.

2.b List of Sources and Treatment Facilities *Add additional rows and information as necessary*

Treatment Facility/ID# (TP)[a]	Supplying Source(s)/ID# (WL, IN)[a]		Corrosion Control Used[c]
TP 001001 ☒ Year Round ☐ Emergency ☐ Seasonal _ _/_ _ to _ _/_ _ ☐ No Treatment[b] CH _ _ _ _ _ _ _ ☐ Year Round ☐ Emergency ☐ Seasonal _ _/_ _ to _ _/_ _	WL001002 ☒ Year Round ☐ Emergency ☐ Seasonal _ _/_ _ to _ _/_ _ _ _ _ _ _ _ _ _ ☐ Year Round ☐ Emergency ☐ Seasonal _ _/_ _ to _ _/_ _	WL001003 ☒ Year Round ☐ Emergency ☐ Seasonal _ _/_ _ to _ _/_ _ _ _ _ _ _ _ _ _ ☐ Year Round ☐ Emergency ☐ Seasonal _ _/_ _ to _ _/_ _	☒ Chemical feed(s) operated for CCT ☒ pH Adj. Process/Chem: soda ash ☒ Orthophosphate/Orthophosphate Blend ☐ Silica ☐ Alkalinity Adj. Process/Chem: _____ ☐ None
TP _ _ _ _ _ _ _ ☐ Year Round ☐ Emergency ☐ Seasonal _ _/_ _ to _ _/_ _ ☒ No Treatment[b] CH _ _ _ _ _ _ _ ☐ Year Round ☐ Emergency ☐ Seasonal _ _/_ _ to _ _/_ _	WL002004 ☐ Year Round ☒ Emergency ☐ Seasonal _ _/_ _ to _ _/_ _ _ _ _ _ _ _ _ _ ☐ Year Round ☐ Emergency ☐ Seasonal _ _/_ _ to _ _/_ _	_ _ _ _ _ _ _ _ ☐ Year Round ☐ Emergency ☐ Seasonal _ _/_ _ to _ _/_ _ _ _ _ _ _ _ _ _ ☐ Year Round ☐ Emergency ☐ Seasonal _ _/_ _ to _ _/_ _	☐ Chemical feed(s) operated for CCT ☐ pH Adj. Process/Chem: _____ ☐ Orthophosphate/Orthophosphate Blend ☐ Silica ☐ Alkalinity Adj. Process/Chem: _____ ☒ None
Bulk Suppliers	**Interconnections /ID# (CC)[a]**		**Corrosion Control Used by Supplier[c]**
PWSID: NJ 0101001	CC003005 ☐ Year Round ☐ Emergency ☒ Seasonal 05/31 to 09/30 Main St & Maple Ave ☐ Year Round ☒Emergency ☐ Seasonal _ _/_ _ to _ _/_ _	% of water received from interconnection(s): 35% _____ _____	☒ Chemical feed(s) operated for CCT ☒ pH Adj. Process/Chem: soda ash ☒ Orthophosphate/Orthophosphate Blend ☐ Silica ☐ Alkalinity Adj. Process/Chem: _____ ☐ None
Additional Corrosion Control Treatment Locations[d]			**Corrosion Control Used**
Oak Street Booster Station			☒ Chemical feed(s) operated for CCT ☐ pH Adj. Process/Chem: _____ ☒ Orthophosphate/Orthophosphate Blend ☐ Silica ☐ Alkalinity Adj. Process/Chem: _____ ☐ None

2.c Contact information for bulk purchasers and wholesalers

As sample results and treatment or source changes may impact bulk purchasers and/or wholesalers, it is important to include up to date contact information; therefore, provide the name, title, phone number, and e-mail of the contact person(s) for each bulk purchaser and/or wholesaler. Additionally:

- Indicate if water system has no bulk purchasers or wholesalers; and/or
- Indicate if connection is year-round, seasonal or emergency.

3. Distribution System Map

The following information is required:

- Distribution system map that clearly identifies the following water system components:
  - EPTDS
  - Standard WQP sampling sites;
  - Delineation of service area;
  - Alternate WQP sampling sites; and
  - If applicable:

- Reduced WQP Sites (required for systems with a population greater than 10,000);
- Delineation of pressure zones;
- Storage tanks;
- Delineation of areas receiving CCT;
- Delineation of areas receiving no CCT or different CCT from seasonal EPTDS; and
- Blow offs/flushing points.

