Safe Drinking Water Information System Federal (SDWIS Fed) Data Reporting Requirements

Technical Guidance

Infrastructure Branch
Drinking Water Protection Division
Office of Ground Water and Drinking Water
Office of Water
U.S. Environmental Protection Agency

3/25/2016

Revision History

Date	Description	Version
1/7/2016	Initial version	0.1
1/29/2026	Checked against FedRep 3.5 Requirements Document	0.2
3/21/2016	Verified and revised Violations section/other minor changes	0.3
3/21.2016	Finalized version 1	1.0
3/25/2016	Added header row in Valid Activity Type/Reason Code Combination table	1.1
3/31/2016	Corrected XML tag typos for PWS Additional Reporting Elements	1.2

Table of Contents

Table of Contents

Table of Contents

PURPOSE

The purpose of this document is to describe the data that Drinking Water Primacy Agencies (primacy agencies) report at the end of every fiscal quarter to USEPA. Included in this document are descriptions of the:

- Data required to register a water system and related compliance data in EPA's national database, and;
- Cardinality and permitted value options of individual data elements.

While this document includes details about reporting violations data, information concerning rule compliance determination is found in the implementation guidance and the data entry instructions for each drinking water rule.

BACKGROUND

The 2006 SDWIS Modernization Project defined an Extensible Markup Language (XML) Data Exchange Template (DET) for reporting drinking water data to EPA. This DET is described in the SDWIS/FedRep 3.5 Design Document and is designated as the Safe Drinking Water Act (SDWA) version 3.5 DET by the Exchange Network.[1] While the SDWA 3.5 DET serves as the basis for this document, the information is presented differently here for easier reference.

DATA EXCHANGE ORGANIZATION

The SDWA 3.5 DET segregates drinking water data into 18 business objects each corresponding to the inventory, action, or samples subject area, as described in the table below.

Subject Area	Business Object(s)	Data Reported
Inventory	Water System	- General information about the water system such activity status, type, population served, and such - Additional water system reporting for the source water protection program and the Long Term 2 Enhanced Surface Water Treatment and Revised Total Coliform rules
	Legal Entity and Legal Entity Affiliation	- Primary administrative contact - Relationship between the administrative contact and the water system as the administrative contact may be associated with more than one water system - Physical address of each active treatment facility for non-transient and community water systems if not reporting the latitude/longitude of the treatment facility (see the Water System Facility Treatment Plant business object later in this table)

---

[1] See: http://www.exchangenetwork.net/data-exchange/safe-drinking-water-information-system/

Subject Area	Business Object(s)	Data Reported
	Service Area	Primary service area; or primary type of service
	Geographic Area	City, county, or tribe/native Alaskan village served by the water system
	Water System Facility Source	All active source facilities
	Locational Detail	• Latitude/longitude of every source facility for non-transient and community water systems • The latitude/longitude of every active treatment facility for non-transient and community water systems *if not* reporting the physical address of the treatment facility
	Water System Facility Treatment Plant	All treatment facilities
	Treatment Data	Each treatment associated with a treatment facility as described in the Water System Facility Treatment Plan business object above
	Facility Flow	Water flow relationship between source and treatment facilities as reported in the Water System Facility Treatment Plant and Water System Facility Source business objects
	Water System Facility Other	Other types of water system facilities reported at the DWPA's discretion
Sample	Sample and Sample Result	• Lead and copper 90th percentile sample and sample results information
Action	Event Schedule Activity	• Lead and copper milestones • Corrective actions to address fecal contamination (specific to RTCR), deficiencies, and sanitary defects • Treatment technique triggers (Specific to RTCR)
	Site Visit	• Sanitary surveys conducted • Other types of site visits reported at the DWPA's discretion
	Violation	Violations of drinking water rules
	Enforcement Actions and Assignment Criteria	Enforcement actions taken against water systems and association to violations

The remainder of this document presents the minimum reporting requirements organized by the subject areas and business objects. Business object reporting requirements are organized by required, conditional, and optional data elements.

INVENTORY SUBJECT AREA REPORTING REQUIREMENTS

This section describes the reporting requirements for the Inventory Subject Area.

Every active public water system under the Drinking Water Primacy Agency's enforcement authority must be reported every quarter. If a water system becomes inactive or no longer meets the requirements for classification as a public water system since the last report, it must still be reported in subsequent quarters as inactive. The date that the water system became inactive is also reported.

Water System Business Object

Primacy agencies assign every water system under their authority a unique "PWSID". While the PWSID is unique within a primacy agency, other primacy agencies may use the same PWSID for a different water system under their authority. To prevent this, the SDWIS Fed data transformation process adds a two-character prefix to the PWSID according to the following rules:

- If the primacy agency is a state or territorial agency, appends the PWSID to the state or territorial postal code
    - The exception to this rule is the Wyoming drinking water program, which EPA Region 8 manages. PWSIDs for regulated water systems located in Wyoming are prepended with "WY".
- For tribal programs directly implemented by an EPA region, the region number (01-10, except 03) is prepended to the PWSID
    - The Navajo Nation has primacy for the water systems located within its lands, so "NN" is prepended to the PWSID

Required Data Elements

SDWIS/FedRep Data Element Name	SDWIS/FedRep XML Schema Tags	Comments	Format/ Permitted Values
PWS ID	<InventoryDataFlow> 　<WaterSystems> 　　<WaterSystemDetails> 　　　<PWSIdentifier>		AN (9)
PWS TYPE	<InventoryDataFlow> 　<WaterSystems> 　　<WaterSystemDetails> 　　　<SDWAPWSTypeCode>		A (4) C　Community NC Non-Community NTNC 　　Non-Transient, 　　Non-Community
PWS NAME	<InventoryDataFlow> 　<WaterSystems> 　　<WaterSystemDetails> 　　　<PWSNameText>	Formal, legal, or common name of the water system	AN (80)
ACTIVITY FLAG	<InventoryDataFlow> 　<WaterSystems> 　　<WaterSystemDetails> 　　　<PWSActivityCode> 　　　　<SDWAPWSActivityCode>	Indicates if this is an active or inactive water system	A (1) A Active I　Inactive

SDWIS/FedRep Data Element Name	SDWIS/FedRep XML Schema Tags	Comments	Format/ Permitted Values

RETAIL POPULATION SERVED	<InventoryDataFlow>
	 <WaterSystems>
	  <WaterSystemDetails>
	   <RetailPopulationServedValue>
		Total daily retail population served	N(8/0)
			<9,000,000

RETAIL SERVICE CONNECTIONS	<InventoryDataFlow>
	 <WaterSystems>
	  <WaterSystemDetails>
	   <RetailServiceConnectionsValue>
		Number of retail service connections	N (7/0)

OWNER TYPE	<InventoryDataFlow>
	 <WaterSystems>
	  <WaterSystemDetails>
	   <OwnerTypeCode>
	    <SDWAOwnerTypeCode>
		The type of owner of the water system	A (1)
			F Federal Government
			L Local Government
			M Mixed
			N Native American
			P Private
			S State Government

Conditional Data Elements

SDWIS/FedRep Data Element Name	SDWIS/FedRep XML Schema Tags	Comments	Format/ Permitted Values

DEACTIVATION DATE	<InventoryDataFlow>
	 <WaterSystems>
	  <WaterSystemDetails>
	   <PWSDeactivationDate>
		Date the water system activity status changed from active to inactive status	Date (YYYYMMDD)
			NULL if ACTIVITY FLAG = A

NON-COMMUNITY SEASON BEGIN (MONTH AND DAY)	<InventoryDataFlow>
	 <WaterSystems>
	  <WaterSystemDetails>
	   <NonCommunitySeason>
	    <NonCommunitySeasonBeginMonthDay>
		Required for all non-community water systems	Date (MMDD)
			Use 01/01 for non-seasonal water systems

NON-COMMUNITY SEASON END (MONTH AND DAY)	<InventoryDataFlow>
	 <WaterSystems>
	  <WaterSystemDetails>
	   <NonCommunitySeason>
	    <NonCommunitySeasonEndMonthDay>
		Required for all non-community water systems	Date (MMDD)
			Use 12/31 for non-seasonal water systems

Additional Water System Reporting Object

The Additional Water System Reporting Object extends the SDWA 3.5 DET and allows reporting of seven data items specific to three newer drinking water rules. A drawback of this approach is that it overloads the XML reporting object, which can lead to confusion. This section of the document describes the additional water system reporting object in detail in order to minimize, if not eliminate, potential confusion about its use.

The table below defines the elements used in the additional water system reporting object:

Additional Water System Reporting Object Data Elements		
Element Name	**Format**	**Purpose**
ADDITIONAL PWS REPORTING NAME	AN (40)	Identifies the data being reported. For example, when reporting the Combined Distribution System Identifier (CDS ID), the literal "Combined Distribution Identifier" is stored in this element.
Additional PWS Reporting Text Value	AN (40)	If the value is a text string (also includes numbers stored as text string), then the value of the data being reported is stored here. For example, if the CDS ID for the water system is "123456", then the string "123456" is reporting in this element.
Additional PWS Reporting Begin Date Value	Date (YYYYMMDD)	Used to report the beginning date when the value applied to the water system.
Additional PWS Reporting End Date Value	Date (YYYYMMDD)	Used to report the date when the value no longer applied to the water system.
Additional PWS Reporting Numeric Value	N (18/9)	This data element is used to report numeric values. *This element is not used at this time.*

The additional water system reporting object is used for reporting information about these drinking water rules:

Drinking Water Rule	**"Additional" Data Reported**
Stage 2 Disinfectant/ Disinfection By-Products Rule (Stage 2 DBP)	o Combined Distribution System Identifier o Stage 2 DBP Schedule Category
Long Term 2 Enhance Surface Water Treatment Rule (LT2 SWTR)	o Water system's participation in the primacy agency's Source Water Protection program o LT2 SWTR Schedule category o If the water system is an outstanding performer
Revised Total Coliform rule (RTCR)	o Reduced monitoring o Seasonal water system pressurization status

The following sections describe how to use the additional water system reporting object for reporting these data.

Reporting the Combined Distribution System (CDS) Identifier for the Stage 2 DBP Rule

Use the additional water system reporting object to report the CDS ID. This is required only if the water system is included in a combined distribution system as identified by the primacy agency. Note that the Additional PWS Reporting Name data element contains the literal "Combined Distribution System Identifier" to indicate that the payload contains the CDS ID.

SDWIS/FedRep Data Element Name	SDWIS/FedRep XML Schema Tags	Comments	Format/ Permitted Values

ADDITIONAL PWS REPORTING NAME	\<InventoryDataFlow>
	  \<WaterSystems>
	   \<WaterSystemDetails>
	    \<PWSAdditionalReportingDetails>
	     \<PWSAdditionalReportingElementName>
	\<PWSAdditionalReportingElementTextValue>
			AN (40) Combined Distribution System Identifier

ADDITIONAL PWS REPORTING TEXT VALUE	\<InventoryDataFlow>
	  \<WaterSystems>
	   \<WaterSystemDetails>
	    \<PWSAdditionalReportingDetails>
	     \<PWSAdditionalReportingElementTextValue>
		Report the CDS ID here	AN (40)

Additional PWS Reporting Begin Date Value	Not Used		
Additional PWS Reporting End Date Value	Not Used		
Additional PWS Reporting Numeric Value	Not Used		

Reporting the Stage 2 DBP Rule Schedule Category

Use the additional water system reporting object to report the Stage 2 DBP rule schedule category. This is required only if the Stage 2 DBP rule applies to the water system. Note that the Additional PWS Reporting Name data element contains the literal "Stage 2 DBPR Schedule Category".

SDWIS/FedRep Data Element Name	SDWIS/FedRep XML Schema Tags	Comments	Format/ Permitted Values

ADDITIONAL PWS REPORTING NAME	\<InventoryDataFlow>
	  \<WaterSystems>
	   \<WaterSystemDetails>
	    \<PWSAdditionalReportingDetails>
	     \<PWSAdditionalReportingElementName>
	\<PWSAdditionalReportingElementTextValue>
			AN (40) Stage 2 DBPR Schedule Category

SDWIS/FedRep Data Element Name	SDWIS/FedRep XML Schema Tags	Comments	Format/ Permitted Values
ADDITIONAL PWS REPORTING TEXT VALUE	\<InventoryDataFlow> \<WaterSystems> \<WaterSystemDetails> \<PWSAdditionalReportingDetails> \<PWSAdditionalReportingElementTextValue>	Report the value corresponding to the schedule category	AN (40) 1 2 3 4
Additional PWS Reporting Begin Date Value	Not Used		
Additional PWS Reporting End Date Value	Not Used		
Additional PWS Reporting Numeric Value	Not Used		

Reporting if the Water System Participates in the State Source Water Protection Program

Use the Additional PWS Reporting Name XML tag to report if the water system is participating in the primacy agency's source water protection program. Note that the Additional PWS Reporting Name data element contains the literal "State Source Water Program" to indicate that the payload contains data for the water system's participation in the primacy agency's source water protection program. Report these data for all active community water systems.

