



GEORGIA

DEPARTMENT OF NATURAL RESOURCES

ENVIRONMENTAL PROTECTION DIVISION

Stage 2 Disinfectants and Disinfection Byproducts Rule Operational Evaluation Report For GROUND WATER DRINKING WATER SYSTEMS

A. ADMINISTRATIVE			
PWS No.		Prepared Date	
PWS Name		Prepared By	
		Title	
B. OPERATION EVALUATION LEVEL (OEL)			
This report is submitted for the following monitoring period.			
Check One:	<input type="checkbox"/> 1 st Quarter	<input type="checkbox"/> 2 nd Quarter	<input type="checkbox"/> 3 rd Quarter <input type="checkbox"/> 4 th Quarter
		Year	
Total Trihalomethanes Exceeded?	<input type="checkbox"/> Yes <input type="checkbox"/> No	Level	<input type="checkbox"/> mg/L <input type="checkbox"/> ug/L
<ul style="list-style-type: none"> If yes, what was the sample collection date? 			
		Level	<input type="checkbox"/> mg/L <input type="checkbox"/> ug/L
<ul style="list-style-type: none"> If yes, what was the amount of chloroform present in the sample result? 			
Haloacetic Acids (HAA5s) Exceeded?	<input type="checkbox"/> Yes <input type="checkbox"/> No	Level	<input type="checkbox"/> mg/L <input type="checkbox"/> ug/L
<ul style="list-style-type: none"> If yes, what was the sample collection date? 			
		Level	<input type="checkbox"/> mg/L <input type="checkbox"/> ug/L
<ul style="list-style-type: none"> If yes, what was the amount of monobromoacetic acid present in the sample result? 			
		Level	<input type="checkbox"/> mg/L <input type="checkbox"/> ug/L
<ul style="list-style-type: none"> If yes, what was the amount of dibromoacetic acid present in the sample result? 			
		Level	<input type="checkbox"/> mg/L <input type="checkbox"/> ug/L
C. HISTORY			
1. In the previous quarter, was the OEL exceeded?			<input type="checkbox"/> Yes <input type="checkbox"/> No
<ul style="list-style-type: none"> If yes, did your system submit an Operation Evaluation Report (OER)? 			<input type="checkbox"/> Yes <input type="checkbox"/> No
<ul style="list-style-type: none"> If your system did submit an OER in the previous quarter, please skip to Section H. 			<input type="checkbox"/> N/A

2. In past years, do your TTHMs normally exceed 0.080 mg/L during the quarter indicated above, reduce in the next quarter, and maintain the calculated locational running annual average (LRAA) value below 0.080 mg/L?						<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure	
<ul style="list-style-type: none"> If yes, you must provide the following information from the previous year to demonstrate that TTHMs levels drop the following quarter and normally remain in compliance. 							
Month 1		Year		TTHM Level		<input type="checkbox"/> mg/L	<input type="checkbox"/> ug/L
Month 2		Year		TTHM Level		<input type="checkbox"/> mg/L	<input type="checkbox"/> ug/L
<ul style="list-style-type: none"> Month 1 is the month of the sample collection date (from Section B) for the previous year. Month 2 is the following quarter during the previous year. If your data demonstrates a normal reduction of TTHMs to remain in compliance, then you may proceed directly to section H. 							
3. In past years, do your HAA5s normally exceed 0.060 mg/L during the quarter indicated above, reduce in the next quarter, and maintain the calculated locational running annual average (LRAA) value below 0.060 mg/L?						<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure	
<ul style="list-style-type: none"> If yes, you must provide the following information from the previous year to demonstrate that TTHMs normally remain in compliance. 							
Month 1		Year		TTHM Level		<input type="checkbox"/> mg/L	<input type="checkbox"/> ug/L
Month 2		Year		TTHM Level		<input type="checkbox"/> mg/L	<input type="checkbox"/> ug/L
<ul style="list-style-type: none"> Month 1 is the month of the sample collection date (from Section B) for the previous year. Month 2 is the following quarter during the previous year. If your data demonstrates a normal reduction of HAA5s to remain in compliance, then you may proceed directly to section H. 							
D. SOURCE WATER <input type="checkbox"/> If this submittal is an update from prior reports, skip to Section H.							
1. Does your system have a wellhead protection plan?						<input type="checkbox"/> Yes <input type="checkbox"/> No	
2. Have any changes occurred with obtaining your source water? e.g., changed well pumping depth, well rehab, changed screen depth, changed pumping rates, pumping times or frequency, etc.						<input type="checkbox"/> Yes <input type="checkbox"/> No	
3. Have you changed/added sources? e.g., turned on emergency sources, drilled new well, etc.						<input type="checkbox"/> Yes <input type="checkbox"/> No	
4. Have you seen changes in source water quality? e.g., changes in turbidity, pH, temp, alkalinity, hardness; new impacts from drought conditions, heavy rain, animal feed lots, agricultural practices, etc.						<input type="checkbox"/> Yes <input type="checkbox"/> No	
5. If you answered " YES " to questions above (Sections D.1-D.4), please explain:							

