Centers for Disease Control and Prevention
Water Fluoridation Reporting System
Overview
• 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

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

- 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 systems included

160,000 public water systems in SDWIS

Which water systems are in WFRS?
WFRS includes community water systems: 52,000 systems
Fluoridation status

- All systems identified as one of six fluoridation status:
  - Adjusted
  - Natural
  - Non-Adjusted
  - Defluoridated
  - Variable/Other
  - Consecutive
Fluoridation status (cont)

- Adjusted
  - System which adds fluoride
  - Can be a system which purchases non-fluoridated water
Fluoridation status (cont)

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

• **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)

- **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)

- **Consecutive**
  - System which purchases water from another system
  - Does not adjust the fluoride concentration
  - May be fluoridated or non-fluoridated
WFRS manages water systems based on fluoridation status

“Yes” Status for
• Adjusted
• Natural
• Consecutive
Water system can be selected by name or SDWIS ID.

Public Water Systems

Owner ID: State of Denali  |  Fluoridated | Non-Fluoridated | All Systems

Pages: 1 2
Current: | Filter: Fluoridated Systems | Add New Record

<table>
<thead>
<tr>
<th>PWS ID</th>
<th>Public Water System Name</th>
<th>Status</th>
<th>Last Update</th>
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By number  |  By name
Each water system has separate table on information

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<thead>
<tr>
<th>Field</th>
<th>Value</th>
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<tbody>
<tr>
<td>State/EPA PWS ID number and relationship to other systems</td>
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<tr>
<td>PWS name and contact information</td>
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<td>Population, type of system and system attributes</td>
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Water system information (cont)

Inspections
Training
Fluoride levels information
Fluoride levels

• 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)

- **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)

• **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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<th>Monthly Fluoridation Levels</th>
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<table>
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<th>Avg</th>
<th>High</th>
<th>Low</th>
<th># I/R</th>
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<th>Lab</th>
<th>Sample Date</th>
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</tbody>
</table>

- Monthly average
- Highest and lowest results
- Operator reported split sample result
- State confirmation result
- Split results correlate?
- Sufficient number of samples reported?
- Sufficient number of samples in optimal range?
Reports and Data Analysis

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

• 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