

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

# 2023 PSAR Guide: Part A Line 4 Water Treatment Loss

Southwest Florida  
*Water Management District*



## Overview

- What is Water Treatment Loss?
- How to Properly Calculate Water Treatment Loss
- Using the 2023 Flushing Deduction Calculator



## What is Water Treatment Loss?

Per 2.3.7 of WUP Applicant's Handbook, water treatment loss is the, “- significant treatment process [loss] associated with making the water potable, such as reject water in desalination, membrane cleaning or back-flush quantities associated with sand filtration systems.”

An important note: Water used for line flushing is not considered Water Treatment Loss. It's considered Water Loss. However, to accommodate for utility operations & maintenance line flushing, up to 1% of total treated water volume delivered to the distribution system may be deducted for line flushing.

# How to Properly Calculate Water Treatment Loss

To ensure that Part A Line 4 Water Treatment Loss is properly calculated, use the 2023 Flushing Deduction Calculator. The calculator can be found on the [Section D, Public Supply Annual Reports and Significant Use](#) webpage in the PSAR Resources box.

Even if your utility does not have water treatment loss, we encourage using the calculator as supporting documentation for your PSAR.

The following slides will illustrate how to use the calculator.

**Southwest Florida Water Management District**

Name of Permittee:

Water Use Permit #:

Report Date:

Reporting Period:   
*(for example, January 2023 - December 2023)*

**PSAR FLUSHING DEDUCTION CALCULATOR**

*This calculator provides guidance on Treatment Loss Reporting based on PSAR Definitions. It is the responsibility of the permittee to ensure values in the PSAR are accurate.*

**Directions:** Fill in GREEN cells. Grey cells are automatically updated. Orange cells are outputs for PSAR reporting.

Unit of Measure Used Throughout Worksheet (Gallons, 1000s Cu Ft, etc.)   
*(Change if using Unit of Measure other than Gallons)*

LINE	ITEM	QUANTITY *	PSAR Line No
1.	TOTAL SYSTEM WATER SUPPLY (Unadjusted)		
a.	Total Withdrawals	<input type="text"/>	Line 1
b.	Imported Water:	<input type="text"/>	Line 2
c.	Exported Water:	<input type="text"/>	Line 3
i.	Total Treatment Losses (at WTP, True treatment loss)	<input type="text"/>	
	<b>TOTAL DELIVERED TO DISTRIBUTION SYSTEM</b>	<input type="text" value="0"/>	
2.	Adjusted Treatment Losses for PSAR		
i.	Total Water Main/Distribution System Flushing	<input type="text"/>	
ii.	1% of Total Delivered to Distribution System	<input type="text" value="0"/>	
ii.	Allowable Flushing Deduction (up to 1% of system flows)	<input type="text" value="0"/>	
iii.	<b>CORRECTED TREATMENT LOSSES FOR PSAR REPORTING</b>	<input type="text" value="0"/>	Line 4
	<b>PSAR GROSS WATER USE</b>	<input type="text" value="0"/>	Line 5



## Using the 2023 Flushing Deduction Calculator

1. Line 1a: Enter your total withdrawal value downloaded from WMIS. This will be your PSAR Part A Line 1. (For help on obtaining this value, see our 2023 PSAR Guide: Part A Line 1 Total Withdrawal – WMIS Pumpage.)

2. Line 1b: Enter your total imports value from your supporting documentation. This will be your PSAR Part A Line 2.

3. Line 1c: Enter your total exports value from your supporting documentation. This will be your PSAR Part A Line 3.

RAW WATER PUMPAGE + IMPORTED WATER - EXPORTED WATER = TOTAL OF ALL USES

6,518,429 gpd + 1,829,489 gpd - 145,694 gpd = 8,202,224 gpd

**PSAR FLUSHING DEDUCTION CALCULATOR**

*This calculator provides guidance on Treatment Loss Reporting based on PSAR Definitions. It is the responsibility of the permittee to ensure values in the PSAR are accurate.*

Directions: Fill in GREEN cells. Grey cells are automatically updated. Orange cells are outputs for PSAR reporting.