SDWIS/FedRep Data Element Name	SDWIS/FedRep XML Schema Tags	Comments	Format/ Permitted Values
ADDITIONAL PWS REPORTING NAME	\<InventoryDataFlow> \<WaterSystems> \<WaterSystemDetails> \<PWSAdditionalReportingDetails> \<PWSAdditionalReportingElementName> \<PWSAdditionalReportingElementTextValue>		AN (40) State Source Water Program
ADDITIONAL PWS REPORTING TEXT VALUE	\<InventoryDataFlow> \<WaterSystems> \<WaterSystemDetails> \<PWSAdditionalReportingDetails> \<PWSAdditionalReportingElementTextValue>	Report the source water protection program status	AN (40) Y N

SDWIS/FedRep Data Element Name	SDWIS/FedRep XML Schema Tags	Comments	Format/ Permitted Values
ADDITIONAL PWS REPORTING BEGIN DATE VALUE	\<InventoryDataFlow\> \<WaterSystems\> \<WaterSystemDetails\> \<PWSAdditionalReportingDetails\> \<PWSAdditionalReportingElementName\> \<PWSAdditionalReportingElementBeginDate\>	Date the water system started participating in the source water protection program	Date (YYYYMMDD)
Additional PWS Reporting End Date Value	Not Used		
Additional PWS Reporting Numeric Value	Not Used		

Reporting the Schedule Category for the LT2ESWTR

Use the additional water system reporting object to report the schedule category used by the water system as required under the LT2ESWTR. Report these data elements only for water systems where the LT2ESWTR applies. Note that the Additional PWS Reporting Name data element contains the literal "LT2 ESWTR Schedule Category" to indicate that the payload contains schedule category data.

SDWIS/FedRep Data Element Name	SDWIS/FedRep XML Schema Tags	Comments	Format/ Permitted Values
ADDITIONAL PWS REPORTING NAME	\<InventoryDataFlow\> \<WaterSystems\> \<WaterSystemDetails\> \<PWSAdditionalReportingDetails\> \<PWSAdditionalReportingElementName\> \<PWSAdditionalReportingElementTextValue\>		AN (40) LT2 ESWTR Schedule Category
ADDITIONAL PWS REPORTING TEXT VALUE	\<InventoryDataFlow\> \<WaterSystems\> \<WaterSystemDetails\> \<PWSAdditionalReportingDetails\> \<PWSAdditionalReportingElementTextValue\>	Report the LT2 ESWTR schedule category	AN (40) 1 2 3 4 5
Additional PWS Reporting Begin Date Value	Not Used		
Additional PWS Reporting End Date Value	Not Used		

SDWIS/FedRep Data Element Name	SDWIS/FedRep XML Schema Tags	Comments	Format/ Permitted Values
Additional PWS Reporting Numeric Value	Not Used		

Reporting if the Water System is an Outstanding Performer

Use the additional water system reporting object to report the outstanding performer flag as shown below. Note that the Additional PWS Reporting Name data element contains the literal "Outstanding Performer" to indicate that the payload contains outstanding performer data.

SDWIS/FedRep Data Element Name	SDWIS/FedRep XML Schema Tags	Comments	Format/ Permitted Values

ADDITIONAL PWS REPORTING NAME	<InventoryDataFlow>
	 <WaterSystems>
	  <WaterSystemDetails>
	   <PWSAdditionalReportingDetails>
	    <PWSAdditionalReportingElementName>
	 <PWSAdditionalReportingElementTextValue>
			AN (40) Outstanding Performer

ADDITIONAL PWS REPORTING TEXT VALUE	<InventoryDataFlow>
	 <WaterSystems>
	  <WaterSystemDetails>
	   <PWSAdditionalReportingDetails>
	    <PWSAdditionalReportingElementTextValue>
		Report if the Water System is/is not an outstanding performer	AN (40)
			Y
			N

ADDITIONAL PWS REPORTING BEGIN DATE VALUE	<InventoryDataFlow>
	 <WaterSystems>
	  <WaterSystemDetails>
	   <PWSAdditionalReportingDetails>
	    <PWSAdditionalReportingElementName>
	     <PWSAdditionalReportingElementBeginDate>
		Date the water system performance status changed	Date (YYYYMMDD)

Additional PWS Reporting End Date Value	Not Used		
Additional PWS Reporting Numeric Value	Not Used		

Reporting Reduced Monitoring for the RTCR

Use the additional water system reporting object to report reduced monitoring for the water system under the RTCR as shown below. Note that the Additional PWS Reporting Name data element contains the literal "Reduced RTCR Monitoring" to indicate that the payload contains the RTCR reduced monitoring period.

SDWIS/FedRep Data Element Name	SDWIS/FedRep XML Schema Tags	Comments	Format/ Permitted Values

ADDITIONAL PWS REPORTING NAME	\<InventoryDataFlow\>
	  \<WaterSystems\>
	   \<WaterSystemDetails\>
	    \<PWSAdditionalReportingDetails\>
	     \<PWSAdditionalReportingElementName\>
	  \<PWSAdditionalReportingElementTextValue\>
			AN (40)
			 Reduced RTCR Monitoring

ADDITIONAL PWS REPORTING TEXT VALUE	\<InventoryDataFlow\>
	  \<WaterSystems\>
	   \<WaterSystemDetails\>
	    \<PWSAdditionalReportingDetails\>
	     \<PWSAdditionalReportingElementTextValue\>
		Report the reduce monitoring requirement here	AN (40)
			 Every 2 Months
			 Quarterly
			 Semi-annual
			 Annual

ADDITIONAL PWS REPORTING BEGIN DATE VALUE	\<InventoryDataFlow\>
	  \<WaterSystems\>
	   \<WaterSystemDetails\>
	    \<PWSAdditionalReportingDetails\>
	     \<PWSAdditionalReportingElementName\>
	     \<PWSAdditionalReportingElementBeginDate\>
		Date the reduced monitoring requirement was assigned to the water system	Date (YYYYMMDD)

ADDITIONAL PWS REPORTING END DATE VALUE	\<InventoryDataFlow\>
	  \<WaterSystems\>
	   \<WaterSystemDetails\>
	    \<PWSAdditionalReportingDetails\>
	     \<PWSAdditionalReportingElementEndDate\>
		Date the primacy agency determined that the monitoring requirement no longer applied	Date (YYYYMMDD)
			 Report NULL if the monitoring requirement still applies

Additional PWS Reporting Numeric Value	Not Used		

Reporting Seasonal Water System Pressurization Status for RTCR

Use the additional water system reporting object to report the pressurization status for a seasonal water system under the RTCR. Note that the Additional PWS Reporting Name data element contains the literal "Seasonal Startup System" to indicate that the payload contains the water system pressurization status.

SDWIS/FedRep Data Element Name	SDWIS/FedRep XML Schema Tags	Comments	Format/ Permitted Values
ADDITIONAL PWS REPORTING NAME	\<InventoryDataFlow\> \<WaterSystems\> \<WaterSystemDetails\> \<PWSAdditionalReportingDetails\> \<PWSAdditionalReportingElementName\> \<PWSAdditionalReportingElementTextValue\>		AN (40) Seasonal Startup System
ADDITIONAL PWS REPORTING TEXT VALUE	\<InventoryDataFlow\> \<WaterSystems\> \<WaterSystemDetails\> \<PWSAdditionalReportingDetails\> \<PWSAdditionalReportingElementTextValue\>	Enter the system pressurization status here	AN (40) Not Pressurized All Year Pressurized Including Off Season
ADDITIONAL PWS REPORTING BEGIN DATE VALUE	\<InventoryDataFlow\> \<WaterSystems\> \<WaterSystemDetails\> \<PWSAdditionalReportingDetails\> \<PWSAdditionalReportingElementName\> \<PWSAdditionalReportingElementBeginDate\>	Date when the pressure- zation status was determined	Date (YYYYMMDD)
Additional PWS Reporting End Date Value	Not Used		
Additional PWS Reporting Numeric Value	Not Used		

Optional Data Elements

SDWIS/FedRep Data Element Name	SDWIS/FedRep XML Schema Tags	Comments	Format/ Permitted Values
WHOLESALEROF WATER	\<InventoryDataFlow\> \<WaterSystems\> \<WaterSystemDetails\> \<WaterSystemWholesalerCode\> \<SDWAWaterSystemWholesaleCode\>	Indicates if the water system is a wholesaler of water	A (1) N No Y Yes

Legal Entity/Affiliation Business Object

The legal entities module of SDWIS State defines the relationships between people, organizations and water systems. Primacy agencies are required to report:

- Only one administrative contact per water system (the primary administrative contact in SDWIS State and SDWIS Prime), and

- Treatment plant facility physical addresses if the primacy agency did not report a corresponding locational data for the treatment facility (see the Locational Detail Business Object section for details)

Primacy agencies may submit a wide variety of legal entity type records to EPA, but at this time, only the administrative contacts and treatment plant facility physical address types are stored in the SDWIS Fed Data Warehouse (SFDW).

Legal Entity Business Object

Required Data Elements

SDWIS/FedRep Data Element Name	SDWIS/FedRep XML Schema Tags	Comments	Format/ Permitted Values
ADDRESS ID	\<InventoryDataFlow\> \<LegalEntities\> \<LegalEntityDetails\> \<LegalEntityAddressIdentifier\>	Uniquely identifies an administrative contact or treatment plant facility address	AN (20)
CITY	\<InventoryDataFlow\> \<LegalEntities\> \<LegalEntityDetails\> \<AddressDetails\> \<MailingAddressCityName\>		AN (40)
COUNTRY CODE	\<InventoryDataFlow\> \<LegalEntities\> \<LegalEntityDetails\> \<AddressDetails\> \<CountryCode\> \<SDWACountryCode\>		A (2) Typically: US United States CA Canada

Conditional Data Elements

SDWIS/FedRep Data Element Name	SDWIS/FedRep XML Schema Tags	Comments	Format/ Permitted Values
ORGANIZATION	\<InventoryDataFlow\> \<LegalEntities\> \<LegalEntityDetails\> \<OrganizationNameText\>	Legal name of the organization, if the entity is an organization	AN (80) Required if ADDRESSEE NAME is not reported
ADDRESSEE NAME	\<InventoryDataFlow\> \<LegalEntities\> \<LegalEntityDetails\> \<AddresseeNameText\>	Addressee name if reporting an individual	AN (70) Required if ORGANIZATION is not reported

SDWIS/FedRep Data Element Name	SDWIS/FedRep XML Schema Tags	Comments	Format/ Permitted Values
ADDRESS LINE 1	\<InventoryDataFlow\> \<LegalEntities\> \<LegalEntityDetails\> \<AddressDetails\> \<MailingAddressText\>	First line of the street address	AN (50)
ADDRESS LINE 2	\<InventoryDataFlow\> \<LegalEntities\> \<LegalEntityDetails\> \<AddressDetails\> \<SupplementalAddressText\>	Second line of the street address	AN (50)
US STATE OR CANADIAN PROVINCE CODE	\<InventoryDataFlow\> \<LegalEntities\> \<LegalEntityDetails\> \<AddressDetails\> \<SDWAUSStateCanadianProvinceCode\>	Required if the address is located in the USA or Canada.	A (2)
POSTAL CODE	\<InventoryDataFlow\> \<LegalEntities\> \<LegalEntityDetails\> \<AddressDetails\> \<MailingAddressZipCode\>	ZIP code or Canadian postal code	AN (2) Required for Canadian and American addresses

Optional Data Elements

SDWIS/FedRep Data Element Name	SDWIS/FedRep XML Schema Tags	Comments	Format/ Permitted Values
TELEPHONE NUMBER	\<InventoryDataFlow\> \<LegalEntities\> \<LegalEntityDetails\> \<PhoneFaxEmail\> \<TelephoneNumber\>		AN (15)
TELEPHONE EXTENSION NUMBER	\<InventoryDataFlow\> \<LegalEntities\> \<LegalEntityDetails\> \<PhoneFaxEmail\> \<TelephoneNumberExtension\>		AN (5)
FAX NUMBER	\<InventoryDataFlow\> \<LegalEntities\> \<LegalEntityDetails\> \<PhoneFaxEmail\> \<FaxNumber\>		AN (15)
ALTERNATE TELEPHONE NUMBER	\<InventoryDataFlow\> \<LegalEntities\> \<LegalEntityDetails\> \<PhoneFaxEmail\> \<AlternatePhoneNumber\>		AN (15)

SDWIS/FedRep Data Element Name	SDWIS/FedRep XML Schema Tags	Comments	Format/ Permitted Values
ELECTRONIC ADDRESS	\<InventoryDataFlow\> \<LegalEntities\> \<LegalEntityDetails\> \<PhoneFaxEmail\> \<EmailAddressText\>	E-mail address for the legal entity	AN (100)

Legal Entity Affiliation Business Object

This business object links the administrative contact or treatment plant physical address to the water system.

