



# Fluoridation Monthly Operations Report Guidance

## Introduction

We designed this guide to help public water systems prepare and report monthly operating reports (MORs) for fluoride to the state Department of Health Office of Drinking Water (department). We included sample MOR templates for sodium fluoride saturators (form 331-496) and fluorosilicic acid or sodium fluorosilicate (form 331-497).

Copies of the templates are at: (Insert link)

These templates have been designed in Microsoft Excel so that some features could be automated.

The following cells in Form **331-496** have been automated for you:

- Header information Page 2 (system name, system ID, FIP No, Month/Year, Contact Name, and Phone #) auto populates from the information that you enter on page one.
- Volume Treated Column
- Fluoride Additive Added To Total
- Fluoride Additive Volume Used Total
- Monitored Calculated Dosage Min, Max, Avg, Count Total, Count within Range, and Percent within Range
- Monitored Field Tested Result Min, Max, Avg, Count Total, Count within Range, and Percent within Range

The following cells in Form **331-497** have been automated for you:

- Header information Page 2 (system name, system ID, FIP No, Month/Year, Contact Name, and Phone #) auto populates from the information that you enter on page one.
- Volume Treated Column
- Fluoride Additive Quantity Used Total
- Monitored Calculated Dosage Min, Max, Avg, Count Total, Count within Range, and Percent within Range
- Monitored Field Tested Result Min, Max, Avg, Count Total, Count within Range, and Percent within Range





## Section 1: Form Header Information

Enter the water system name that is registered with the department.

Enter the 5 – 6 character water system ID number.

Enter the Fluoride Injection Point (FIP) number.

Enter the month/year of the report.

Enter the primary contact name for all fluoride related questions.

Enter the phone number of the primary contact.

## Section 2: Date

This section lists the day of the month, starting with a “**Prev**” cell. Enter the last reading from the previous month’s report in the “**Meter Reading**” cell to right of the cell marked “**Prev**”.

Date	Meter Reading (1000 gals)
Prev.	<input type="text"/>

## Section 3: Water Production

Enter your daily water production meter reading (in thousands of gallons) under “**Meter Reading**” in the corresponding day’s cell.

The “**Volume Treated (1000 gallons)**” is the difference between that days reading and the previous days reading.

## Section 4: Fluoride Additive

Enter the number of pounds of sodium fluoride that were added to the saturator on any given day during the month in the “**Added To**” column.

Enter the meter reading (in gallons) from the fluoride saturator water supply line in the “**Meter Reading**” column.

Enter the amount of saturated fluoride solution that is used on any given day in the “**Volume Used**” column. (This is the difference between today’s “**Meter Reading**” and yesterday’s “**Meter Reading**”.)

## Section 5: Monitoring

Enter the calculated fluoride concentration based on the raw water fluoride levels added to the calculated added fluoride in the “**Calculated Dosage**” column.

Calculated Dosage Example:

$$((18,000 \times \text{Fluoride Volume Used}) \div \text{Water Volume Tested}) + \text{Raw Water Data}$$

Enter the daily fluoride field result in the “**Field Test**” column. This is either a single daily value or an average of all the daily sample values if more than one sample is taken during the day.

## Section 6: Monthly Totals

The “Calculated Dosage” and the “Filed Test” Min, Max, Avg, Count Total, Count within Range, and Percent within Range are automatically calculated with an embedded formula; however if those formulas fail please calculate “Calculated Dosage” totals and “Fields Test Results” totals by:

“**Min**” – Enter the minimum value for the month.

“**Max**” – Enter the maximum value for the month.

“**Avg**” – Enter the calculated average of all the monthly results.

Calculation: Summation of all of the results ÷ the total number of results

“**Count Total**” - Enter the number of results entered for the month.

“**Count within Range**” – The number of results that were within 0.5 – 0.9 mg/L.

“**Percent within Range**” – The percentage of the total results that were within 0.5 – 0.9mg/L.

Calculation: ((number of samples within range ÷ total number of samples) × 100)

## Section 7: Raw Water Data

Enter the most recent certified laboratory result for the fluoride concentration of your *raw* water.

## Section 8: Fluoride Additive Data

Enter the manufacturer information for your fluoride additive.

## Section 9: Testing and Monitoring

Enter the make and model of the instrument used for field monitoring

## Section 10: Weekly Instrument Calibration

After instrument calibration; enter the date, the concentration of the calibration standard, and the result from analysis of the calibration standard.

