



Water Fluoridation Reporting System

Centers for Disease Control and Prevention Water Fluoridation Reporting System Overview





Water Fluoridation Reporting System

- **Water Fluoridation Reporting System (WFRS) is a web-based database for managing water fluoridation in a state**
- **CDC hosts a “data shell” and states enter and maintain jurisdiction data over the internet**
- **Jointly developed with the Association of State and Territorial Dental Directors**
- **Access is restricted to approved state officials, and determined by State Dental Director**





Functions of WFRS

Water Fluoridation
Reporting System

- **Verify/Modify information about individual water systems**
- **Relationships between systems**
- **Enter monthly fluoride reading data (i.e. - monthly concentrations, etc.)**





WFRS main menu

Water Fluoridation Reporting System

- Water Systems
- Fluoride Levels
- Counties
- Communities
- Reports
- Preferences
- Tools
- Contact Us
- Help
- Logout



Welcome to WFRS, the premier Water Fluoridation Reporting System brought to you by the [National Center for Chronic Disease Prevention and Health Promotion \(NCCDPHP\)](#), the [Division of Oral Health](#) and the [Association of State and Territorial Dental Directors \(ASTDD\)](#). This system collects and reports on National Fluoridation Levels from Participating Public Water Systems. All

Navigation buttons are used to choose actions





WFRS data model

Water Fluoridation
Reporting System

- All information organized around the *Water System*
- Unique identifier needed
- U.S. Environmental Protection Agency (EPA) SDWIS ID Number
 - Two digit state code (CA, GA, etc.)
 - Seven digit numeric code (1234567)

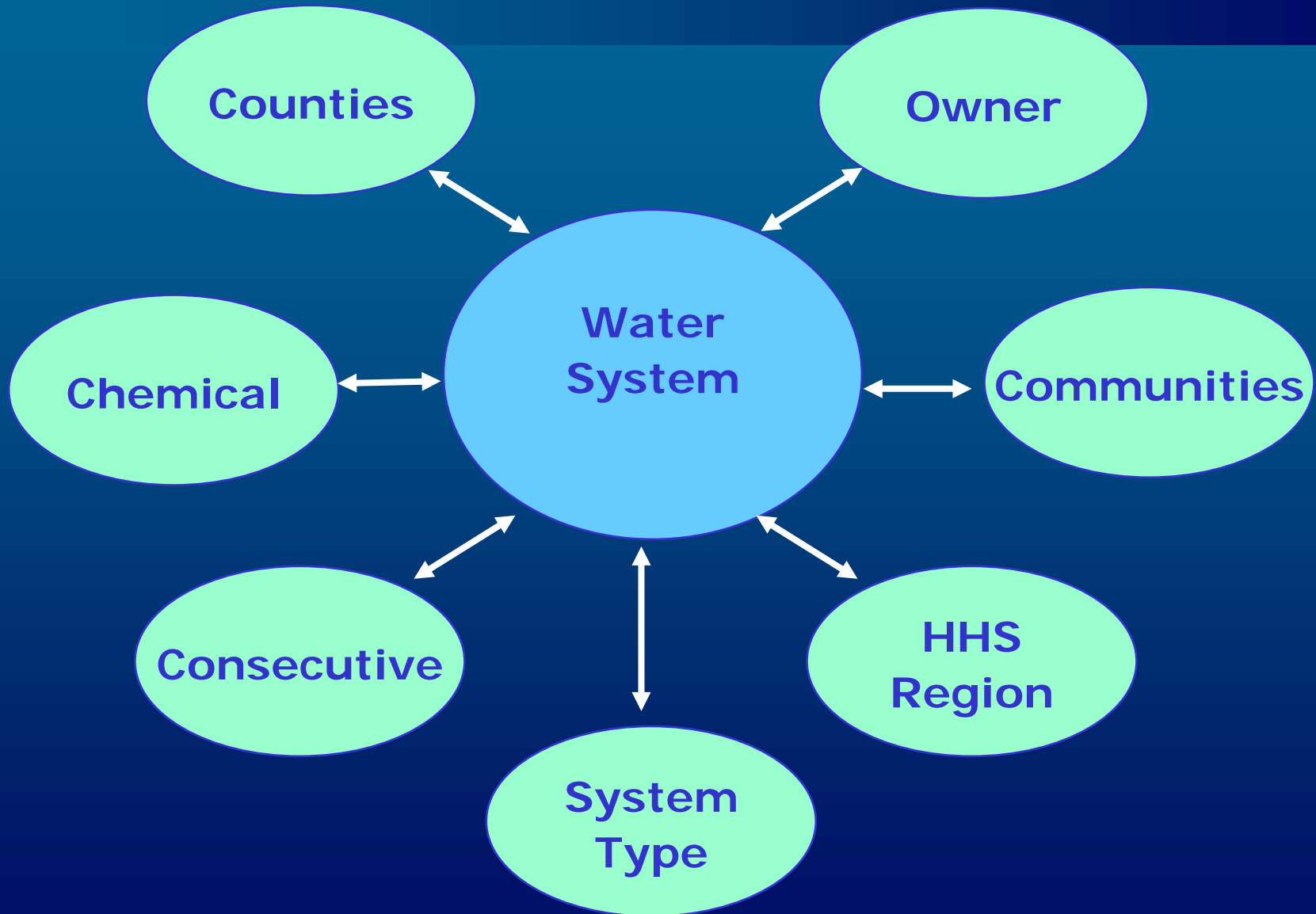
CA 1234567





WFRS data model (cont)

Data is organized around each separate water system



Water Fluoridation
Reporting System





Water systems included

160,000 public water systems in SDWIS

Which water systems are in WFRS?