Required Data Elements

SDWIS/FedRep Data Element Name	SDWIS/FedRep XML Schema Tags	Comments	Format/ Permitted Values
ADDRESS ID	\<InventoryDataFlow\> \<LegalEntities\> \<LegalEntityDetails\> \<LegalEntityAddressIdentifier\>	Uniquely identifies an administrative contact or treatment plant facility address	AN (20)
PWS ID	\<InventoryDataFlow\> \<LegalEntityAffiliations\> \<LegalEntityAffiliationDetails\> \<PWSIdentifier\>	Provides a link to the water system	AN (9)
AFFILIATION TYPE	\<InventoryDataFlow\> \<LegalEntityAffiliations\> \<LegalEntityAffiliationDetails\> \<AffiliationCode\> \<SDWAAffiliationCode\>	Defines the affiliation of the legal entity to the water system, usually TP (Treatment Plant) or AC (Administrative Contact)	A (2) Report only one Administrative Contact (AC). See the Affiliation Type Permitted Values section

Affiliation Type Permitted Values

The table below lists the permitted values for describing the type of affiliation a legal entity has to a water system. While primacy agencies may report all types of affiliations, only administrative contacts and treatment plants (types AC and TP, respectively) are saved to the SDWIS Fed Data Warehouse (SFDW).

Code	Affiliation Type Description
AC	Administrative Contact - Identifies a legal entity as a contact of interest to the water system. For example, an individual representing a water system that may receive correspondence from the primacy agency. Along with treatment facilities, this is the only legal entity affiliation type copied to the SDWIS Fed Data Warehouse (SFDW).
BI	Bureau of Indian Affairs Representative
DO	Designated Operator in Direct Charge
EC	Emergency Contact
FC	Financial Contact
HC	Health Clinic Representative
IE	Indian Health Service Engineer
IS	Indian Health Service Sanitarian
LC	Legal Contact
LE	Lead Engineer
MA	Mailing Address
OP	Operator
OT	Other
OW	Owner
PC	Primary Contact
RC	Regulatory contact
SA	Sampler
TC	Tribal Chairman
TE	Tribal Environmental Department Representative
TG	Tribal Government Representative
TH	Tribal Health Department Representative
TP	Water Treatment Plant Facility - along with administrative contact, this is the only legal entity affiliation type copied to the SDWIS Fed Data Warehouse (SFDW). Not used if reporting the location data for the treatment plant.
UN	Utility Representative (non-tribal)
UT	Utility Representative (tribal)

Optional Data Elements

SDWIS/FedRep Data Element Name	SDWIS/FedRep XML Schema Tags	Comments	Format/ Permitted Values
FACILITY ID	<InventoryDataFlow> <LegalEntityAffiliations> <LegalEntityAffiliationDetails> <PWSFacilityIdentifier>	Not used for reporting Administrative Contact (AC) affiliation type	AN (12)

Service Area Business Object

A Service Area categorizes the types of customers receiving water. Primacy agencies are required to report the primary service area for every active water system and may report secondary service areas at their discretion.

Required Data Elements

SDWIS/FedRep Data Element Name	SDWIS/FedRep XML Schema Tags	Comments	Format/ Permitted Values
PWS ID	<InventoryDataFlow> <ServiceAreas> <ServiceAreaDetails> <PWSIdentifier>		AN (9)
PRIMARY SERVICE AREA CODE	<InventoryDataFlow> <ServiceAreas> <ServiceAreaDetails> <PrimaryServiceAreaCode> <SDWAServiceAreaCode>	Used once per water system for reporting the primary service area	A (2) See the Primary Service Area Permitted Values section below

Primary Service Area Permitted Values

This section lists the primary service area permitted values.

Code	Service Area Description
DI	Dispenser
HA	Homeowners Association
HM	Hotel/Motel
HR	Highway Rest Area
IA	Industrial/Agricultural
IC	Interstate Carrier
IN	Institution
MF	Medical Facility
MH	Mobile Home Park
MP	Mobile Home Park, Principle Residence
MU	Municipality
OA	Other Area
ON	Other Non-Transient Area
OR	Other Residential Area
OT	Other Transient Area
PA	Recreation Area
RA	Residential Area
RE	Retail Employees

Code	Service Area Description
RS	Restaurant
SC	School
SI	Sanitary Improvement District
SK	Summer Camp
SR	Secondary Residences
SS	Service Station
SU	Subdivision
WB	Water Bottler
WH	Wholesale

Optional Data Element

SDWIS/FedRep Data Element Name	SDWIS/FedRep XML Schema Tags	Comments	Format/ Permitted Values
SERVICE AREA CODE	<InventoryDataFlow> <ServiceAreas> <ServiceAreaDetails> <PrimaryServiceAreaCode> <SDWAServiceAreaCode>	Used for reporting a secondary service area	A (2) Use the values shown in the Service Area Description table above

Geographic Area Business Object

The primacy agency must report one and only one geographic area served by the water system. A geographic area is reported as a city/state, county, or tribal/native Alaskan village.

Required Data Elements

SDWIS/FedRep Data Element Name	SDWIS/FedRep XML Schema Tags	Comments	Format/ Permitted Values
PWS ID	<InventoryDataFlow> <GeographicAreas> <GeographicAreaDetails> <PWSIdentifier>		AN (9)

Conditional Data Elements

SDWIS/FedRep Data Element Name	SDWIS/FedRep XML Schema Tags	Comments	Format/ Permitted Values
US STATE CODE	<InventoryDataFlow> <GeographicAreas> <GeographicAreaDetails> <GeographicAreaServedDetails> <ServedStateCityDetails> <ServedStateCode> <SDWAServedStateCode>	If CITY NAME is reported	A (2) State or territory the city is located
CITY NAME	<InventoryDataFlow> <GeographicAreas> <GeographicAreaDetails> <GeographicAreaServedDetails> <ServedStateCityDetails> <ServedCityText>	If COUNTY CODE or TRIBAL CODE is NOT reported	AN (40) The name of the city served by the water system
FIPS COUNTY CODE	<InventoryDataFlow> <GeographicAreas> <GeographicAreaDetails> <GeographicAreaServedDetails> <ServedFIPSCountyCode>	If CITY NAME or TRIBAL CODE is NOT reported	AN (5) FIPS code of the state and county served by the water system
TRIBAL CODE	<InventoryDataFlow> <GeographicAreas> <GeographicAreaDetails> <GeographicAreaServedDetails> <ServedTribalCode> <SDWATribalCode>	If the water system is a tribal system	AN (3) The 3-digit EPA code for the Indian reservation or Alaska native village served by the water system

Optional Data Element

SDWIS/FedRep Data Element Name	SDWIS/FedRep XML Schema Tags	Comments	Format/ Permitted Values
SERVED AREA ZIP CODE	<InventoryDataFlow> <GeographicAreas> <GeographicAreaDetails> <GeographicAreaServedDetails> <ServedAreaZipCode>	Primary zip code of the population served by the water system	N (5/0)

Water System Facility Source Business Object

Report *all facilities* that are a source of water for every active public water system included in the submission. Every water system must have *at least one* source facility reported.

Required Data Elements

SDWIS/FedRep Data Element Name	SDWIS/FedRep XML Schema Tags	Comments	Format/ Permitted Values
PWS ID	<InventoryDataFlow> <WaterSystemFacilities> <FacilityDetails> <PWSIdentifier>	Taken together, the PWSID and FACILITY ID uniquely identify a source facility nationally	AN (9)
FACILITY ID	<InventoryDataFlow> <WaterSystemFacilities> <FacilityDetails> <PWSFacilityIdentifier>		AN (12)
ACTIVITY FLAG	<InventoryDataFlow> <WaterSystemFacilities> <FacilityDetails> <FacilityActivityCode><SDWAFacilityActivityCode>	Indicates if the facility is active or inactive	A - Active I - Inactive
FACILITY NAME	<InventoryDataFlow> <WaterSystemFacilities> <FacilityDetails> <SourceFacility><FacilityNameText>		AN (80)
FACILITY TYPE CODE	<InventoryDataFlow> <WaterSystemFacilities> <FacilityDetails> <SourceFacility><SourceFacilityTypeCode><SDWASourceFacilityTypeCode>		A (2) CC Consecutive Connection IG Infiltration Gallery IN Intake NN Non-piped, non-purchased NP Non-piped RC Roof Catchment RS Reservoir SP Spring WL Well (Source)

SDWIS/FedRep Data Element Name	SDWIS/FedRep XML Schema Tags	Comments	Format/ Permitted Values
FACILITY WATER TYPE CODE	<InventoryDataFlow> <WaterSystemFacilities> <FacilityDetails> <SourceFacility> <SourceFacilityWaterTypeCode> <SDWASourceFacilityWaterTypeCode>		A (2) GU Ground water under direct influence of surface water GW Ground Water SW Surface Water See the Facility Water Type Code Rules Section
AVAILABILITY	<InventoryDataFlow> <WaterSystemFacilities> <FacilityDetails> <SourceFacility> <SourceFacilityAvailabilityCode> <SDWASourceFacilityAvailabilitCode>		A (1) E Emergency Utilization I Interim Utilization O Other Utilization P Permanent Utilization S Seasonal Utilization

Facility Water Type Code Rules

The table below shows the valid facility water types for each source facility type. A grayed-out cell indicates an invalid facility type code-facility water type code combination.

Facility Type Code	Facility Water Type Code		
	GU	**GW**	**SW**
CC	Valid	Valid	Valid
IG	Valid		Valid
IN			Valid
NP	Valid	Valid	Valid
RC		Valid	
RS			Valid
SP	Valid	Valid	Valid
WL	Valid	Valid	
NN	Valid	Valid	Valid

Conditional Data Elements

SDWIS/FedRep Data Element Name	SDWIS/FedRep XML Schema Tags	Comments	Format/ Permitted Values
DEACTIVATION DATE FACILITY	\<InventoryDataFlow> \<WaterSystemFacilities> \<FacilityDetails> \<FacilityDeactivationDate>	Report if the facility is inactive (ACTIVITY FLAG = I)	DATE (YYYYMMDD)
SELLER PWS ID	\<InventoryDataFlow> \<WaterSystemFacilities> \<FacilityDetails> \<SourceFacility> \<SourceFacilitySellerPWSIdentifier>	Report if source is purchased water (FACILITY TYPE CODE = CC or NP)	AN (9)
SELLER SOURCE TREATMENT CODE	\<InventoryDataFlow> \<WaterSystemFacilities> \<FacilityDetails> \<SourceFacility> \<SourceFacilitySellerTreatmentCode> \<SDWASourceFacilitySellerTreatmentCode>	Report if source is purchased (FACILITY TYPE CODE = CC or NP)	A (1) F Treated by seller including SWT G Treated by seller with 4-log virus for GWR N No, not treated Y Partially treated by seller
SOURCE TREATED CODE	\<InventoryDataFlow> \<WaterSystemFacilities> \<FacilityDetails> \<SourceFacility> \<SourceFacilityTreatedCode> \<SDWASourceFacilityTreatedCode>	Report if the Water System Facility Type = CC, IG, IN, NP, RC, RS, SP, WL, or NN	A (1) N Not treated Y Treated
REPORTED FILTRATION STATUS CODE	\<InventoryDataFlow> \<WaterSystemFacilities> \<FacilityDetails> \<SourceFacility> \<SourceFacilityReportedFiltrationStatusCode> \<SDWASourceFacilityReportedFiltrationStatusCode> Report if Facility Water Type Code = GU or SW and the source facility is not an emergency source of water (AVAILABILITY_CODE = E). If the reported value is Filtered (FIL), surface water or ground water under the influence of surface water, source water facility must flow to a treatment plant with filtration = 341, 342, 343, 344, 345, 346, 347 or 348 (see the Treatment Process Permitted Values section)		A (3) FIL Filtered MIF Must Install Filtration (SW or GU only) SAF Successfully Avoiding Filtration (SW or GU only)

Optional Data Element

SDWIS/FedRep Data Element Name	SDWIS/FedRep XML Schema Tags	Comments	Format/ Permitted Values
STATE DATABASE FACILITY ID	\<InventoryDataFlow> \<WaterSystemFacilities> \<FacilityDetails> \<SourceFacility> \<FacilityStateDatabaseIdentifier>	Value used in the primacy agency system to identify a water system facility	AN (40)

Locational Detail Business Object

The locational detail business object is used for reporting the following:

- Active source facilities – primacy agencies *are required* to report the physical location, using latitude and longitude, of every active source facility corresponding the source facilities described in the Water System Facility Source Business Object section above. This information must include latitude, longitude and associated metadata according to EPA's Locational Policy.
- Active treatment plan facilities – primacy agencies *have the option* of reporting the physical location of treatment facilities, following the data requirements for locational detail in the previous bullet, *or* the physical address of the treatment facilities. If reporting the physical address, use the legal entity and legal entity affiliation business objects described in the Legal Entity Business Object and the Legal Entity Affiliation Business Object sections, respectively
- Although not required, primacy agencies may report location data for non-source facilities.