## Section 11: Monthly Split Sample

Enter the date when the split sample was taken and the result from the certified lab. The result entered in the field result cell on the day that the split sample was taken must correspond with the field result reported to the certified lab when the split sample was submitted.

## Section 12: Process Interruption

Enter the start date/time and end date/time of any process interruption. On the second page, there must be a detailed account of the cause and response for every process interruption.

## Section 13: Certified Operator Sign-off

A state certified operator must either manually or electronically sign and date page one and page two. On page one the certified operator must provide their Washington Certification Number.

# Fluorosilicic Acid / Sodium Fluorosilicate: Form 331-497

This section explains how to complete the Fluorosilicic Acid / Sodium Fluorosilicate form.



**Fluoridation Monthly Operations Report Form**  
*Fluorosilicic Acid / Sodium Fluorosilicate*

DOH Form 331-497  
Jan. 2016

System Name: \_\_\_\_\_ System ID: \_\_\_\_\_

FIP No: \_\_\_\_\_ **1** Month/Year: \_\_\_\_\_ / \_\_\_\_\_

Contact Name: \_\_\_\_\_ Phone #: \_\_\_\_\_

Date	Water Production		Fluoride Additive		Monitoring	
	Meter Reading (MG)	Volume Treated (MG)	Total Remaining (Circle one) (gals) or (lbs)	Quantity Used (Circle one) (gals) or (lbs)	Calculated Dosage (mg/L)	Field Tested Result* (mg/L)
Prev.						
1						
2						
3						
4						
5						
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22						
23						
24						
25						
26						
27						
28						
29						
30						
31						
Total		0		0		
Min					#NUM!	#NUM!
Max					0.00	0.00
Avg					#DIV/0!	#DIV/0!
Count Total					0	0
Count within Range					0	0
Percent within Range					#DIV/0!	#DIV/0!

**Raw Water Data:**  
Date of Last Sample: \_\_\_\_\_  
Lab Result: \_\_\_\_\_ mg/L **7**

**Fluoride Additive Data:**  
 Fluorosilicic Acid     Sodium Fluorosilicate  
 Manufacturer: \_\_\_\_\_  
 ANSI-NSF Standard 60 Approved     Yes  
 Percent strength of acid used: \_\_\_\_\_ %  
 Specific Gravity (SG) of acid: \_\_\_\_\_ **8**

**Testing and Monitoring:**  
 \*Instrument used in field testing (Make/Model) \_\_\_\_\_  
 Method used:     SPADNS     Electrode **9**

**Weekly Instrument Calibration:**

Date	Standard mg/L	Result mg/L

**10**

**Date Split Sample Take** \_\_\_\_\_  
**Split Sample Result mg** \_\_\_\_\_ **11**

**Process Interruption(s) (date/time):**

1st Start:	End:
2nd Start:	End:
3rd Start:	End:

**12**

Explain cause and corrective actions taken for interruption(s) on back of page.

**Please send your report to us by the 10th day of the following month.**

Certified Operator Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Washington Certification No.: \_\_\_\_\_ **13**

If you need this publication in an alternative format, call 800.525.0127 (TDD/TTY call 711).  
 This and other publications are available at: <http://www.doh.wa.gov/drinkingwater>



**2**

**3**

**4**

**5**

**6**

**7**

**8**

**9**

**10**

**11**

**12**



**Fluoridation Monthly Operations Report - Supplemental Form**

Explain cause and corrective actions taken for each interruption/overfeed.  
 (Use this page to the report if these occurred during the month. Add additional pages, if needed.)

System Name: 0 \_\_\_\_\_ System ID: 0 \_\_\_\_\_

FIP No: 0 \_\_\_\_\_ **1** Month/Year: 01/00/00 \_\_\_\_\_

Contact Name: 0 \_\_\_\_\_ Phone #: - \_\_\_\_\_

Date(s)	Cause and Response

**12**

Certified Officer Signature: \_\_\_\_\_ Date: \_\_\_\_\_ **13**

Please send report to: Fluoride@doh.wa.gov (preferred) OR PO BOX 47822, Olympia, WA 98504-7822 OR Fax: 360-236-2252

## Section 1: Form Header Information

Enter the water system name that is registered with the department.

Enter the 5 – 6 character water system ID number.

Enter the Fluoride Injection Point (FIP) number.