WFRS includes community water systems: 52,000 systems

Water Fluoridation
Reporting System





Fluoridation status

Water Fluoridation
Reporting System

- **All systems identified as one of six fluoridation status:**
 - Adjusted
 - Natural
 - Non-Adjusted
 - Defluoridated
 - Variable/Other
 - Consecutive





Fluoridation status (cont)

Water Fluoridation
Reporting System

- **Adjusted**
 - System which adds fluoride
 - Can be a system which purchases non-fluoridated water





Fluoridation status (cont)

Water Fluoridation
Reporting System

- **Natural**
 - System with natural fluoride concentration above the minimum control range
 - Range may be different from that of adjusted systems





Fluoridation status (cont)

Water Fluoridation
Reporting System

- **Non-Adjusted**
 - Does not purchase water from another system
 - Natural fluoride concentration below the minimum control range
 - Does not adjust the fluoride concentration





Fluoridation status (cont)

Water Fluoridation
Reporting System

- **Defluoridated**
 - Does not purchase water from another system
 - Natural fluoride concentration high
 - Finished water fluoride concentration is reduced by:
 - a treatment process to reduce the fluoride concentration, or
 - high fluoride water is blended with low fluoride water





Fluoridation status (cont)

- **Variable/Other**
 - Does not purchase water from another system
 - Fluoride concentration widely variable throughout the year
 - Can also be used as a category for systems not meeting other criteria





Fluoridation status (cont)

Water Fluoridation
Reporting System

- **Consecutive**
 - System which purchases water from another system
 - Does not adjust the fluoride concentration
 - May be fluoridated or non-fluoridated





Fluoridation status (cont)

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City: ANDERSON
 State: SAMPLE DATA
 Zip Code: 00000
 Contact Name: JANE DOE
 Telephone: 486-555-1212
 *Population Served: 100000
 *Fluoridation Status: Adjusted
 *System Type: Community
 *Water Source: Ground
 Chemical Type: H2SiF6
 Fluoridation Start: 1/1/1956
 Last Inspection: 9/15/2001
 Last Fluoride Training: 7/4/2001

Fluoride Criteria

*Natural Fluoride Conc.: 0.3 mg/L **Defluoridated Criteria**
 *Optimal Fluoride Conc.: 1 mg/L **Defluoridated Monitor:**
 *Lowest Optimal Conc.: 0.8 mg/L **Defluoridated Target:** mg/L
 *Highest Optimal Conc.: 1.5 mg/L **Variable/Other Criteria**
 *Split +/- Tolerance: 0.2 mg/L **Variable High:** mg/L
Number of Points: **Variable Low:** mg/L

Fluoridated: Yes
 Memo:

WFRS manages water systems based on fluoridation status

- “Yes” Status for**
- Adjusted
 - Natural
 - Consecutive

Water system can be selected by name or SDWIS ID

By number

By name



WFRS

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Public Water Systems

Owner ID: State of Denali [Fluoridated](#) | [Non-Fluoridated](#) | [All Systems](#)

Pages: [1](#) [2](#)

Current: 1 Filter: Fluoridated Systems [Add New Record](#)

PWS ID	Public Water System Name	Status	Last Update
AA-0000001	STERLING	Adj	9/24/2003
AA-0000003	GIRDLWOOD	Nat	9/24/2003
AA-0000004	TOK	Cons	12/31/2002
AA-0000009	OSCAR	Cons	11/6/2001
AA-0000010	BRAVO	Adj	1/16/2003
AA-0000011	LIMA VILLAGE	Cons	6/4/2002
AA-0000012	KILO	Adj	1/31/2002
AA-0000015	INDIGO LAKE	Adj	1/28/2003
AA-0000017	HOMER	Cons	6/4/2002
AA-0000018	NORTHWAY	Adj	9/29/2003
AA-0000021	GAMBELL	Adj	1/28/2003
AA-0000023	AMBERVILLE	Cons	6/4/2002
AA-0000029	FAIRBANKS	Adj	1/28/2003
AA-0000030	BARROW	Nat	10/1/2003
AA-0000031	CHINOOK	Cons	1/28/2003
AA-0000032	THORNE BAY	Def	6/12/2003
AA-0000033	VICTOR	Cons	10/29/2001
AA-0000034	CRAIG	Cons	1/28/2003
AA-0000035	ANGOON	Cons	1/28/2003
AA-0000036	CHIGNIK	Cons	1/28/2003
AA-0000037	NENANA	Adj	1/28/2003
AA-0000038	EAGLE	Cons	1/28/2003
AA-0000040	SEWARD	Adj	1/28/2003