Required Data Elements

SDWIS/FedRep Data Element Name	SDWIS/FedRep XML Schema Tags	Comments	Format/ Permitted Values
PWSID	\<InventoryDataFlow> \<Locations> \<LocationDetails> \<PWSIdentifier>	Taken together, the PWSID and FACILITY ID uniquely identify a facility nationally	AN (9)
FACILITY ID	\<InventoryDataFlow> \<Locations> \<LocationDetails> \<PWSFacilityIdentifier>		AN (12)

SDWIS/FedRep Data Element Name	SDWIS/FedRep XML Schema Tags	Comments	Format/ Permitted Values

HORIZONTAL COLLECTION METHOD	<InventoryDataFlow>
	 <Locations>
	  <LocationDetails>
	   <HorizontalCollectionMethodCode>
	<SDWAHorizontalCollectionMethodCode>
		Method used to determine the latitude/longitude, represents the primary source of the data	AN (3)
			See the Horizontal Collection Method Permitted Values section

HORIZONTAL ACCURACY MEASURE	<InventoryDataFlow>
	 <Locations>
	  <LocationDetails>
	   <HorizontalAccuracyMeasure>
		Describes the correctness of the latitude/longitude measurement, in meters.	N (7/2)

REFERENCE POINT CODE	<InventoryDataFlow>
	 <Locations>
	  <LocationDetails>
	   <ReferencePointAlternateCode>
	    <SDWAReferencePointAlternateCode>
		Category of the feature referenced by the latitude and longitude.	AN (3)
			See the Reference Point Permitted Values section

HORIZONTAL REFERENCE DATUM CODE	<InventoryDataFlow>
	 <Locations>
	  <LocationDetails>
	   <HorizontalReferenceDatumCode>
	   <SDWAHorizontalReferenceDatumCode>
		Reference standard for three dimensional and horizontal positioning established by the U.S. National Geodetic Survey (NGS) and other bodies	AN (3)
			001 NAD 27
			002 NAD 83
			003 WGS 84

SOURCE MAP SCALE	<InventoryDataFlow>
	 <Locations>
	  <LocationDetails>
	   <SourceMapScaleCode>
	    <SDWASourceMapScaleCode>
		Scale of the map used to determine the latitude and longitude coordinates	AN (2)
			See the Source Map Scale Permitted Values section

Horizontal Collection Method Permitted Values

Code	Horizontal Collection Method Description
001	Address Matching – House Number
002	Address Matching - Block Face
003	Address Matching – Street Centerline
004	Address Matching - Nearest Intersection
005	Address Matching – Primary Name

Code	Horizontal Collection Method Description
006	Address Matching - Digitized
007	Address Matching - Other
008	Census Block - 1990 - Centroid
009	Census Block/Group - 1990 - Centroid
010	Census Block Track - 1990 - Centroid
011	Census - Other
012	Global Positioning System (GPS) Carrier Phase Static Relative Positioning
013	GPS Carrier Phase Kinematic Relative Positioning Technique
014	014 GPS Code Measurements (Pseudo Range) Differentially Corrected
015	015 GPS Code Measurements (Pseudo Range) Precise Positioning Service
016	016 GPS Code Measurements (Pseudo Range) Standard Positioning Service SA Off
017	017 GPS Code Measurements (Pseudo Range) Standard Positioning Service SA On
018	018 Interpolation - Map
019	019 Interpolation - Photo
020	Interpolation - Satellite
021	021 Interpolation - Other
022	022 Loran C
023	023 Public Land Survey - Quarter Section
024	024 Public Land Survey - Section
025	025 Classical Surveying Techniques
026	026 ZIP Code – Centroid
027	027 Unknown
028	028 GPS – Unspecified
029	029 GPS Code Measurements (Pseudo Range) Standard Positioning Service Corrected
030	030 Interpolation – Digital Map Source (Tiger)
031	031 Interpolation - Spot
032	032 Interpolation - MSS (Multi-Spectral Scanner)
033	033 Interpolation - TM (Thematic Mapper)
034	034 Public Land Survey – Eighth Section
035	035 Public Land Survey – Sixteenth Section
036	036 Public Land Survey – Footing
037	037 ZIP+4 Code – Centroid
038	038 ZIP+2 Code – Centroid

Reference Point Permitted Values

Code	Reference Point Description
002	Plant Entrance (General)
003	Other
004	Plant Entrance (Personnel)
005	Plant Entrance (Freight)
006	Air Release Stack
007	Air Release Vent
008	Storage Tank

Code	Reference Point Description
009	Pipe Release To Water
010	Lagoon or Settling Pont
011	Liquid Waste Treatment Unit
012	Atmospheric Emissions Treatment Unit
013	Solid Waste Treatment/ Disposal Unit
014	Solid Waste Storage Area
015	Loading Facility
016	Loading Area Centroid
017	Process Unit
018	Process Unit Area Centroid
019	Administrative Building
020	Facility Centroid
021	NE Corner of Land Parcel
022	SE Corner of Land Parcel
023	NW Corner of Land Parcel
024	SW Corner of Land Parcel
025	Center of Facility
026	Well
027	Well Protection Area
028	Water Monitoring Station
029	Air Monitoring Station
030	Intake Pipe
101	Entrance point of facility/station
012	Center of a facility or station
013	Facility/monitoring site boundary point
104	Point where substance enters facility/monitoring site (can be inside or outside of a facility/site)
105	Point where substance is processed, treated, settled, or stored
106	Point where a substance is released
107	Point where a substance is monitored
108	Points not represented by 101-107

Source Map Scale Permitted Values

Code	Source Map Scale Description
1	>= 1:500
2	BETWEEN 1:500 AND 1:5,000
3	BETWEEN 1:5,000 AND 1:10,000
4	BETWEEN 1:10,000 AND 1:15,000
5	BETWEEN 1:15000 AND 1:20,000
6	BETWEEN 1:20,000 AND 1:25,000
7	BETWEEN 1:25,000 AND 1:50,000
8	BETWEEN 1:50,000 AND 1:100,000
9	<1:100,000

Code	Source Map Scale Description
A	1:10,000
B	1:12,000
C	1:15,840 D 1:20,000
D	1:20,000
E	1:24,000
F	1:25,000
G	1:50,000
H	1:62,500
I	1:63,360
J	1:100,000
K	1:125,000
L	1:250,000
M	1:500,000
NA	SCALE NOT APPLICABLE TO COLLECTION METHOD

Conditional Data Elements

SDWIS/FedRep Data Element Name	SDWIS/FedRep XML Schema Tags	Comments	Format/ Permitted Values
LATITUDE DEG:MINS:SECS	<InventoryDataFlow> <Locations> <LocationDetails> <LatitudeLongitude> <LatitudeLongitudeDegMinSec> <LatitudeDegMinSec>	Latitude and longitude measures are required if reporting using degree/minute/ second format	SDDMMSS.SSSS S + or -[2] DD Degrees MM minutes SS Seconds SSSS micro-seconds
LONGITUDE DEG:MINS:SECS	<InventoryDataFlow> <Locations> <LocationDetails> <LatitudeLongitude> <LatitudeLongitudeDegMinSec> <LongitudeDegMinSec>		
LATITUDE MEASURE	<InventoryDataFlow> <Locations> <LocationDetails> <LatitudeLongitude> <LatitudeLongitudeMeasure> <LatitudeMeasure>	Latitude and longitude measures are required if	SDD.DDDDDD S + or - DD Degree . Decimal point

---

[2] American Samoa is the only inhabited U.S. Territory in the southern hemisphere and latitude measures for facilities located there are prepended with "-". Latitude measure for facilities located in all other U.S. jurisdictions are prepended with "+". Islands on the western end of the Aleutians, Guam, and the Commonwealth of the Northern and Marianas Islands are in the eastern hemisphere. Longitude measures for facilities located in these areas are prepended with a "+" sign. Longitude measure for facilities located in all other U.S. jurisdictions are prepended with "-".

SDWIS/FedRep Data Element Name	SDWIS/FedRep XML Schema Tags	Comments	Format/ Permitted Values
LONGITUDE MEASURE	<InventoryDataFlow> <Locations> <LocationDetails> <LatitudeLongitude> <LatitudeLongitudeMeasure> <LongitudeMeasure>	reporting using decimal format	DDDD Decimal fraction
VERTICAL MEASURE	<InventoryDataFlow> <Locations> <LocationDetails> <VerticalMeasureDetails> <VerticalMeasure>	Vertical distance from the vertical datum to the land surface or other measuring point, in meters.	N (7/2)

Optional Data Elements

SDWIS/FedRep Data Element Name	SDWIS/FedRep XML Schema Tags	Comments	Format/ Permitted Values
GEOMETRIC TYPE CODE (Required element for any release prior to 3.0)	<InventoryDataFlow> <Locations> <LocationDetails> <GeometricTypeCode> <SDWAGeometricTypeCode>	Used to indicate if the geometry type of the latitude/ longitude co-ordinates	AN (3) 001 Point (Default) 002 Line 003 Area 004 Region 005 Route
DATA COLLECTION DATE	<InventoryDataFlow> <Locations> <LocationDetails> <DataCollectionDate>	Date the latitude /longitude were collected	DATE (YYYYMMDD)
COORDINATE DATA SOURCE CODE	<InventoryDataFlow> <Locations> <LocationDetails> <GeometricTypeCode> <CoordinateDataSourceCode> <SDWACoordinateDataSourceCode>	Party responsible for collecting or providing the latitude and longitude	AN (3) See the Coordinate Data Source Permitted Values section below
VERIFICATION METHOD CODE	<InventoryDataFlow> <Locations> <LocationDetails> <VerificationMethodCode> <SDWAVerificationMethodCode>	Method used to determine the vertical measure	AN (3) See the Verification Method Permitted Values section below

SDWIS/FedRep Data Element Name	SDWIS/FedRep XML Schema Tags	Comments	Format/ Permitted Values

VERTICAL COLLECTION METHOD CODE	InventoryDataFlow>
	  <Locations>
	   <LocationDetails>
	    <VerticalMeasureDetails>
	     <VerticalCollectionMethodCode>
	    <SDWAVerticalCollectionMethodCode>
		Method used to determine the vertical measure	AN (3)
			 See the Vertical Collection Method Permitted Values section below

VERTICAL ACCURACY MEASURE	<InventoryDataFlow>
	  <Locations>
	   <LocationDetails>
	    <VerticalMeasureDetails>
	     <VerticalAccuracyMeasure>
		Deviation from true value in the vertical measure (estimate of error) describing the correctness of the vertical measure - in meters.	N (7/2)

VERTICAL REFERENCE DATUM CODE	<InventoryDataFlow>
	  <Locations>
	   <LocationDetails>
	    <VerticalMeasureDetails>
	     <VerticalReferenceDatumCode>
	
	   <SDWAVerticalReferenceDatumCode>
		National reference standard for vertical control used to determine the vertical measure	AN (3)
			 001 NAVD 88
			 002 NGVD 29
			 003 Elevation from mean sea-level
			 004 Local Tidal Datum

LOCATION COMMENT TEXT	<InventoryDataFlow>
	  <Locations>
	   <LocationDetails>
	    <LocationCommentsText>
		Additional information about the location data	AN (2000)

Coordinate Data Source Permitted Values

Code	Coordinate Data Source Description
001	ALABAMA
002	ALASKA
004	ARIZONA
005	ARKANSAS
006	CALIFORNIA
008	COLORADO
009	CONNECTICUT
010	DELAWARE
011	DISTRICT OF COLUMBIA
012	FLORIDA
013	GEORGIA
015	HAWAII
016	IDAHO

Code	Coordinate Data Source Description
017	ILLINOIS
018	INDIANA
019	IOWA
020	KANSAS
021	KENTUCKY
022	LOUISIANA
023	MAINE
024	MARYLAND
025	MASSACHUSETTS
026	MICHIGAN
027	MINNESOTA
028	MISSISSIPPI
029	MISSOURI
030	MONTANA
031	NEBRASK
032	NEVAD
033	NEW HAMPSHIRE
034	NEW JERSEY
035	NEW MEXICO
036	NEW YORK
037	NORTH CAROLINA
038	NORTH DAKOTA
039	OHIO
040	OKLAHOMA
041	OREGON
042	PENNSYLVANIA
044	RHODE ISLAND
045	SOUTH CAROLINA
046	SOUTH DAKOTA
047	TENNESSEE
048	TEXAS
049	UTAH
050	VERMONT
051	VIRGINIA
053	WASHINGTON
054	WEST VIRGINIA
055	WISCONSIN
056	WYOMING
060	AMERICAN SAMOA
064	FEDERATED STATES OF MICRONESIA
066	GUAM
068	MARSHALL ISLANDS
069	NORTHERN MARIANA ISLANDS

Code	Coordinate Data Source Description
070	PALAU
072	PUERTO RICO
074	U.S. MINOR OUTLYING ISLANDS
078	VIRGIN ISLANDS OF THE UNITED STATES
080	CONTRACTOR
081	DUNN & BRADSTREET
082	EPA HEADQUARTERS
083	OTHER
084	OTHER FEDERAL AGENCY
085	PRIVATE
086	TRIBE
087	UNKNOWN
088	EPA REGION 1
089	EPA REGION 10
090	EPA REGION 2
091	EPA REGION 3
092	EPA REGION 4
093	EPA REGION 5
094	EPA REGION 6
095	EPA REGION 7
096	EPA REGION 8
097	EPA REGION 9
098	REGULATED ENTITY
NN	NN NAVAJO NATION

Verification Method Permitted Values

Code	Verification Method Description
001	Proximity to Polygon Centroid (County)
002	Proximity to Alternative Facility Coordinate
003	Proximity to Polygon Centroid (Other)
004	Point in Polygon (Other)
005	Point in Polygon (County)
006	Point in Polygon (ZIP)
007	Verified Relative to Map Features (1:24,000)
008	Verified Relative to Map Features (1:100,000 OR Tiger)
009	Verified Relative to Map Features (Other)
010	Verified, Unknown Method
011	Ground Truth Conducted
012	Proximity to Polygon Centroid (ZIP Code)
013	Point in Bounding Box (ZIP)
014	Point in Bounding Box (County)

Vertical Collection Method Permitted Values

Code	Vertical Collection Method Description
001	GPS Carrier Phase Static Relative Positioning Technique
002	GPS Carrier Phase Kinematic Relative Positioning Technique
003	GPS Code Measurements (Pseudo Range) Differentially Corrected
004	GPS Code Measurements (Pseudo Range) Precise Positioning Service
005	GPS Code Measurements (Pseudo Range) Standard Positioning Service (SA Off)
006	GPS Code Measurements (Pseudo Range) Standard Positioning Service (SA On)
007	Classical Surveying Techniques
008	Other, Unspecified
009	Altimetry
010	Precise Leveling from a Benchmark
011	Leveling Between Non Benchmark Control Points
012	Trigonometric Leveling
013	Photogrammetric
014	Topographic Map Interpolation

Water System Facility Treatment Plant Business Object

Report all active water treatment facilities and when they become inactive.