Enter the month/year of the report.

Enter the primary contact name for all fluoride related questions.

Enter the phone number of the primary contact.

## Section 2: Date

This section lists the day of the month, starting with a “**Prev**” cell. Enter the last reading from the previous month’s report in the “**Meter Reading**” cell to right of the cell marked “**Prev**”.

Date	Meter Reading (MG)
Prev.	

## Section 3: Water Production

Enter your daily water production meter reading (in millions of gallons) under “**Meter Reading**” in the corresponding day’s cell.

The “**Volume Treated (MG)**” is the difference between that days reading and the previous days reading.

## Section 4: Fluoride Additive

Enter the number of gallons or pounds (circle one) remaining in the additive storage tank in the “**Total Remaining**” column.

Enter the amount of gallons or pounds (circle one) of additive used in the “**Quantity Used**” column. This is the difference between the today’s “**Total Remaining**” and yesterday’s “**Total Remaining**”.

## Section 5: Monitoring

Enter the calculated fluoride concentration based on the raw water fluoride levels added to the calculated added fluoride in the “**Calculated Dosage**” column.

Calculated Dosage Example (based on 23% acid concentration):

$$((\text{Fluoride Quantity Used (lbs)} \times 0.79 \times 0.23) \div (\text{Water Volume Treated (MG)} \times 8.34)) + \text{Raw Water Data}$$

Enter the daily fluoride field result in the “**Field Tested Result**” column. This is either a single daily value or an average of all the daily sample values if more than one sample is taken during the day.

## Section 6: Monthly Totals

The “Calculated Dosage” and the “Filed Test” Min, Max, Avg, Count Total, Count within Range, and Percent within Range are automatically calculated with an embedded formula; however if those formulas fail please calculate “Calculated Dosage” totals and “Fields Test Results” totals by:

“**Min**” – Enter the minimum value for the month.

“**Max**” – Enter the maximum value for the month.

“**Avg**” – Enter the calculated average of all the monthly results.

Calculation:  $\text{Summation of all of the results} \div \text{the total number of results}$

“**Count Total**” - Enter the number of results entered for the month.

“**Count within Range**” – The number of results that were within 0.5 – 0.9 mg/L.

“**Percent within Range**” – The percentage of the total results that were within 0.5 – 0.9mg/L.

Calculation:  $((\text{number of samples within range} \div \text{total number of samples}) \times 100)$

## Section 7: Raw Water Data

Enter the most recent certified laboratory result for the fluoride concentration of your *raw* water.

## Section 8: Fluoride Additive Data

Mark which type of acid you are using.

Enter the manufacturer information for your fluoride additive.

Mark if the additive is ANSI-NSF Standard 60 approved.

Enter the percent strength of the acid used.

Enter the Specific Gravity of the acid used.

## Section 9: Testing and Monitoring

Enter the make and model of the instrument used for field monitoring

## Section 10: Weekly Instrument Calibration

After instrument calibration; enter the date, the concentration of the calibration standard, and the result from analysis of the calibration standard.

## Section 11: Monthly Split Sample

Enter the date when the split sample was taken and the result from the certified lab. The result entered in the field result cell on the day that the split sample was taken must correspond with the field result reported to the certified lab when the split sample was submitted.

## Section 12: Process Interruption

Enter the start date/time and end date/time of any process interruption. On the second page, there must be a detailed account of the cause and response for every process interruption.

## Section 13: Certified Operator Sign-off

A state certified operator must either manually or electronically sign and date page one and page two. On page one the certified operator must provide their Washington Certification Number.

All completed forms must be received by the Department by the 10<sup>th</sup> of the following month for which you are reporting.

- They can be e-mailed (preferred method) to the Department at:

**Fluoride@doh.wa.gov**

- They can be mailed to the Department at:

**Department of Health  
Attn: Fluoride Program  
PO BOX 47822  
Olympia, WA 98504-7822**

- They can be faxed to the Department at:

**360-236-2252  
Attn: Fluoride Program**

**Fluoride Program Contact Information:**

**Technical Support:**

Stephen Baker  
(360) 236-3138  
stephen.baker@doh.wa.gov

**Compliance Support:**

Nina Helpling  
(360) 236- 3197  
nina.helpling@doh.wa.gov

For people with disabilities, this document is available on request in other formats. To submit a request, please call 1-800-525-0127 (TDD/TTY call 711).