Please note the following:

- Do not indicate layout of distribution mains or include any other potentially sensitive information.
- NTNCWS may submit a detailed sketch in lieu of a map.
  - Schools that were required to develop a sampling plan for lead under the Board of Education (BOE) regulation may submit the floorplan that was created to comply with the BOE regulation.

4. Sample Site Selection

4.a Distribution System Sampling Sites

The number of sample sites utilized to sample throughout the distribution system is based upon the water system's residential and non-transient population served (refer to Table 1 below). Sample sites in the distribution system must be representative of the water quality throughout the water system.

Table 1: Number of Required WQP Distribution Sample Sites[1]

Water system size (Population Served)	Standard Distribution Sites	Reduced Distribution Sites	**Alternate Distribution Sites**
> 100,000	25	10	10
10,001-100,000	10	7	7
3,301 to 10,000	3	3	3
501 to 3,300	2	2	2
≤ 500	1	1	1

NJDEP requires that water systems identify alternate distribution sites. A suitable pool of alternate sites must be equal in number to the reduced distribution sites. Changes to sample sites are allowed when a water system can no longer gain access to the site or if the original site location no longer meets the selection criteria. The change in location must be submitted to the NJDEP using the *Water Quality Parameter Sample Site Change form (Form BWSE-19)*, which can

[1] NJDEP may require additional distribution system sites to represent water quality more evenly throughout the distribution system (i.e., a water system required to collect from 3 distribution system sites based on population but has 7 distinct pressure zones; in this case, 7 distribution system samples will be required).

be found at http://www.nj.gov/dep/watersupply/dws-sampreg.html. **The WQPSP must be updated whenever there is an addition or deletion of a site.**

The WQPSP must outline procedures for when samples may need to be taken from alternate and/or additional distribution sites, including if an emergency EPTDS is used for 30 or more than consecutive days.

The following items must be taken into consideration when selecting sample sites:

- Size of the population served and where the population is located within the DS;
- The different sources of water currently in use;
- The different treatments installed and operating;
- The effects of seasonal variability on treatment and water quality;
- The proximity of WQP sites to supplemental chlorination feed points;
- The proximity of WQP sites to ground or elevated storage locations;
- That sampling sites are representative of typical retention times of water in the distribution system;
- That sampling sites are representative of maximum residence times of water in the distribution system;
- That sampling sites are representative of distinct pressure zones located throughout the distribution system; and
- That sampling sites are representative of distribution system materials.

Water systems should not include the following sample sites:

- Areas where maintenance or flushing is conducted to reduce the chance of water quality upsets;
- Locations within close proximity to the EPTDS
- Fire hydrants and storage tank taps; and
- Sampling sites where routine access is an issue as repeat sampling may be necessary following an excursion (i.e., schools, businesses with limited hours, residences).

Be sure to include the site-specific justification for each tap sample site in the WQPSP. Note that a justification of the site simply as being a Revised Total Coliform Site is **not** acceptable and the considerations noted above should be included in the justification.

An example of how to display this information is shown below and the table is available in the WQPSP template.

Standard WQP Sites Minimum Number Required: *1*			
	Street Address/Building	*Tap Location (i.e., Kitchen)*	*Site specific justification*[1]
1	*9 Main Street*	*Ladies Room Sink*	*Maximum Residence Time*
2			
3			
Reduced WQP Sites Minimum Number Required: *1* ☐ *not applicable; residential and non-transient population ≤ 500*			
	Street Address/Building	*Tap Location (i.e., Kitchen)*	*Site specific justification*[2]
1	*9 Main Street*	*Ladies Room Sink*	*Maximum Residence Time*
2			
3			
Alternate WQP Sites Minimum Number Required: *1*			
	Street Address/Building	*Tap Location (i.e., Kitchen)*	*Site specific justification*[2]
1	*5 Main Street*	*Break Room Sink*	*Maximum Residence Time*
2			
3			

4.b Entry Point to the Distribution System

Samples must be collected from each EPTDS, including all permanent active interconnections, including seasonal (see 5d). Samples collected at the EPTDS must be from locations representative of each source after treatment. If the distribution system draws water from more than one source and the sources are combined before distribution, the water system must sample at an EPTDS during periods of normal operating conditions (i.e., when water is representative of all sources being used). The EPTDS locations are to be identified, as outlined, in 2.b above.