Required Data Elements

SDWIS/FedRep Data Element Name	SDWIS/FedRep XML Schema Tags	Comments	Format/ Permitted Values
PWSID	\<InventoryDataFlow\> \<WaterSystemFacilities\> \<FacilityDetails\> \<PWSIdentifier\>	Together, the PWSID and FACILITY ID uniquely identify a treatment facility nationally	AN (9)
FACILITY ID	\<InventoryDataFlow\> \<WaterSystemFacilities\> \<FacilityDetails\> \<PWSFacilityIdentifier\>		AN (12)
ACTIVITY FLAG	\<InventoryDataFlow\> \<WaterSystemFacilities\> \<FacilityDetails\> \<FacilityActivityCode\> \<SDWAFacilityActivityCode\>	Indicates if the treatment facility is active or inactive	A(1) A Active I Inactive
FACILITY NAME	\<InventoryDataFlow\> \<WaterSystemFacilities\> \<FacilityDetails\> \<TreatmentPlantFacility\> \<FacilityNameText\>	All alphabetic characters will be in mixed case.	AN (80)

SDWIS/FedRep Data Element Name	SDWIS/FedRep XML Schema Tags	Comments	Format/ Permitted Values
FACILITY TYPE CODE	<InventoryDataFlow> <WaterSystemFacilities> <FacilityDetails> <TreatmentPlantFacility> <TreatmentFacilityTypeCode> <SDWATreatmentFacilityTypeCode>	Enter TP for treatment plant	AN (2) TP

Conditional Data Element

SDWIS/FedRep Data Element Name	SDWIS/FedRep XML Schema Tags	Comments	Format/ Permitted Values
DEACTIVATION DATE FACILITY	<InventoryDataFlow> <WaterSystemFacilities> <FacilityDetails> <FacilityDeactivationDate>	Report the date the treatment plant became inactive	DATE (YYYYMMDD)

Optional Data Element

SDWIS/FedRep Data Element Name	SDWIS/FedRep XML Schema Tags	Comments	Format/ Permitted Values
STATE DATABASE FACILITY ID	<InventoryDataFlow> <WaterSystemFacilities> <FacilityDetails> <TreatmentPlantFacility> <FacilityStateDatabaseIdentifier>	Identifier used by the primacy agency's system other than SDWIS	AN (40)

Reporting Treatment Facility Location

As discussed earlier, primacy agencies have the option of reporting treatment facility location, using the locational business object described in the Locational Detail Business Object section, or reporting the physical address of treatment facilities as legal entities. See the Legal Entity/Affiliation Business Object sections for details.

Treatment Data Business Object

Primacy agencies must report the treatment objectives and processes for achieving the objectives for every treatment facility report.

Required Data Elements

SDWIS/FedRep Data Element Name	SDWIS/FedRep XML Schema Tags	Comments	Format/ Permitted Values

PWSID	\<InventoryDataFlow\>
	  \<WaterSystemFacilities\>
	    \<FacilityDetails\>
	      \<PWSIdentifier\>
		Together, the PWSID and FACILITY ID uniquely identify a treatment facility nationally	AN (9)

FACILITY ID	\<InventoryDataFlow\>
	  \<WaterSystemFacilities\>
	  \<FacilityDetails\>
	    \<PWSFacilityIdentifier\>
			AN (12)

TREATMENT ID	\<InventoryDataFlow\>
	  \<TreatmentData\>
	    \<TreatmentDetails\>
	      \<TreatmentIdentifier\>
		Assigned by the primacy agency and used to identify a treatment applied to a source of water	N (20)

TREATMENT OBJECTIVE	\<InventoryDataFlow\>
	  \<TreatmentData\>
	    \<TreatmentDetails\>
	      \<TreatmentObjectiveCode\>
	        \<SDWATreatmentObjectiveCode\>
			A (1)
			See the Treatment Objective Permitted Values Section

TREATMENT PROCESS	\<InventoryDataFlow\>
	  \<TreatmentData\>
	    \<TreatmentDetails\>
	      \<TreatmentProcessCode\>
	        \<SDWATreatmentProcessCode\>
			AN (3)
			See the Treatment Process Permitted Values below

Treatment Objective Permitted Values

Code	Treatment Objective Description
B	DISINFECTION BY-PRODUCTS CONTROL
C	CORROSION CONTROL
D	DISINFECTION
E	DECHLORINATION
F	IRON REMOVAL
I	INORGANICS REMOVAL
M	MANGANESE REMOVAL
O	ORGANICS REMOVAL
P	PARTICULATE REMOVAL
R	RADIONUCLIDES REMOVAL
S	SOFTENING (HARDNESS REMOVAL)

Code	Treatment Objective Description
T	TASTE / ODOR CONTROL
Z	OTHER

Treatment Process Permitted Values

Code	Treatment Process Description
100	ACTIVATED ALUMINA
121	ACTIVATED CARBON, GRANULAR
125	ACTIVATED CARBON, POWDERED
141	AERATION, CASCADE
143	AERATION, DIFFUSED
145	AERATION, PACKED TOWER
147	AERATION, SLAT TRAY
149	AERATION, SPRAY
160	ALGAE CONTROL
180	BONE CHAR
190	BROMINIZATION (SPECIAL USE)
200	CHLORAMINES
220	CHLORINE DIOXIDE
240	COAGULATION
300	DISTILLATION
320	ELECTRODIALYSIS
341	FILTRATION, CARTRIDGE
342	FILTRATION, DIATOMACEOUS EARTH
343	FILTRATION, GREENSAND
344	FILTRATION, PRESSURE SAND
345	FILTRATION, RAPID SAND
346	FILTRATION, SLOW SAND
347	FILTRATION, ULTRAFILTRATION
348	FILTERED
360	FLOCCULATION
361	4-Log Treatment of viruses
362	3-Log Remove/Inactiv G Lamblia
363	4-Log Remove/Inactiv Viruses
364	2-Log Remove Crypto
365	1-LOG TREATMENT OF CRYPTO
366	1.5-LOG TREATMENT OF CRYPTO
367	2-LOG TREATMENT OF CRYPTO
368	2.5-LOG TREATMENT OF CRYPTO
369	3-LOG TREATMENT OF CRYPTO
370	4-LOG REMOVE/INACTIVATE CRYPTO
371	5.0-LOG REMOVE/INACTIV CRYPTO
372	5.5-LOG REMOVE/INACTIV CRYPTO
380	FLUORIDATION
401	GASEOUS CHLORINATION, POST
403	GASEOUS CHLORINATION, PRE

Code	Treatment Process Description
421	HYPOCHLORINATION, POST
423	HYPOCHLORINATION, PRE
441	INHIBITOR, BIMETALLIC PHOSPHATE
443	INHIBITOR, HEXAMETAPHOSPHATE
445	INHIBITOR, ORTHOPHOSPHATE
447	INHIBITOR, POLYPHOSPHATE
449	INHIBITOR, SILICATE
455	IODINE
460	ION EXCHANGE
461	CHLORINATION (FRDS-1.5)
473	CONVERTED (FRDS-1.5)
500	LIME - SODA ASH ADDITION
520	MICROSCREENING
541	OZONATION, POST
543	OZONATION, PRE
560	PERMANGANATE
580	PEROXIDE
600	RAPID MIX
620	REDUCING AGENTS
623	REDUCING AGENT, SODIUM BISULFATE
625	REDUCING AGENT, SODIUM SULFITE
627	REDUCING AGENT, SULFUR DIOXIDE
640	REVERSE OSMOSIS
660	SEDIMENTATION
680	SEQUESTRATION
700	SLUDGE TREATMENT
720	ULTRAVIOLET RADIATION
740	PH ADJUSTMENT
741	PH ADJUSTMENT, POST
742	PH ADJUSTMENT, RE
999	INNOVATIVE

Conditional Data Element

SDWIS/FedRep Data Element Name	SDWIS/FedRep XML Schema Tags	Comments	Format/ Permitted Values
TREATMENT COMMENT	InventoryDataFlow> <TreatmentData> <TreatmentDetails> <TreatmentCommentText>	Comment required if treatment process is reported as 999-INNOVATIVE	AN (2000)

Water System Facility Flow Business Object

Required Data

Report the connection between source and treatment facilities within each water system.

SDWIS/FedRep Data Element Name	SDWIS/FedRep XML Schema Tags	Comments	Format/ Permitted Values
PWS ID	<InventoryDataFlow> <FacilityFlowData> <FacilityFlowDetails> <PWSIdentifier>		AN (9)
FACILITY ID FLOW FROM	<InventoryDataFlow> <FacilityFlowData> <FacilityFlowDetails> <FacilityFromToDetails> <FacilityFromIdentifier>	"Upstream" facility ID	AN (12)
FACILITY ID FLOW TO	<InventoryDataFlow> <FacilityFlowData> <FacilityFlowDetails> <FacilityFromToDetails>	"Downstream" facility ID	AN (12)

Water System Facility Other Business Object

Primacy agencies *may* choose to report data describing facilities other than treatment plants and sources.

Required Data Elements

SDWIS/FedRep Data Element Name	SDWIS/FedRep XML Schema Tags	Comments	Format/ Permitted Values
PWS ID	<InventoryDataFlow> <WaterSystemFacilities> <FacilityDetails> <PWSIdentifier>	Together, the PWSID and FACILITY ID uniquely identify a treatment facility nationally	AN (9)
FACILITY ID	<InventoryDataFlow> <WaterSystemFacilities> <FacilityDetails> <PWSFacilityIdentifier>		AN (12)
ACTIVITY FLAG	<InventoryDataFlow> <WaterSystemFacilities> <FacilityDetails> <FacilityActivityCode> <SDWAFacilityActivityCode>		A (1) A Active I Inactive

SDWIS/FedRep Data Element Name	SDWIS/FedRep XML Schema Tags	Comments	Format/ Permitted Values
FACILITY NAME	\<InventoryDataFlow\> \<WaterSystemFacilities\> \<FacilityDetails\> \<OtherFacility\> \<FacilityNameText\>		AN (80)
FACILITY TYPE CODE	\<InventoryDataFlow\> \<WaterSystemFacilities\> \<FacilityDetails\> \<OtherFacility\> \<OtherFacilityTypeCode\> \<SDWAOtherFacilityTypeCode\>		AN (2) See the Facility Type Code Permitted Values section below

Facility Type Code Permitted Values

The table below show the permitted values used for identifiers of *non-source* water system facilities.

Code	Treatment Objective Description
CH	Common Headers
CS	Cistern
DS	Distribution System/Zone
OT	Other
PC	Pressure Control
PF	Pump Facility
RS	Reservoir
SI	Surface Impoundment
SS	Sampling Station
ST	Storage-ST
TM	Transmission Main (Manifold)
WH	Well Head

Conditional Data Element

SDWIS/FedRep Data Element Name	SDWIS/FedRep XML Schema Tags	Comments	Format/ Permitted Values
DEACTIVATION DATE FACILITY	\<InventoryDataFlow\> \<WaterSystemFacilities\> \<FacilityDetails\> \<FacilityDeactivationDate\>	If ACTIVITY FLAG = "I" (Inactive Facility)	DATE (YYYYMMDD)

Optional Data Element

SDWIS/FedRep Data Element Name	SDWIS/FedRep XML Schema Tags	Comments	Format/ Permitted Values
STATE DATABASE FACILITY ID	<InventoryDataFlow> <WaterSystemFacilities> <FacilityDetails> <OtherFacility> <FacilityStateDatabaseIdentifier>	Identifier used by the primacy agency's system other than SDWIS	AN (40)

SAMPLE SUBJECT AREA

Primacy agencies are only required to report lead and copper sample results as described in the next section. Other sample results may be submitted, but are not propagated to the SDWIS Fed Data Warehouse as of the date of this document.