Unit of Measure Used Throughout Worksheet (Gallons, 1000s Cu Ft, etc.) : \*   
 (Change if using Unit of Measure other than Gallons)

LINE	ITEM	QUANTITY *	PSAR Line No
1.	TOTAL SYSTEM WATER SUPPLY (Unadjusted)		
a.	Total Withdrawals	6,518,429 gpd	Line 1
b.	Imported Water:	1,829,489 gpd	Line 2
c.	Exported Water:	145,694 gpd	Line 3
i.	Total Treatment Losses (at WTP, True treatment loss)	3,803 gpd	
<b>TOTAL DELIVERED TO DISTRIBUTION SYSTEM</b>		8,198,421 gpd	

# Using the 2023 Flushing Deduction Calculator (Continued)

4. Line 1i: Enter your total treatment loss value from your supporting documentation. This value will not include line flushing.

The value displayed in the following gray cell will autofill with the total gallons per day of potable water delivered to the distribution system.

Month	Treatment Loss	Treatment Loss
January	95,480	27,280
February	89,320	25,520
March	95,480	27,280
April	10	26,400
May	95,480	27,280
June	112,400	36,400
July	95,480	27,280
August	95,480	27,280
September	92,400	26,400
October	100,480	27,280
November	92,480	26,400
December	95,480	27,280
Total	1,059,890	332,080
<b>**AADF</b>	<b>2,896</b>	<b>907</b>

  

**PSAR CALCULATOR**

*based on PSAR Definitions.  
PSAR are accurate.*

*Highlighted. Orange cells are outputs for PSAR reporting.*

(Units, etc.): \* gpd

LINE	ITEM	QUANTITY *	PSAR Line No
1.	TOTAL SYSTEM WATER SUPPLY (Unadjusted)		
a.	Total Withdrawals	6,518,429 gpd	Line 1
b.	Imported Water:	1,829,489 gpd	Line 2
c.	Exported Water:	145,694 gpd	Line 3
i.	Total Treatment Losses (at WTP, True treatment loss)	3,803 gpd	
<b>TOTAL DELIVERED TO DISTRIBUTION SYSTEM</b>		<b>8,198,421 gpd</b>	



## Using the 2023 Flushing Deduction Calculator (Continued)

5. Line 2i: Enter your total line flushing value from your supporting documentation.

The values in the following two gray cells will autofill with calculated values to determine which is less: total flushing or 1% of total water delivered to the distribution system.

Month	Flushing	Flushing
January	294,900	8,000
February	300,680	32,000
March	143,000	41,000
April	157,725	36,000
May	325,050	34,000
June	955,500	34,300
July	530,700	114,000
August	354,095	115,000
September	330,465	116,000
October	395,862	121,000
November	1,042,384	121,000
December	286,900	113,000
Total	5,117,261	885,300
**AADF	13,982	2,419

<b>2. Adjusted Treatment Losses for PSAR</b>		
i. Total Water Main/Distribution System Flushing	16,401 gpd	
ii. 1% of Total Delivered to Distribution System	81,984 gpd	
ii. Allowable Flushing Deduction (up to 1% of system flows)	16,401 gpd	
iii. CORRECTED TREATMENT LOSSES FOR PSAR REPORTING	20,204 gpd	Line 4
PSAR GROSS WATER USE	8,182,020 gpd	Line 5

## Using the 2023 Flushing Deduction Calculator (Continued)

6. CORRECTED TREATMENT LOSSES FOR PSAR REPORTING. The value displayed in the orange cell will autofill to the value above plus the value from Line 1i. Enter this value in Line 4 of your PSAR.

7. PSAR GROSS WATER USE. The value displayed in this cell will autofill with the sum of Line 1a. + Line 1b. – Line 1c. – Line 2iii. Enter this value in Line 5 of your PSAR.

<b>2. Adjusted Treatment Losses for PSAR</b>		
i. Total Water Main/Distribution System Flushing	16,401 gpd	
ii. 1% of Total Delivered to Distribution System	81,984 gpd	
ii. Allowable Flushing Deduction (up to 1% of system flow)	16,401 gpd	
iii. CORRECTED TREATMENT LOSSES FOR PSAR REPORTING	20,204 gpd	Line 4
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