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6. Do you have source water temperature data during the month of the OEL exceedance?			<input type="checkbox"/> Yes <input type="checkbox"/> No
• If yes, what was the water temperature nearest to the DBP sample collection date above?		Date Measured	
• If no, please measure the temperature in the source water.		Date Measured	
7. Do you have raw water pH data during the month of the OEL exceedance?			<input type="checkbox"/> Yes <input type="checkbox"/> No
• If yes, what was the pH value nearest to the DBP sample collection date above?		Date Measured	
• If no, please measure the pH in the source water.		Date Measured	
8. Do you have raw water hardness data during the month of the OEL exceedance?			<input type="checkbox"/> Yes <input type="checkbox"/> No
• If yes, what was the hardness value nearest to the DBP sample collection date above?		Date Measured	
• If no, please measure the hardness in the source water.		Date Measured	
9. Do you have raw water Ammonia data during the month of the OEL exceedance?			<input type="checkbox"/> Yes <input type="checkbox"/> No
• If yes, what was the ammonia level nearest to the sample collection date above?		Date Measured	
• If no, please measure the ammonia in the source water.		Date Measured	
10. Do you have raw water Total Organic Carbon (TOC) data during the month of the OEL exceedance?			<input type="checkbox"/> Yes <input type="checkbox"/> No
• If yes, what was the TOC value nearest to the sample collection date above?		Date Measured	
• If no, please measure the TOC in the source water.		Date Measured	
E. WATER TREATMENT <input type="checkbox"/> If this submittal is an update from prior reports, skip to Section H.			
1. Have you changed the type of disinfectant? e.g., chlorine to chloramines, chemical product, etc.			<input type="checkbox"/> Yes <input type="checkbox"/> No
2. Have you changed the amount of chlorine dosage? e.g., trying to maintain higher chlorine residuals			<input type="checkbox"/> Yes <input type="checkbox"/> No
3. Have you changed or added locations of disinfectant points along the treatment process?			<input type="checkbox"/> Yes <input type="checkbox"/> No
4. Does your system provide any treatment processes other than disinfection?			<input type="checkbox"/> Yes <input type="checkbox"/> No
5. Have you made changes to any other chemical applications? e.g., change any chemicals (change filter aid), filter material, changes in application points, changing dosage of any chemical, etc.			<input type="checkbox"/> Yes <input type="checkbox"/> No
6. If you answered " YES " to any of the questions above (Sections E.1-E.5), please explain:			

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7. For the chlorine product, please answer the following:			
• What is the name of manufacturer?			
• What is the name of the product?			
8. Do you have chlorine dosage data during the month of the OEL exceedance?			<input type="checkbox"/> Yes <input type="checkbox"/> No
• If yes, what was the average chlorine dosage nearest to the sample collection date above?		Date Measured	
• If no, please measure the chlorine dosage.		Date Measured	
• If unable to calculate the dosage, please provide the following information:			
Water amount pumped on TTHM/HAA5 sample collection date		<input type="checkbox"/> gal <input type="checkbox"/> MG	
Amount of chlorine used on TTHM/HAA5 sample collection date		<input type="checkbox"/> lbs <input type="checkbox"/> gal	
9. Do you have chlorine residual data at the point of entry (POE) during the month of the OEL exceedance?			<input type="checkbox"/> Yes <input type="checkbox"/> No
• If yes, what was the POE chlorine residual nearest to the sample collection date above?		Date Measured	
• If no, please measure the POE free chlorine residual.		Date Measured	
10. Does your system use chloramines (not free chlorine) for secondary disinfection?			<input type="checkbox"/> Yes <input type="checkbox"/> No
• If yes, what was the ammonium dosage nearest to the DBP sample collection date above?		Date Measured	
• If yes and you don't know the ammonium dosage, please measure the ammonium dosage rate.		Date Measured	
• If yes, what was the POE chlorine residual nearest to the DBP sample collection date above?		Date Measured	
• If no, please measure the POE total chlorine residual.		Date Measured	
11. Do you have finished water nitrate data during the month of the OEL exceedance?			<input type="checkbox"/> Yes <input type="checkbox"/> No
• If yes, what was the maximum nitrate level nearest to the DBP sample collection date above?		Date Measured	
• If no, what was the most recent nitrate results measured? If data is from multiple wells, provide the highest value.		Date Measured	
12. Do you have finished water (after all treatment processes) Total Organic Carbon (TOC) data during the month of the OEL exceedance?			<input type="checkbox"/> Yes <input type="checkbox"/> No
• If yes, what was the TOC during or closest to the sample collection date above?		Date Measured	
• If no, please measure the finished water TOC.		Date Measured	