Sample Business Object

Report the 90th percentile calculations for lead and copper monitoring that exceed the action level for all water systems with retail population served >3,300.

Required Data Elements

SDWIS/FedRep Data Element Name	SDWIS/FedRep XML Schema Tags	Comments	Format/ Permitted Values
PWS ID	<InventoryDataFlow> <WaterSystemFacilities> <FacilityDetails> <PWSIdentifier>		AN (9)
SAMPLE ID	<SamplesDataFlow> <Samples> <SampleDetails> <SampleIdentifier>	Uniquely identifies the sample submission	AN (20)

Conditional Data Elements

SDWIS/FedRep Data Element Name	SDWIS/FedRep XML Schema Tags	Comments	Format/ Permitted Values
FACILITY ID	<SamplesDataFlow> <Samples> <SampleDetails> <PWSFacilityIdentifier>	Together, the PWSID and FACILITY ID uniquely identify a treatment facility nationally	AN (12)

SDWIS/FedRep Data Element Name	SDWIS/FedRep XML Schema Tags	Comments	Format/ Permitted Values
SAMPLE BEGIN DATE	<SamplesDataFlow> <Samples> <SampleDetails> <SampleDateDetails> <MonitoringPeriodDetails> <MonitorPeriodBeginDate>	Required for PB90 and CU90 samples	DATE (YYYYMMDD)
SAMPLE END DATE	<SamplesDataFlow> <Samples> <SampleDetails> <SampleDateDetails> <MonitoringPeriodDetails> <MonitorPeriodEndDate>		DATE (YYYYMMDD)
SAMPLE COLLECTION DATE	<SamplesDataFlow> <Samples> <SampleDetails> <SampleDateDetails> <CollectionDate>		DATE(YYYYMMDD)
SOURCE TYPE	<SamplesDataFlow> <Samples> <SampleDetails> <SampleFacilityWaterTypeCode> <SDWASampleFacilityWaterTypeCode>	Not permitted for PB90 and CU90 samples	AN (2) GU Ground water UDI of surface water GW Ground Water SW Surface Water
SAMPLE TYPE	<SamplesDataFlow> <Samples> <SampleDetails> <SampleWaterTreatmentCode> <SDWASampleWaterTreatmentCode>		AN(2) FN Finished water sample RW Raw water sample

Optional Data Elements

SDWIS/FedRep Data Element Name	SDWIS/FedRep XML Schema Tags	Comments	Format/ Permitted Values
QTY COMPOSITED	<SamplesDataFlow> <Samples> <SampleDetails> <SampleQuantityCompositedValue>	NOT PERMITTED Not permitted PB90 or CU90 samples	N (1) 2, 3, 4, or 5
SAMPLING RECONCILIATION ID	<SamplesDataFlow> <Samples> <SampleDetails> <SampleReconciliationIdentifier>	An identifier used for reconciliation with the state data system or LAB assigned identifiers.	AN (40)

Sample Result Business Object

Required Data Elements

SDWIS/FedRep Data Element Name	SDWIS/FedRep XML Schema Tags	Comments	Format/ Permitted Values
SAMPLE CONTAMINANT	<SamplesDataFlow> <Samples> <SampleDetails> <SampleResults> <SampleResultDetails> <SampleAnalyteCode> <SDWASampleAnalyteCode>	Contaminant ID	AN (4) CU90 Copper Action Level Exceedance PB90 Lead 90th Percentile Value
SAMPLE ANALYSIS RESULT	<SamplesDataFlow> <Samples> <SampleDetails> <SampleResults> <SampleResultDetails> <SampleAnalysisResultValue>		N(15/9)

Conditional Data Elements

SDWIS/FedRep Data Element Name	SDWIS/FedRep XML Schema Tags	Comments	Format/ Permitted Values
SAMPLE RESULT SIGN	<SamplesDataFlow> <Samples> <SampleDetails> <SampleResults> <SampleResultDetails> <SampleResultSignCode> <SDWASampleResultSignCode>		AN (1) < Below minimum detection limits = Exactly equal to the value reported
UNIT OF MEASURE	<SamplesDataFlow> <Samples> <SampleDetails> <SampleResults> <SampleResultDetails> <SampleUnitMeasureCode> <SDWASampleUnitMeasure Code>	SAMPLE ANALYSIS RESULT reported unit of measure (UM) Not reported for PB90 and CU90	AN(4) MG/L mg/l - milligrams/liter (parts per million) UG/L ug/l - micrograms/liter (parts per billion)

Optional Data Element

SDWIS/FedRep Data Element Name	SDWIS/FedRep XML Schema Tags	Comments	Format/ Permitted Values
SAMPLE ANALYSIS METHOD	<SamplesDataFlow> <Samples> <SampleDetails> <SampleResults> <SampleResultDetails> <SampleAnalysisMethodCode> <SDWASampleAnalysisMethodCode>	Analytical method used for obtaining the sample result	AN (5)

ACTIONS SUBJECT AREA

Event Schedule Activity Business Object

The Event Schedule Activity business object is used to report:

- Lead and copper milestones used under the Lead and Copper rule (LCR)
- Deficiencies and sanitary defects
- Addressing fecal contamination in groundwater sources
- Treatment technique triggers under the Revised Total Coliform Rule (RTCR)

The subsections below breakout these reporting requirements.

Reporting Lead and Copper Milestones

This section describes how to report lead and copper milestones using the event schedule activity business object.

Required Data Elements

SDWIS/FedRep Data Element Name	SDWIS/FedRep XML Schema Tags	Comments	Format/ Permitted Values
PWS ID	<ActionsDataFlow> <EventScheduleActivities> <EventScheduleActivityDetails> <PWSIdentifier>		AN (9)
EVENT ACTIVITY ID	<ActionsDataFlow> <EventScheduleActivities> <EventScheduleActivityDetails> <EventActivityIdentifier>	Uniquely identifies the activity; assigned by the Primacy Agency	AN (20)

SDWIS/FedRep Data Element Name	SDWIS/FedRep XML Schema Tags	Comments	Format/ Permitted Values
ACTIVITY TYPE CODE	<ActionsDataFlow> <EventScheduleActivities> <EventScheduleActivityDetails> <EventActivityCode> <SDWAEventActivityCode>	Describes the activity associated with the schedule	AN(4) DEEM System deemed optimized w/o OCCT DONE System done with OCCT LSLR Lead service line replacement required
ACTIVITY ACTUAL/DUE DATE	<ActionsDataFlow> <EventScheduleActivities> <EventScheduleActivityDetails> <EventActivityActualDate>	Date when the activity must be successfully completed	DATE (YYYYMMDD)

Conditional Data Elements

SDWIS/FedRep Data Element Name	SDWIS/FedRep XML Schema Tags	Comments	Format/ Permitted Values
REASON CODE	<ActionsDataFlow> <EventScheduleActivities> <EventScheduleActivityDetails> <EventActivityReasonCode> <SDWAEventActivityReasonCode>	Required if Activity Type Code = DEEM Optional if Activity Type Code = DONE or LSLR	AN (5) B1 Serving fewer than 50,000; met action levels B3 Serving greater than 50,000; met action levels WQP Water Quality Parameters
ACTIVITY END/ACHIEVED DATE	<ActionsDataFlow> <EventScheduleActivities> <EventScheduleActivityDetails> <EventActivityEndDate>	The date when the activity was successfully completed Optional if Activity Type Code = DONE	DATE (YYYYMMDD)

Optional Data Elements

SDWIS/FedRep Data Element Name	SDWIS/FedRep XML Schema Tags	Comments	Format/ Permitted Values

ACTIVITY COMMENT	\<ActionsDataFlow\>
	 \<EventScheduleActivities\>
	  \<EventScheduleActivityDetails\>
	   \<EventActivityCommentText\>
		Description of the activity	AN (2000)

Reporting Activities Addressing Deficiencies and Sanitary Defects

This section describes how to use the event schedule activity business object to report corrective actions planned or taken to address sanitary defects identified during sanitary surveys and site assessments.

At least one corrective action must be reported for each significant deficiency or sanitary defect. Additionally, the primacy agency must report interim corrective actions when the water system fails to complete their plan to the satisfaction of the primacy agency and any resulting violation. The violation must be linked to the corrective action that triggered the violation by inserting the EVENT ACTIVITY ID of the corrective action into the violation record.

Required Data Elements

SDWIS/FedRep Data Element Name	SDWIS/FedRep XML Schema Tags	Comments	Format/ Permitted Values

PWS ID	\<ActionsDataFlow\>
	 \<EventScheduleActivities\>
	  \<EventScheduleActivityDetails\>
	   \<PWSIdentifier\>
			AN (9)

EVENT ACTIVITY ID	\<ActionsDataFlow\>
	 \<EventScheduleActivities\>
	  \<EventScheduleActivityDetails\>
	   \<EventActivityIdentifier\>
		Uniquely identifies the activity; assigned by the Primacy Agency	AN (20)

ACTIVITY TYPE CODE	\<ActionsDataFlow\>
	 \<EventScheduleActivities\>
	  \<EventScheduleActivityDetails\>
	   \<EventActivityCode\>
	    \<SDWAEventActivityCode\>
		Type of corrective action	AN (4)
			SDFF Significant Deficiency Corrective Action
			
			SDFI Significant Deficiency Interim Step

ACTIVITY ACTUAL/DUE DATE	\<ActionsDataFlow\>
	 \<EventScheduleActivities\>
	  \<EventScheduleActivityDetails\>
	   \<EventActivityActualDate\>
		Date when the action must be successfully completed	DATE (YYYYMMDD)

SDWIS/FedRep Data Element Name	SDWIS/FedRep XML Schema Tags	Comments	Format/ Permitted Values
REASON CODE	<ActionsDataFlow> <EventScheduleActivities> <EventScheduleActivityDetails> <EventActivityReasonCode> <SDWAEventActivityReasonCode>	Indicates the drinking water rule driving the activity	AN (5) GW Ground Water Rule SH Subpart H (IESWTR) RTCR Revised TCR

Optional Data Elements

SDWIS/FedRep Data Element Name	SDWIS/FedRep XML Schema Tags	Comments	Format/ Permitted Values
ACTIVITY END/ACHIEVED DATE	<ActionsDataFlow> <EventScheduleActivities> <EventScheduleActivityDetails> <EventActivityEndDate>	The date when the corrective action was successfully completed	DATE (YYYYMMDD)
ACTIVITY COMMENT	<ActionsDataFlow> <EventScheduleActivities> <EventScheduleActivityDetails> <EventActivityCommentText>	Description of the activity	AN (2000)

Reporting Activities Addressing Fecal Contamination in Groundwater Sources

Report corrective actions taken to address the presence of fecal contamination in groundwater sources using the event schedule activity business object as described below. If activities to address fecal contamination are not completed to the satisfaction of the primacy agency, report the resulting violation using the violation business object described in the Violation Business Object section. This violation must be linked to the event schedule activity by including the EVENTY ACTIVITY ID in the violation record.

Required Data Elements

SDWIS/FedRep Data Element Name	SDWIS/FedRep XML Schema Tags	Comments	Format/ Permitted Values
PWS ID	<ActionsDataFlow> <EventScheduleActivities> <EventScheduleActivityDetails> <PWSIdentifier>		AN (9)

SDWIS/FedRep Data Element Name	SDWIS/FedRep XML Schema Tags	Comments	Format/ Permitted Values
EVENT ACTIVITY ID	<ActionsDataFlow> <EventScheduleActivities> <EventScheduleActivityDetails> <EventActivityIdentifier>	Uniquely identifies the activity; assigned by the Primacy Agency	AN (20)
ACTIVITY TYPE CODE	<ActionsDataFlow> <EventScheduleActivities> <EventScheduleActivityDetails> <EventActivityCode> <SDWAEventActivityCode>	Describes the type of corrective action	AN (4) FICF Fecal Indicator Contamination Action FICI Fecal Indicator Interim Step
ACTIVITY ACTUAL/DUE DATE	<ActionsDataFlow> <EventScheduleActivities> <EventScheduleActivityDetails> <EventActivityActualDate>	Date when the activity must be successfully completed	DATE (YYYYMMDD)
REASON CODE	<ActionsDataFlow> <EventScheduleActivities> <EventScheduleActivityDetails> <EventActivityReasonCode> <SDWAEventActivityReasonCode>	Indicates that this activity was driven by Ground Water Rule requirements	AN (5) GW Ground Water Rule SH Subpart H

Optional Data Elements

SDWIS/FedRep Data Element Name	SDWIS/FedRep XML Schema Tags	Comments	Format/ Permitted Values
ACTIVITY END/ACHIEVED DATE	<ActionsDataFlow> <EventScheduleActivities> <EventScheduleActivityDetails> <EventActivityEndDate>	Date when the activity was successfully completed	DATE (YYYYMMDD)
ACTIVITY COMMENT	<ActionsDataFlow> <EventScheduleActivities> <EventScheduleActivityDetails> <EventActivityCommentText>	Description of the activity	AN (2000)

Reporting Treatment Technique Triggers for the Revised Total Coliform Rule

Report level 1 and level 2 treatment technique triggers (TTT) for water systems under the Revised Total Coliform Rule (RTCR) using the Event Schedule Activity business object as described below.