The WQPSP must outline procedures for when samples may need to be taken from an emergency EPTDS, if used for 30 or more consecutive days.

It should be noted that there may be situations when additional WQP sampling is required based on the dynamics of the water system (i.e., if, after leaving the EPTDS, the treated water is blended with another source prior to entering the distribution system). This also includes booster stations where a CCT inhibitor is added for lead and/or copper control.

NTNCWS that do not have a tap immediately after all treatment must install one immediately, Pursuant to N.J.A.C. 7:10-12.33(a)(5)(ii), each point of entry treatment device shall be equipped with sampling water taps before and after the point at which treatment is applied.

5. Monitoring Schedules and Required Analytes

WQP sampling needs may vary depending on whether initial, follow-up, or optimized monitoring is required. Additionally, alternate sources of water (i.e., emergency interconnections or wells) should be identified so the appropriate WQPs may be sampled if the emergency EPTDS is operated for 30 or more consecutive days. Incorporate the appropriate

monitoring schedule and WQPs to be analyzed based on which schedule type is applicable for your water system within the WQPSP. *Note that small and medium water systems may be required to include both Initial and Follow-Up/Optimal schedule requirements if some EPTDS have CCT and other EPTDS have no CCT.*

NJDEP may require monitoring of additional water quality parameters (i.e., iron, manganese, chloride, sulfate, etc.) if determined necessary for complete evaluation of CCT processes.

5.a. Initial WQP Monitoring

Small and medium water systems that exceed the lead/copper action level and **do not** have CCT installed at all of their EPTDS and/or **do not** receive water from a wholesaler who has CCT installed are required to conduct initial WQP monitoring within six months from the beginning of the monitoring period in which the water system exceeded the lead/copper action level.

Small and medium water systems without CCT installed at all of their EPTDS and/or do not receive water from a wholesaler who has CCT installed may include the WQPSP within the water system's Lead and Copper Sampling Plan.

Initial WQP monitoring is used to determine water corrosivity and identify appropriate CCT options.

Below is an example of how to display the initial WQP monitoring requirements, and is available as table 5.a. in the WQPSP template.

5a. Initial WQP Monitoring ☒

EPTDS does not have CCT installed and/or do not receive water from a wholesaler who has CCT installed; therefore, this monitoring is required 6-months from the beginning of the monitoring period in which an AL is exceeded.

Location	Frequency	Number of Sites	Analytes	Additional Analytes for C Recommendation[1]
EPTDS	Twice within 6 months from the beginning of the monitoring period in which the system exceeds the AL	1	– pH – Alkalinity – Calcium - Conductivity - Temperature	- Iron - Manganese - Aluminum - Chloride - Sulfate
DS	Twice within the 6 months from the beginning of the monitoring period in which the system exceeds the AL	10	– pH – Alkalinity – Calcium - Conductivity - Temperature	- Iron - Manganese - Aluminum - Chloride - Sulfate

☒ The water system is required to conduct initial monitoring for only select EPTDS that do not have CCT. The Facility IDs these EPTDS are: WL002004

Within 6 months after the end of the monitoring period in which the system exceeds an action level, a Corrosion Control Tr Recommendation will be submitted to the NJDEP, with the Initial WQP data as supporting documentation.

5.b Follow-up WQP Monitoring

Water systems under the LCR are required to conduct follow-up WQP monitoring during 2 consecutive 6-month monitoring periods **immediately following the installation of CCT**. NJDEP is requiring all water systems with CCT for lead and copper installed to commence follow-up WQP monitoring if Optimal WQP values were not previously set.
The bi-weekly monitoring periods for EPTDS sample collection are available at http://www.nj.gov/dep/watersupply/dwc-lead-public.html.

Below is an example of how to display the follow-up WQP monitoring requirements, and is available as Table 5b in the WQPSP template.