Each water system has separate table on information

Water Fluoridation Reporting System

- Water Systems
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Public Water Systems Maintenance

Owner ID: State of Denali

New Save Remove Reset < > | Fi

***EPA State/Territory:** AA

***PWS ID:** 0000029

Source System: None - None - None

Parent System: None - None - None

PWS Region ID: 0 [Edit Consecutive Systems](#)

***Name:** FAIRBANKS

Address Line 1: 8254 QUARTZ CANYON DRIVE

Address Line 2:

City: BLUE CANYON

State: SAMPLE DATA

Zip Code: 12345

Contact Name: ANNIE NEZSKI

Telephone: 520-555-1212

***Population Served:** 18250

***Fluoridation Status:** Adjusted

***System Type:** Native American

***Water Source:** Surface

Chemical Type: NaF

Fluoridation Start: 4/4/1968

State/EPA PWS ID number and relationship to other systems

PWS name and contact information

Population, type of system and system attributes





Water system information (cont)

Water Fluoridation Reporting System



WFRS

Water Systems

Fluoride Levels

Counties

Communities

Reports

Preferences

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City: BLUE CANYON

State: SAMPLE DATA

Zip Code: 12345

Contact Name: ANNIE NEZSKI

Telephone: 520-555-1212

*Population Served: 18250

*Fluoridation Status: Adjusted

*System Type: Native American

*Water Source: Surface

Chemical Type: NaF

Fluoridation Start: 4/4/1968

Last Inspection: 8/15/2001

Last Fluoride Training: 3/10/2000

Fluoride Criteria

*Natural Fluoride Conc.: 0.5 mg/L

*Optimal Fluoride Conc.: 1 mg/L

*Lowest Optimal Conc.: 0.8 mg/L

*Highest Optimal Conc.: 1.5 mg/L

*Split +/- Tolerance: 0.2 mg/L

Number of Points: 1

Fluoridated: Yes

Defluoridated Criteria

Defluoridated Monitor:

Defluoridated Target: mg/L

Variable/Other Criteria

Variable High: mg/L

Variable Low: mg/L

Memo:

Inspections
Training

Fluoride levels
information





Fluoride levels

Water Fluoridation
Reporting System

- **Minimum data requirements for WFRS**
 - Basic water system information
 - Consecutive supply relationships
 - Monthly average fluoride readings
- **Can only enter for adjusted and defluoridated (monitored) systems**
- **WFRS automatically enters for other system types**





Fluoride levels (cont)

Water Fluoridation
Reporting System

- **Data fields**
 - **Daily fluoride readings**
 - **Average – monthly average concentration**
 - **High – monthly highest concentration**
 - **Low – monthly lowest concentration**
 - **Adequate number of daily tests**
 - **Adequate number within range**





Fluoride levels (cont)

Water Fluoridation
Reporting System

- **Data fields**
 - **Split sample results**
 - Oper – operator test results
 - Lab – state lab test result
 - Sample Date – date operator pulled sample
 - Split samples required?
 - Correlation required?



Fluoride levels (cont)



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Monthly Fluoridation Levels

Monthly average

Operator reported split sample result

State confirmation result

Split results correlate?

	Avg	High	Low	#	I/R	Oper	Lab	Sample Date	Req'd	Corr	Chemical Type
Jan	1.00	1.30	0.80	✓	✓	1.20	1.15	1/15/2003	✓	✓	NaF
Feb	0.98	1.25	0.90	✓	✓	1.05	1.10	2/21/2003	✓	✓	NaF
Mar	0.95	1.15	0.85	✓	✓	1.00	1.10	3/14/2003	✓	✓	NaF
Apr	1.10	1.25	0.85	✓	✓	0.95	1.05	4/23/2003	✓	✓	NaF
				✓	✓	1.60	1.75	5/17/2003	✓	✓	NaF
				✓	✓	1.00	1.15	6/12/2003	✓	✓	NaF
				✓	✓	1.05	1.15	7/14/2003	✓	✓	NaF
				✓	✓	1.05	1.15	8/17/2003	✓	✓	NaF
				✓	✓	1.15	1.25	9/12/2003	✓	✓	NaF

Highest and lowest results

Sufficient number of samples reported?

Sufficient number of samples in optimal range?





Reports and Data Analysis

Water Fluoridation
Reporting System

Once entered, numerous reports and analysis capabilities support program development and improvement in fluoridation quality within a state





WFRS training

Water Fluoridation
Reporting System

- **CDC offers training on use of WFRS to state officials. For information on training, visit www.cdc.gov/fluoridation**
- **For more details on WFRS refer to **CDC Fact Sheet****
http://www.cdc.gov/fluoridation/fact_sheets/engineering/wfrs_factsheet.htm