Required Data Elements

SDWIS/FedRep Data Element Name	SDWIS/FedRep XML Schema Tags	Comments	Format/ Permitted Values
PWS ID	\<ActionsDataFlow> \<EventScheduleActivities> \<EventScheduleActivityDetails> \<PWSIdentifier>		AN (9)
EVENT ACTIVITY ID	\<ActionsDataFlow> \<EventScheduleActivities> \<EventScheduleActivityDetails> \<EventActivityIdentifier>	Uniquely identifies the activity; assigned by the Primacy Agency	AN (20)
ACTIVITY TYPE CODE	\<ActionsDataFlow> \<EventScheduleActivities> \<EventScheduleActivityDetails> \<EventActivityCode> \<SDWAEventActivityCode>	Describes the type of triggered treatment technique	AN (4) RTL1 RTCR Level 1 Treatment Technique Trigger RTL2 RTCR Level 2 Treatment Technique Trigger
ACTIVITY ACTUAL/DUE DATE	\<ActionsDataFlow> \<EventScheduleActivities> \<EventScheduleActivityDetails> \<EventActivityActualDate>	Date when the triggered assessment must be submitted to the Primacy Agency	DATE (YYYYMMDD)

SDWIS/FedRep Data Element Name	SDWIS/FedRep XML Schema Tags	Comments	Format/ Permitted Values

REASON CODE	`<ActionsDataFlow>`
	  `<EventScheduleActivities>`
	    `<EventScheduleActivityDetails>`
	      `<EventActivityReasonCode>`
	        `<SDWAEventActivityReasonCode>`
		Describes what triggered the treatment technique
		
		See table below for valid ACTIVTY CODE – REASON CODE pairing
			AN (5)
			L2-TA RTCR MCL Treatment Technique Trigger
			L2-TB RTCR Second Level 1 Treatment Technique Trigger
			L1-TC RTCR TC+ with Insufficient Repeat Treatment Technique Trigger
			L1-TD RTCR Multiple TC+ Treatment Technique Trigger

Valid Activity Type/Reason Code Combinations				
Activity Type Code	Reason Code			
	L1-TC	L1-TD	L2-TA	L2-TB
RTL1	Valid	Valid		
RTL2			Valid	Valid

Optional Data Elements

SDWIS/FedRep Data Element Name	SDWIS/FedRep XML Schema Tags	Comments	Format/ Permitted Values

ACTIVITY END/ACHIEVED DATE	`<ActionsDataFlow>`
	  `<EventScheduleActivities>`
	    `<EventScheduleActivityDetails>`
	      `<EventActivityEndDate>`
		Date when the action was successfully completed	DATE (YYYYMMDD)

ACTIVITY COMMENT	`<ActionsDataFlow>`
	  `<EventScheduleActivities>`
	    `<EventScheduleActivityDetails>`
	      `<EventActivityCommentText>`
		Description of the activity.	AN (2000)

Site Visit Business Object

Characterizes a call conducted by a representative of a regulatory agency for the purpose of compliance inspection, technical support, or complaint investigation. The results of the site visit are documented and can result in violations. For the purposes of Minimum Reporting Requirements, Sanitary Surveys conducted must be reported with the eight category evaluations described in the Interim Enhanced Surface Water Rule and Groundwater Rule and listed below as conditionally required. Other kinds of site visits may be reported the by the primacy agency at their discretion.

Required Data Elements

SDWIS/FedRep Data Element Name	SDWIS/FedRep XML Schema Tags	Comments	Format/ Permitted Values
PWS ID	<ActionsDataFlow> <SiteVisits> <SiteVisitDetails> <PWSIdentifier>		AN (9)
VISIT ID	<ActionsDataFlow> <SiteVisits> <SiteVisitDetails> <VisitIdentifier>	A value used to uniquely identify a specific on-site visit/assessment made t made to a PWS.	AN (20)
VISIT DATE	<ActionsDataFlow> <SiteVisits> <SiteVisitDetails> <VisitDate>	A value that represents the calendar date on which a visit/assessment was made to a PWS.	DATE (YYYYMMDD)
VISIT REASON	<ActionsDataFlow> <SiteVisits> <SiteVisitDetails> <VisitReasonCode> <SDWAVisitReasonCode>	Indicates the purpose of the visit	AN (4) See the Mandatory Site Visit Reason Permitted Values and the Discretionary Site Visit Reason Permitted Values sections
VISIT AGENCY TYPE	<ActionsDataFlow> <SiteVisits> <SiteVisitDetails> <VisitAgencyCode> <SDWAVisitAgencyCode>	Defines the type of agency responsible for conducting the site visit	AN (2) See the Visit Agency Type Permitted Values section

Mandatory Site Visit Reason Permitted Values

Primacy agencies are required to report site visits conducted for the following reasons:

Code	Site Visit Reason Description
LV1A	Level 1 Assessment RTCR
LV2A	Level 2 Assessment RTCR
L1SS	Level 1 Assessment and Sanitary Survey
L2SS	Level 2 Assessment and Sanitary Survey
L1PS	Level 1 Assessment and Partial Sanitary Survey
L2PS	Level 2 Assessment and Partial Sanitary Survey
SNSP	Sanitary Survey, Partial
SNSV	Sanitary Survey, Complete
SSVF	Sanitary Survey Follow-up

Discretionary Site Visit Reason Permitted Values

Primacy agencies may, at their discretion, report site visits conducted for the following reasons:

Code	Site Visit Reason Description
CAPD	Capacity Development Assessment
CMPA	Compliance Assistance
CNST	Construction Inspection
CPEV	Comprehensive Performance Evaluation (CPE)
EMRG	Emergency Assistance
ENGR	Engineering Determination/Advice/Plan Review
FENF	Formal Enforcement
FUFE	Follow-up to Formal Enforcement
IENF	Informal Enforcement
INFI	Informal System Inspection
INVG	Investigation (Complaint/Violation/etc.)
LABC	Laboratory Certification
LABI	Laboratory Inspection
LOCD	Locational Data Collection
OM	Operation and Maintenance
OTHR	Other
PRMT	Permit (Qualification/Review/Compliance)
PUBH	Public Hearing
RCDR	Record Review
RSCH	Regularly Scheduled
SHAZ	Sanitary Hazards Investigation
SITE	Site Inspection
SMPL	Sample Collection
SRCE	Source Water Inspection
SRF	State Revolving Fund
TECH	Technical Assistance (Non-Specific)
TRNG	Training
TRTP	Water Treatment Plant Site Visit
VAEX	Variance/Exemption related
WHPP	Wellhead Protection Program
WSHD	Watershed Evaluation

Code	Site Visit Reason Description
XCON	Cross Connection Inspection/Investigation

Visit Agency Type Permitted Values

Code	Site Visit Reason Description
AR	Alaskan Remote Village
AT	Authority
BR	Borough
CM	Commission
CN	County
CT	City
DS	District
FD	Federal
MN	Municipality
NA	Native American Tribe
PR	Parish
RG	Region
SA	State Administrative District
SC	State Contractor
SD	School District
SR	State Administrative Region
ST	State
TA	Non-State Provider Eng/Tech Assist Firm
TW	Town
WD	Water District
WS	Water System

Conditional Data Elements

Primacy agencies are required to report evaluation results for sanitary surveys and site assessments (see the Mandatory Site Visit Reason Permitted Values sections) as described in the following table.

SDWIS/FedRep Data Element Name	SDWIS/FedRep XML Schema Tags	Comments	Format/ Permitted Values
CATEGORY EVALUATION MANAGEMENT AND OPERATIONS	\<ActionsDataFlow> \<SiteVisits> \<SiteVisitDetails> \<VisitCategoryEvaluationDetails> \<VisitManagementOperationsEvaluationCode> \<SDWAVisitCategoryEvaluationCode>	All data elements share the same permitted value list	AN (1) D Sanitary Defect M Minor deficiencies N No deficiencies or recommendations R Recommendations made S Significant deficiencies X Not evaluated
CATEGORY EVALUATION SOURCE	\<ActionsDataFlow> \<SiteVisits> \<SiteVisitDetails> \<VisitCategoryEvaluationDetails> \<VisitSourceEvaluationCode> \<SDWAVisitCategoryEvaluationCode>		

SDWIS/FedRep Data Element Name	SDWIS/FedRep XML Schema Tags	Comments	Format/ Permitted Values
CATEGORY EVALUATION PUMPS	<ActionsDataFlow> <SiteVisits> <SiteVisitDetails> <VisitCategoryEvaluationDetails> <VisitPumpsEvaluationCode> <SDWAVisitCategoryEvaluationCode>		Z Not applicable
CATEGORY EVALUATION OPERATOR COMPLIANCE	<ActionsDataFlow> <SiteVisits> <SiteVisitDetails> <VisitCategoryEvaluationDetails> <VisitOperatorCompliance EvaluationCode> <SDWAVisitCategoryEvaluationCode>		
CATEGORY EVALUATION MONITORING REPORTING DATA VERIFICATION	<ActionsDataFlow> <SiteVisits> <SiteVisitDetails> <VisitCategoryEvaluationDetails> <VisitDataVerificationEvaluationCode> <SDWAVisitCategoryEvaluationCode>		
CATEGORY EVALUATION TREATMENT	<ActionsDataFlow> <SiteVisits> <SiteVisitDetails> <VisitCategoryEvaluationDetails> <VisitTreatmentEvaluationCode> <SDWAVisitCategoryEvaluationCode>		
CATEGORY EVALUATION FINISHED WATER STORAGE	<ActionsDataFlow> <SiteVisits> <SiteVisitDetails> <VisitCategoryEvaluationDetails> <VisitFinishedWaterStorageEvaluation Code> <SDWAVisitCategoryEvaluationCode>		
CATEGORY EVALUATION DISTRIBUTION	<ActionsDataFlow> <SiteVisits> <SiteVisitDetails> <VisitCategoryEvaluationDetails> <VisitDistributionEvaluationCode> <SDWAVisitCategoryEvaluationCode>		

Optional Data Elements

The following data elements may be reported at the primacy agency's discretion.

SDWIS/FedRep Data Element Name	SDWIS/FedRep XML Schema Tags	Comments	Format/ Permitted Values
CATEGORY EVALUATION SECURITY	<ActionsDataFlow> <SiteVisits> <SiteVisitDetails> <VisitCategoryEvaluationDetails> <VisitSecurityEvaluationCode> <SDWAVisitCategoryEvaluationCode>	All data elements share the same permitted value list	AN (1) D Sanitary Defect M Minor deficiencies N No deficiencies or recommendations R Recommendations made S Significant deficiencies X Not evaluated Z Not applicable
CATEGORY EVALUATION OTHER	<ActionsDataFlow> <SiteVisits> <SiteVisitDetails> <VisitCategoryEvaluationDetails> <VisitOtherEvaluationCode> <SDWAVisitCategoryEvaluationCode>		
CATEGORY EVALUATION FINANCIAL	<ActionsDataFlow> <SiteVisits> <SiteVisitDetails> <VisitCategoryEvaluationDetails> <VisitFinancialEvaluationCode><SDWAVisitCategoryEvaluationCode>		
SITE VISIT COMMENT	<ActionsDataFlow> <SiteVisits> <SiteVisitDetails> <VisitCommentText>	Description of the site visit	AN(2000)

Violation Business Object

Describes violations issued against a public water system when there is a failure to meet certain state/region or federal drinking water regulations. Violations are detected by assessment of sample results or reviews (including onsite visits) and may lead to legal actions or compliance orders. Violations are publicized, when required, by public notification and may be remedied by enforcement (e.g., by improved filtration techniques or changes in procedures).

Required Data Elements

SDWIS/FedRep Data Element Name	SDWIS/FedRep XML Schema Tags	Comments	Format/ Permitted Values
PWS ID	<ActionsDataFlow> <Violations> <ViolationDetails> <PWSIdentifier>		AN (9)
VIOLATION ID	<ActionsDataFlow> <Violations> <ViolationDetails> <ViolationIdentifier>	Uniquely identifies a specific violation of a primary drinking water regulation	AN(20)

SDWIS/FedRep Data Element Name	SDWIS/FedRep XML Schema Tags	Comments	Format/ Permitted Values
VIOLATION TYPE	\<ActionsDataFlow\> \<Violations\> \<ViolationDetails\> \<ViolationTypeCode\> \<SDWAViolationTypeCode\>		AN (2) See the Violation Type Permitted Values section
COMPLIANCE PERIOD BEGIN DATE	\<ActionsDataFlow\> \<Violations\> \<ViolationDetails\> \<CompliancePeriodDetails\> \<CompliancePeriodBeginDate\>	The calendar date of the beginning of a period in which a Public water system was determined to be in violation of a primary drinking water regulation	DATE(YYYYMMDD)

Violation Type Permitted Values

The table below lists the Violation ID permitted values.