5b. Follow-Up WQP Monitoring ☒
Immediately following installation of CCT

Location	Frequency	Number of Sites	Analytes
EPTDS	Every 14 days	3	- pH ☐ Alkalinity (if adjusted) ☐ Calcium (if adjusted) ☒ Orthophosphate[1] (a phosphate-based corrosion inhibitor is used) ☐ Silica (a silicate-based corrosion inhibitor is used)
DS	Twice within each 6-month monitoring period	10	- pH – Alkalinity ☐ Calcium (if adjusted) ☒ Orthophosphate[2] (a phosphate-based corrosion inhibitor is used) ☐ Silica (a silicate-based corrosion inhibitor is used)

☒ The water system is required to conduct follow-up monitoring for only select EPTDS. The Facility IDs for these EPTDS are: TP001001, CC003005

☒ Seasonal EPTDS will be monitored during the operational period. The two-week compliance periods are counted starting with the initial date of the monitoring schedule, which is ☒ January 1, 2018 ☐ July 1, 20_ _
A listing of the two-week compliance periods is available at http://www.nj.gov/dep/watersupply/dwc-lead-public.html

☒ Distribution sites will be sampled during the operational period of the system's seasonal EPTDS

Within 30 days of completing follow-up monitoring, the system will submit an *Optimal WQP Recommendation Form* (BWSE-LC03) to the NJDEP.

5.c Optimal Standard WQP Monitoring

NJDEP sets optimum WQP values following the completion of follow-up WQP monitoring. Within 30 days of completing follow-up WQP monitoring, a water system is required to submit an Optimal WQP Recommendation to NJDEP using *Optimal Water Quality Control Parameter Recommendation form* (Form BWSE-LC03). **After NJDEP sets optimum WQP values, the water system is then required to conduct optimal WQP monitoring** beginning January 1st or July 1st, whichever is sooner. For water systems on Optimal WQP monitoring, a copy of the letter received from the NJDEP designating the optimal WQP values must be enclosed with the WQPSP.

The bi-weekly monitoring periods for EPTDS sample collection are available at http://www.nj.gov/dep/watersupply/dwc-lead-public.html

Optimal Reduced Distribution WQP Monitoring

Water systems on optimal monitoring may request reduced monitoring only if the following criteria are met:

- If a water system maintains the optimal WQPs during two consecutive 6-month monitoring periods and serves more than 10,000 persons, the water system may reduce the number of distribution sampling sites (refer to Table 1 in section 3.a above), with written approval from NJDEP.
- If a water system maintains the optimal WQPs during three consecutive years of monitoring, the water system may reduce sampling from every six months to annually, with written approval from NJDEP. This sampling begins during the calendar year immediately following the end of the third consecutive year of six-month monitoring.
- If a water system maintains the optimal WQPs during three consecutive years of annual monitoring, the water system may reduce the sampling from annually to every three years with written approval from NJDEP. This sampling begins no later than the third calendar year following the end of the third consecutive year of annual monitoring.
- If the water system is on reduced optimal WQP monitoring, the letter received from the NJDEP granting a monitoring reduction must be enclosed with the WQPSP.

Reduced monitoring only applies to distribution system sampling. EPTDS monitoring will remain biweekly.

Below is an example of how to display the optimal WQP monitoring requirements, and is available as Table 5c in the WQPSP template.

5c. Optimal WQP Monitoring ☒

After NJDEP sets optimal WQP values (NJDEP Letter Designating Optimal Values enclosed in Appendix B)

☐ NJDEP Letter Granting Reduction of Optimal WQP Monitoring is enclosed in Appendix C

Location	Frequency	Number of Sites	Analytes	Optimal Minimum Value
EPTDS	Every 14 days	2	– pH	
			☐ Alkalinity (if adjusted)	mg/l
			☐ Calcium	mg/l
			☒ Orthophosphate[1] (a phosphate-based corrosion inhibitor is used)	mg/l
			☐ Silica (a silicate-based corrosion inhibitor is used)	mg/l
DS	☒ Standard: Twice within each 6-month monitoring period ☐ Reduced number of sites twice within each 6-month monitoring period ☐ Reduced number of sites twice within: ☐ 6-month ☐ Annual ☐ Triennial	10	- pH	
			☐ Alkalinity (if adjusted)	mg/l
			☐ Calcium	mg/l
			☒ Orthophosphate[6] (a phosphate-based corrosion inhibitor is used)	mg/l
			☐ Silica (a silicate-based corrosion inhibitor is used)	mg/l