F. DISTRIBUTION SYSTEM				<input type="checkbox"/> If this submittal is an update from prior reports, skip to Section H.	
1. Have you added additional service areas (industry or residential)? e.g., adding additional pipes or annexing additional areas of service which could change residence times.			<input type="checkbox"/> Yes <input type="checkbox"/> No		
2. Have you experienced significant increases or decreases in water demand? e.g., drought restrictions, industry opening/closing, population change			<input type="checkbox"/> Yes <input type="checkbox"/> No		
• If yes, what is the primary suspected cause of water demand changes?					
3. Does your system have storage tanks in the distribution system?			<input type="checkbox"/> Yes <input type="checkbox"/> No		
• If yes, how many water storage tanks does your system have?					
• Do any storage tank(s) fill and drain from one pipe into the storage tank?			<input type="checkbox"/> Yes <input type="checkbox"/> No		
• Do any above ground metal storage tanks have condensation differences along the outer wall between upper and lower portions of the storage tank in the morning? <i>Note: This could indicate inadequate water turnover in the tank.</i>		<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		Date Inspected	
• Do you utilize tank management/operational procedures? e.g., cleaning schedule, set operational levels of your tank (high and low), etc?			<input type="checkbox"/> Yes <input type="checkbox"/> No		
• Has the residence time of your tank(s) increased or decreased? i.e., are tanks being filled/drained more or less often?			<input type="checkbox"/> Yes <input type="checkbox"/> No		
• What is the longest approximate residence time in the storage tanks?				<input type="checkbox"/> Hours <input type="checkbox"/> Days	
4. Does your system have a regular distribution flushing program?			<input type="checkbox"/> Yes <input type="checkbox"/> No		
• If yes, what was the last date that flushing operations were performed?					
• If yes, have you been changing your distribution flushing procedures?			<input type="checkbox"/> Yes <input type="checkbox"/> No		
5. Do you have chlorine residual data from near the disinfection byproduct (DBP) sample location?			<input type="checkbox"/> Yes <input type="checkbox"/> No		
• If yes, what was the chlorine residual during or closest to the DBP sample collection date above?				Date Measured	
• If no, please measure the chlorine residual at the DBP sample location.				Date Measured	
6. Do you have water temperature data near the disinfection byproduct (DBP) sample location?			<input type="checkbox"/> Yes <input type="checkbox"/> No		
• If yes, what was the water temperature during or closest to the DBP sample collection date above?				Date Measured	
• If no, please measure the water temperature at the DBP sample location.				Date Measured	
7. Do you have pH level data near the disinfection byproduct (DBP) sample location?			<input type="checkbox"/> Yes <input type="checkbox"/> No		
• If yes, what was the pH during or closest to the DBP sample collection date above?				Date Measured	
• If no, please measure the pH at the DBP sample location.				Date Measured	

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8. Does your system provide additional chlorine (e.g. booster chlorination) in the distribution system?				<input type="checkbox"/> Yes <input type="checkbox"/> No	
<ul style="list-style-type: none"> • What is the chlorine residual at the nearest location before additional chlorine is added? • What is the chlorine residual at the nearest location after additional chlorine is added? 		mg/L	Date Measured		
		mg/L	Date Measured		
9. Did you have customer complaints about water quality during the OEL exceedance month?				<input type="checkbox"/> Yes <input type="checkbox"/> No	
<ul style="list-style-type: none"> • If yes, what was the general nature of the water quality complaints? 					
G. CONTROL PLAN					
				<input type="checkbox"/> If this submittal is an update from prior reports, skip to Section H.	
1. In terms of your source water management, do you plan to monitor or implement best management practices in your source water?				<input type="checkbox"/> Yes <input type="checkbox"/> No	
<ul style="list-style-type: none"> • Does your system have a source water management or wellhead protection plan? • If there isn't a wellhead protection plan, are you interested in developing one? • Does your system implement any best management practices (BMPs) in your aquifer recharge area to minimize impacts to the groundwater? • Does your system monitor for any water quality parameters in the source water? • Are there any sources of pollution near your wells that concern you? 				<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No	
2. Regarding your existing equipment and infrastructure, do you plan to make operational adjustments to improve the quality of your drinking water for DBP control?				<input type="checkbox"/> Yes <input type="checkbox"/> No	
<ul style="list-style-type: none"> • If yes, are you planning to adjust your chemical feeds? • If yes, are you planning to change any chemical products? • If yes, are you planning to start up any existing process equipment not used during the sampling period indicated in Section A? • If yes, are you planning to adjust your chlorine dosage? • If yes, are you planning to adjust any existing aeration processes in your drinking water treatment plant? • If yes, are you planning to make changes to your flushing program? • If yes, are you planning to increase your monitoring of chlorine residuals in the distribution system? • If yes, are you planning to make other changes to your operations? • If you are planning other operational changes, please describe: 				<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No	

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3. In regard to upgrades for your equipment or infrastructure, do you plan to make any capital improvements to your system to improve water quality for DBP control?	<input type="checkbox"/> Yes <input type="checkbox"/> No
• If yes, are you planning to replace or install new feed pumps?	<input type="checkbox"/> Yes <input type="checkbox"/> No
• If yes, are you planning to add new chemicals to your system?	<input type="checkbox"/> Yes <input type="checkbox"/> No
• If yes, are you planning to add aeration to any of your storage tanks?	<input type="checkbox"/> Yes <input type="checkbox"/> No
• If yes, are you planning to install a new treatment process to address DBPs?	<input type="checkbox"/> Yes <input type="checkbox"/> No
• If yes, are you planning to switch your disinfectant?	<input type="checkbox"/> Yes <input type="checkbox"/> No
• If yes, are you planning to add new water mains to reduce dead-ends?	<input type="checkbox"/> Yes <input type="checkbox"/> No
• If yes, are you planning other upgrades to your public water system?	<input type="checkbox"/> Yes <input type="checkbox"/> No

4. Please provide a short statement about the control plan that your system will implement to reduce disinfection byproducts (DBPs):

H. CONTROL PLAN UPDATES

Only fill out this section if you filled out an operational evaluation report (OER) in the previous quarter, or the data provided from Sections C.2 and C.3 instructed you to complete this section.

1. Does your plan only rely on natural decreasing water temperatures to bring your locational running annual average (LRAA) calculated value within compliance?	<input type="checkbox"/> Yes <input type="checkbox"/> No
2. Are you continuing with the exact same control plan in your previous report?	<input type="checkbox"/> Yes <input type="checkbox"/> No
• If yes, please provide an update on the status of accomplishing the items identified in the previous control plan:	

3. Are you planning to use other methods not identified in your previous report to lower your disinfection byproducts (DBPs)?	<input type="checkbox"/> Yes <input type="checkbox"/> No
• If yes, are these new methods going to be implemented in the source watershed? <i>(If yes, fill out Section D Source Water above)</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No
• If yes, are these new methods going to be implemented in the water treatment process? <i>(If yes, fill out Section E Water Treatment above)</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No
• If yes, are these new methods going to be implemented in the distribution system or the water storage tanks? <i>(If yes, fill out Section F Distribution System above)</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No

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4. Please provide a short statement about the control plan updates and status that your system is planning or implementing to reduce disinfection byproducts (DBPs):

I certify that the information in this entire report, including any attachments, is true and accurate to the best of my knowledge.

Signature: _____ Date: _____

Printed Name: _____ License #: _____

Contact Email address: _____ Contact Phone Number: _____

Send the completed report to Georgia EPD no later than 90 days after being notified of the analytical results that caused you to exceed the operational evaluation level using one of the following:

Mail: Environmental Protection Division
Attn: Leslie Lundeen
2 Martin Luther King Jr. Drive
Suite 1152 East Floyd Tower
Atlanta, GA 30334

Fax: 770-342-3903 Attn: Leslie Lundeen

Email: leslie.lundeen@dnr.ga.gov with PWS ID Number and "DBP2 OER" in the subject line.