☒ The water system is required to conduct optimal monitoring for only select EPTDS. The Facility IDs for these EPTDS are: TP001001, CC003005

☒ Seasonal EPTDS will be monitored during the operational period. The two-week compliance periods are counted starting with the initial date of the monitoring schedule, which is ☐ January 1, 20_ _ ☒ July 1, 2018
A listing of the two-week compliance periods is available at http://www.nj.gov/dep/watersupply/dwc-lead-public.html

☒ Distribution sites will be sampled during the operational period of the system's seasonal EPTDS

Monitoring at Seasonal EPTDS

Seasonal EPTDS are only required to be monitored during the facility's operational period. Important items to keep in mind are:

- Seasonal EPTDS are only required to be monitored during the facility's operational period.
- Sampling schedules will reflect a year-round schedule; however, compliance will be based on the operational period. All required sampling must occur during the operational periods.
- Two-week compliance periods are counted starting with the initial date of the monitoring schedule (January 1 or July 1), not the start of the seasonal operational period. Compliance periods can be found here: http://www.nj.gov/dep/watersupply/dwc-lead-wqpm.html

Seasonal sources must also be considered for WQP DS selection and monitoring. Important items to keep in mind are:

- DS sites shall be representative of the seasonal source(s). The area served by the seasonal sources shall be delineated on the DS map.
- Seasonal sources shall be considered when scheduling sample collection for WQP at distribution sites. Ensure that at least one of the sample collection events at each DS site occurs when the seasonal EPTDS is operational.
- If different CCT is installed on a seasonal EPTDS, additional WQPs may be required to be sampled in the DS during the seasonal operational period. This is dependent on the differences in CCT installed.

6. Sample Collection, Analysis, and Reporting

WQP samples may be collected and analyzed by a NJ certified laboratory or by an approved party[2].

6.a Sample Collection and Analysis

If the sample collection is being conducted by an approved party, but the analysis is being conducted by a certified laboratory, information outlined below for both certified labs and approved parties must be included in the WQPSP. *Please note that pH and temperature are required to be analyzed in the field; therefore, the sample collector must also be the sample analyzer.*

By a Certified Laboratory

If the sample collection and/or analysis is being conducted by a certified laboratory, the WQPSP may only include the name and contact information of the contracted laboratory. The WQPSP must also detail how the certified lab is notified of the sample site locations and how the water system is ensuring the lab samples from the designated sample sites.

[2] An approved party is a person "acceptable to the State" who is either the licensed operator or someone trained by a licensed operator. If an approved party conducts the monitoring and analyses, proper calibrations, and recordkeeping of all QAQC tasks must be kept on site and made available upon request.

A licensed operator who has laboratory certification for the WQP analysis or works for a certified lab must include the laboratory contact information and approved EPA methods they will be using to analyze the samples.

By an Approved Party

If the sample collection and analysis is being conducted by an approved party, the following items must be detailed in the WQPSP, as applicable:

- Identification of primary and alternate sample collectors;
- Established sample collection procedures; and
- Established sampling analysis procedures; (Refer to the Office of Quality Assurance for standard procedures at http://www.nj.gov/dep/enforcement/oqa.html)
- EPA method and/or instrumentation used for WQP analysis

The results from a continuous analyzer, that meets the EPA Methods under 40 CFR 141.23(k)(1), may be used for WQP compliance.

WQP samples should be collected as follows:

- Remove an aerator if present;
- Fully flush the tap (for a minimum of 30 seconds);
- Record observations about color, suspended solids and the flushing time;
- Collect and analyze sample for temperature and pH in the field;
- Collect the samples for the remaining required WQPs (i.e., alkalinity, orthophosphate, etc.);
- Avoid the introduction of air bubbles into the samples;
- When collecting WQP samples for calcium in addition to other WQPs, two 500 mL sample bottles should be filled at EPTDS and DS sites. Two bottles are needed as the calcium analysis is conducted using a separate sample to allow for acidification of the sample prior to analyses. The two 500 mL bottles count as one sample;
- Plastic or glass containers can be used when collecting WQP samples unless silica analysis is required, in which case, plastic must be used;
- All samples should be stored in a cool environment until analyzed; and
- During transportation, care should be taken to avoid breakage of the sample.

By a Licensed Operator

The licensed operator is required to report the daily chemical dosages on the Monthly Operator Report for all CCT treatment processes utilizing a chemical feed.

6b. Sample Reporting

By a Certified Laboratory

Results from samples analyzed by a NJ certified laboratory must be submitted via The New Jersey Electronic Environmental (E2) Reporting System.

By an Approved Party

Results from samples collected and analyzed by an approved party are to be submitted on the *WQP Monitoring Report Form for Approved Party.* This form, along with instructions, can be found on our webpage at http://www.nj.gov/dep/watersupply/dws-sampreg.html.

If a continuous analyzer is being used for WQP compliance monitoring, the average of the results for the 24-hour period is to be reported on the *WQP Monitoring Report Form for Approved Party.*

By a Licensed Operator

Water systems that operate a chemical feed for CCT are required to report the daily dosage of the CCT chemical(s) on the Monthly Operator Report and submit it to the NJDEP by the 10th day of the following month in which the data was collected.

7. Action Plans

Action plans for using an emergency EPTDS for 30 or more consecutive days, Monitoring & Reporting violations (M&R), single excursions[3], and treatment technique (TT) violations, are required (as applicable) in the WQPSP. Action plans for single excursions and TT violations are only required for water systems on optimal WQP monitoring.

In addition, water systems developing a WQPSP for initial WQP monitoring requirements should include a plan for submitting a CCT recommendation following completion of initial WQP monitoring. Water systems incorporating follow-up WQP monitoring requirements must include a plan for submitting the *Optimal Water Quality Control Parameter Recommendation form* (BWSE-LC03) to NJDEP following completion of follow-up WQP monitoring. Water systems may refer to EPA's "*Optimal Corrosion Control Treatment Evaluation Technical Recommendations for Primacy Agencies and Public Water Systems*" for further guidance on these actions.

The WQPSP must clearly identify the water system personnel and their roles and responsibilities for each action plan.

7.a. Use of an Emergency EPTDS (i.e., Treatment Plant, Interconnection)

Water systems must create an action plan if the emergency EPTDS will be used. This must include:

- Contacting NJDEP and bulk purchasers within 6 hours of determination/change in source.
- Contacting NJDEP and bulk purchasers at least 5 working days prior to undertaking any planned change in treatment and/or use of an emergency EPTDS.

[3] "Excursion" refers to any daily value for a parameter that is below the minimum optimal value set by NJDEP.

- If the emergency source is to be used for 30 or more consecutive days, begin WQP monitoring for applicable parameters at the emergency EPTDS and in impacted distribution system areas.

NJDEP may require additional monitoring in the distribution system due to the use of an emergency EPTDS.

7.b Monitoring & Reporting (M&R) Violations

The WQPSP must include a protocol for establishing notification to the NJDEP within 48 hours after the water system learns of the monitoring violation, implementing Tier 3 public notification requirements, and ensuring sample collection and analysis of all required WQPs from the minimum number of required sites in subsequent monitoring periods. The WQPSP must detail who the person responsible for implementing this action plan is.

Tier 3 public notification is required to be distributed to each customer within one year from becoming aware of the violation. CWS may incorporate the Tier 3 public notice into its Consumer Confidence Report. Additionally, the water system must send a copy and Public Notice certification to the NJDEP within 10 days of issuance.

7.c Single Excursion

*NOTE: **Only required if system is on Optimal WQP Monitoring.** If a water system's WQPSP includes action plans for excursions, while on Follow-up WQP monitoring, a statement must be included to clarify that the water system is to follow the action plan once the water system is conducting Optimal WQP monitoring.*

An excursion occurs when any daily value for a WQP is below the minimum optimal value set by NJDEP. An excursion remains unresolved until the same WQP meets the minimum value at the same location. Note that the most recent analytical value(s) for a specific location and WQP are used to determine the daily value for each subsequent day. Therefore, it would be in the best interest of the water system to sample at the same location and for the same WQP immediately upon becoming aware of the excursion.

The water system must outline the steps of their action plan to evaluate and optimize treatment units, as necessary, following a single excursion. The WQPSP should also outline steps to collect WQPs immediately following an excursion.

Examples of actions to take after a single excursion include, but are not limited to:

- Immediately informing management and supervisors
- Collection of a confirmation sample
- Review of treatment and/or distribution operations
- Calibration of equipment will be reviewed and/or conducted
- Repairs/optimization of operations based on findings of evaluation
- Sample collection immediately following any changes to optimize treatment and/or distribution system

The WQPSP must detail who the person responsible for implementing this action plan; which must include the water system owner/superintendent and/or the licensed operator.

7.d Treatment Technique

*NOTE: **Only required if water system is on Optimal WQP Monitoring.** If a water system's WQPSP includes action plans for excursions, while on Follow-up WQP monitoring, a statement must be included to clarify that the water system is to follow the action plans after NJDEP has set Optimal values and the water system is conducting Optimal WQP monitoring.*

A Treatment Technique (TT) violation is incurred when excursions occur on more than nine days within a 6-month monitoring period during optimal WQP monitoring. Nine excursions are allowed as it will ensure that the WQPs meet the NJDEP designated optimal values at least 95% of the time during a 6-month compliance period. Note that a water system may incur a maximum of one excursion per day, even if multiple locations and/or WQP did not meet the minimum values on the same day. In the event of a TT violation, water systems must have an action plan prepared; detailing its response to the violation and how it will return to compliance.

The following must be included in the action plan:

- Report the violation to NJDEP within 48 hours of becoming aware of the violation;
- Deliver a Tier 2 public notification[4] to your customers within 30 days of becoming aware of the violation. A template for the Tier 2 public notification is available at http://www.nj.gov/dep/watersupply/dws-sampreg.html ;
- Submit the BWSE-53 (Public Notice Certification form) and a copy of the Tier 2 Public Notice materials to the NJDEP within ten days of implementing the public notice requirements;
- Review of treatment and/or distribution operations and perform calibrations of equipment;
- Submit a remedial measures report to the NJDEP within 30 days of becoming aware of the violation that outlines the evaluation steps taken, findings, and remedial actions taken;
- Return to standard WQP tap monitoring (every 6-months at standard number of sites);
- Return to standard Lead and Copper tap monitoring (every 6-months at standard number of sites);
- Update WQPSP and Lead and Copper Sampling Plan as necessary; and
- Other (i.e., contact and coordination with wholesaler for evaluation and optimization of CCT received).

The WQPSP must detail who the person responsible for implementing this action plan; which must include the water system owner/superintendent and/or the licensed operator.

[4] Tier 2 public notification requires CWS to distribute the notice by mail/direct delivery to all bill paying customers and by another method reasonably calculated to reach other persons regularly served. NTNCWS are required to distribute the notice by posting in conspicuous locations in areas frequented by customers and by another method reasonably calculated to reach other persons regularly served.

8. Division of Water Supply & Geoscience Contact Information

The following contact information must be included within the WQPSP:

- Bureau of Safe Drinking Water: 609-292-5550
- Bureau of Water System Engineering: 609-292-2957
- Bureau of Water Allocation and Well Permitting: 609-984-6831
- Bureau of Water Resources & Geoscience: 609-292-2576

Appendix A: Additional Resources

It is strongly recommended that water systems frequently check the Division of Water Supply & Geoscience's website for new and updated resources.

- Division of Water Supply & Geoscience: Lead in Drinking Water - Public Water System Information
  - Water Quality Parameter Sampling Plan Template

- Fact Sheets
  - Initial WQP Monitoring
  - Follow-Up WQP Monitoring
  - Optimal WQP Monitoring
  - Approved Person (Person Acceptable to the State)

- Lead and Copper Sampling & Regulatory Forms
  - Lead Copper Sampling Suspension Form (LC-01)
  - WQP Monitoring Report Form for Approved Party
    - Directions for WQP Monitoring Report Form
  - Optimal Water Quality Control Parameter Recommendation Form (BWSE-LC03)
  - CCT installation Certification Form (BWSE-LC02)
  - WQP Sample Site Change Form (BWSE 19)

- EPA: Lead and Copper Rule: A Quick Reference Guide

- EPA: Lead and Copper Rule Monitoring and Reporting Guidance for Public Water Systems

- EPA: Memo Addressing Lead and Copper Rule Requirements for Optimal Corrosion Control Treatment

- EPA: Optimal Corrosion Control Treatment Evaluation Technical Recommendations for Primacy Agencies and Public Water Systems

- How to Determine Compliance with Optimal Water Quality Parameter as Revised by the Lead and Copper Rule Minor Revisions