Code	Violation Type Description
01	MCL, Single Sample
02	MCL, Average
03	Monitoring, Regular
04	Monitoring, Check/ Repeat/ Confirmation
05	Notification, State
06	Notification, Public
07	Treatment Techniques
08	Variance/ Exemption/ Other Compliance
09	Record Keeping
10	Operations Report
11	Non-Acute MRDL
12	Qualified Operator Failure
13	Acute MRDL
19	Monitoring, GWR Assessment Source Water
20	Failure to Consult/Respond
21	MCL, Acute (TCR)
22	MCL, Monthly (TCR)
23	Monitoring, Routine Major (TCR)
24	Monitoring, Routine Minor (TCR)
25	Monitoring, Repeat Major (TCR)
26	Monitoring, Repeat Minor (TCR)
27	Monitoring, Routine (DBP)
28	Sanitary Survey Cooperation Failure
29	M&R Filter Profile/CPE Failure

Code	Violation Type Description
30	Monitoring/Submit Plan (IDSE)
31	Monitoring of Treatment (Unfilt/GWR)
32	Monitoring, Source Water (LT2)
33	Failure Submit Treatment Requirement Rpt
34	Monitoring, GWR Triggered/Additional
35	Failure Submit Stage 2 DBPR Report
36	Monitoring of Treatment (SWTR-Filter)
37	Treatment Technique, No Prior State Approval
38	M&R Filter Turbidity Reporting
39	Monitoring and Reporting (FBR)
40	Treatment Technique (FBR)
41	Failure to Maintain Microbial Treatment
42	Failure to Provide Treatment
43	Single Turbidity Exceed (Enhanced SWTR)
44	Treatment Technique Exceeds Turb 0.3 NTU
45	Failure to Address Deficiencies
46	Treatment Technique Precursor Removal
47	Treatment Technique Uncovered Reservoir
48	Failure to Address Contamination
51	Initial LCR Tap Sampling
52	Follow-up and Routine Tap Sampling
53	Water Quality Parameter M & R
56	Initial, Follow-up, or Routine SOWT M&R
57	OCCT/SOWT Recommendation
58	OCCT/SOWT Installation
59	Water Quality Parameter Non-Compliance
63	MPL Non-Compliance
64	Lead Service Line Replacement (LSLR)
65	Public Education
66	Lead Consumer Notice
71	CCR Complete Failure to Report
72	CCR Inadequate Reporting
73	Failure to Notify Other PWS
75	PN Violation for an NPDWR Violation
76	PN Violation without NPDWR Violation
1A	MCL, E. coli (RTCR)
2A	TT, Level 1 Assessment (RTCR)
2B	TT, Level 2 Assessment (RTCR)
2C	TT, Corrective/Expedited Actions (RTCR)
2D	Treatment Technique Startup Procedures
3A	Monitoring, Routine (RTCR)
3B	Monitoring, Additional Routine (RTCR)
3C	Monitor Coliform Turbidity Trigger (RTCR)
3D	Monitoring, Lab Cert/Method Error (RTCR)
4A	Reporting, Assessment Forms (RTCR)

Code	Violation Type Description
4B	Report Sample Result/Fail Monitor (RTCR)
4C	Report Startup Procedures Cert Form RTCR
4D	Notification, E Coli Positive (RTCR)
4E	Notification, E. coli MCL (RTCR)
4F	Notify L1/L2 TT Vio, Correct Action (RTCR)
5A	Sample Siting Plan Errors (RTCR)
5B	Recordkeeping Violations (RTCR)

Conditional Data Elements

The business rules for these elements are dependent upon the violation type. See two Violation tables in the Appendix -- Violation Master and Final RTCR Violation for specific requirements.

SDWIS/FedRep Data Element Name	SDWIS/FedRep XML Schema Tags	Comments	Format/ Permitted Values

CONTAMINANT CODE	<ActionsDataFlow> <Violations> <ViolationDetails> <ViolationAnalyteCode> <SDWAViolationAnalyteCode>		AN (4) See the		

			UNDERLYING OBJECT DATA TYPE	**<Violations>**
				 <ViolationDetails>
				  <RequiredReportingDetails>
				   <UnderlyingObjectDataType>	

			PUBLIC NOTICE UNDERLYING VIOLATION ID	<ActionsDataFlow> <Violations> <ViolationDetails> <PublicNoticeUnderlying ViolationIdentifier>	
			LEVEL VIOLATED	<ActionsDataFlow> <Violations> <ViolationDetails> <LevelViolatedValue>	
			MAJOR VIOLATION INDICATOR	<ActionsDataFlow> <Violations> <ViolationDetails> <MajorViolationIndicator> <SDWAMajorViolation Indicator>	
			SEVERITY INDICATOR COUNT	<ActionsDataFlow> <Violations> <ViolationDetails> <SeverityIndicatoryCount>	
			Contaminant Code Permitted Values List section		

SDWIS/FedRep Data Element Name	SDWIS/FedRep XML Schema Tags	Comments	Format/ Permitted Values
COMPLIANCE PERIOD END DATE	\<ActionsDataFlow\> \<Violations\> \<ViolationDetails\> \<CompliancePeriodDetails\> \<CompliancePeriodEndDate\>		AN (15/9)

ANALYSIS RESULT	\<ActionsDataFlow\>
	 \<Violations\>
	  \<ViolationDetails\>
	   \<AnalysisResultValue\>
		The result obtained from a single analysis, or the average result obtained from multiple analyses. If reported, must me greater than zero.	AN (15/9)

VIOLATION UNIT OF MEASURE	\<ActionsDataFlow\>
	 \<Violations\>
	  \<ViolationDetails\>
	   \<ViolationUnitMeasure\>
		The unit of measure associated with the value reported for ANALYSIS RESULT for violations	AN (9)
			See the Unit of Measure Permitted Values section

UNDERLYING OBJECT ID	\<Violations\> \<ViolationDetails\> \<RequiredReportingDetails\> \<UnderlyingObjectIdentifier\>		AN (20)

If the UNDERLYING OBJECT DATA TYPE = CORACTION, then this value will contain the Event Schedule
If a sample result triggered the violation (UNDERLYING OBJECT ID = SAMPLRESULT), then the value wi
Violation Type, Contaminant Code, Compliance Period Begin Date, and Facility ID.

If the violation type is 34, 42 (and Contaminant Code is 0700), 45, 48, 1A, or 2C shall have one and on

SDWIS/FedRep Data Element Name	SDWIS/FedRep XML Schema Tags	Comments	Format/ Permitted Values
UNDERLYING OBJECT DATA TYPE	<Violations> <ViolationDetails> <RequiredReportingDetails> <UnderlyingObjectDataType>	Indicates the type of UNDERLYING OBJECT submitted – a sample result that triggered the violation or failure of the water system to complete a corrective action	AN (10) CORACTION Corrective Action triggered SMPLRESULT Sample result triggered
PUBLIC NOTICE UNDERLYING VIOLATION ID	<ActionsDataFlow> <Violations> <ViolationDetails> <PublicNoticeUnderlying ViolationIdentifier>	For a public notice violation, this field contains the violation ID of the original violation. Report for all type 75 (PN Violation for an NPDWR Violation) violations.	AN (20)

SDWIS/FedRep Data Element Name	SDWIS/FedRep XML Schema Tags	Comments	Format/ Permitted Values
LEVEL VIOLATED	<ActionsDataFlow> <Violations> <ViolationDetails> <LevelViolatedValue>	The maximum contaminant level exceeded triggering an MCL violation. Reported when the State MCL is more stringent than the Federal MCL	N (15/9)
MAJOR VIOLATION INDICATOR	<ActionsDataFlow> <Violations> <ViolationDetails> <MajorViolationIndicator> <SDWAMajorViolation Indicator>	Indicates the severity (major or minor) of a Monitoring and Reporting (M&R) violation.[3]	AN (1) Y Yes, major N No, minor
SEVERITY INDICATOR COUNT	<ActionsDataFlow> <Violations> <ViolationDetails> <SeverityIndicatoryCount>	Indicates the severity of certain DBPR and IESWTR violations ranging from 1 up to and including 186	N (3/0)

Contaminant Code Permitted Values List

Code	Description
%LUM	Percent Luminance
Code	**Description**
0100	Turbidity
0200	Surface Water Treatment Rule (SWTR)

---

[3] The major versus minor designation does not apply to a sanitary survey M&R violation.

Code	Description
0300	Interim Enhanced/Long Term 1 SWTR (IESWTR)
0400	DBP Stage 1
0500	Filter Backwash Rule
0600	DBP Stage 2
0700	Ground Water Rule (GWR)
0800	Long Term 2 Enhanced SWTR (LT2ESWTR)
0999	Chlorine
1000	Total Chlorine
1001	Combined Chlorine
1002	Aluminum
1003	Nitrogen-Ammonia as (N)
1004	Bromide
1005	Arsenic
1006	Chloramine
1007	Chlorate
1008	Chlorine dioxide
1009	Chlorite
1010	Barium
1011	Bromate
1012	Residual Chlorine
1013	Free Residual Chlorine
1014	Ozone Residual
1015	Cadmium
1016	Calcium
1017	Chloride
1018	Carbon, Total
1020	Chromium
1021	Hydroxide as Calcium Carbonate
1022	Copper
1024	Cyanide, Free
1025	Fluoride
1026	Bicarbonate as HCO3
1027	Hydrogen sulfide
1028	Iron
1029	Iron, Suspended
1030	Lead
1031	Magnesium
1032	Manganese
1033	Manganese, Suspended

Code	Description
1034	Manganese, Dissolved
1035	Mercury
1036	Nickel
1037	Total Kjeldahl Nitrogen (in Water mg/l)
1038	Nitrate-Nitrite
1039	Perchlorate
1040	Nitrate
1041	Nitrite
1042	Potassium
1043	Phosphate, Total
1044	Orthophosphate
1045	Selenium
1046	Percent Sodium
1047	Sodium Adsorption Ratio
1048	Total Hardness (Gr/Gal)D
1049	Silica
1050	Silver
1051	Strontium
1052	Sodium
1055	Sulfate
1056	Residue, Non filterable (TSS)
1057	Residue, Total, Filterable
1058	Residue, Filterable-Volatile
1059	Residue, Filterable-Fixed
1060	Residue, Total-Volatile
1061	Residue, Total-Fixed
1062	Tot Extractable Hydrocarbons-Diesel Oil
1063	Residue, Nonfilterable-Fixed
1064	Conductivity @ 25 C U-MHO
1065	Tot Extractable Hydrocarbons-Waste Oil
1066	pH, CaCO3 Stability S.U.
1067	Alkalinity, CaCO3 Stability
1068	Acidity, Total (CaCO3)
1069	Acidity, M.O. (CaCO3)
1070	Residue, Total
1071	Residue, Settleable (by Weight)
1072	Phosphorus, Soluble
1073	Phosphate, Reactive
1074	Antimony, Total

Code	Description
1075	Beryllium, Total
1076	COD mg/l
1077	Residue, Nonfilterable, Volatile
1078	Bismuth, Total
1079	Boron, Total
1080	Chromium hexavalent ion
1081	Cobalt, Total
1082	Iron, Dissolved
1083	Lithium, Total
1084	Molybdenum, Total
1085	Thallium, Total
1086	Tin, Total
1087	Titanium, Total
1088	Vanadium, Total
1089	MBAS
1090	Oil-Grease, Total
1091	BOD, 5-Day mg/l
1092	TOD mg/l
1093	Phosphorus, Total
1094	Asbestos
1095	Zinc
1901	Carbon dioxide
1902	Carbon disulfide
1905	Color
1910	Corrosivity
1914	Calcium Hardness
1915	Hardness, Total (as CaC03)
1916	Hardness, Carbonate
1917	Hardness, Noncarbonate
1918	Hardness, Calcium Magnesium
1919	Calcium
1920	Odor
1925	pH
1927	Alkalinity, Total
1928	Alkalinity, Bicarbonate
1929	Alkalinity, Carbonate
1930	Total Dissolved Solids (TDS)
1931	Alkalinity, Phenolphthalein
1993	Stability Index

Code	Description
1994	Aggressive Index
1995	Scale Forming
1996	Temperature (Centigrade)
1997	Langelier Index (PHS)
1998	Saturation Index
2004	Alachlor ESA
2005	Endrin
2006	Desethyl atrazine
2007	Desisopropyl atrazine
2009	4,4'-DDE
2010	gamma-BHC; Lindane
2015	Methoxychlor
2020	Toxaphene
2021	Carbaryl
2022	Methomyl
2023	Propoxur; Baygon
2024	Methiocarb
2027	Acetochlor
2028	Paraquat
2029	Prometon (Pramitol)
2030	p-Isopropyltoluene
2031	Dalapon
2032	Diquat
2033	Endothall
2034	Glyphosate
2035	Di(2-ethylhexyl) adipate
2036	Oxamyl; Vydate
2037	Simazine
2038	PAH's
2039	Di(2-ethylhexyl) phthalate
2040	Picloram
2041	Dinoseb
2042	Hexachlorocyclopentadiene
2043	Aldicarb sulfoxide
2044	Aldicarb sulfone
2045	Metolachlor
2046	Carbofuran
2047	Aldicarb
2048	Hypochlorite Ion

Code	Description
2049	1,4-Dioxane
2050	Atrazine
2051	Alachlor; Lasso
2052	EPTC; Eptam
2053	Butylate (Sutan)
2054	Cyanazine; Bladex
2055	Trifluralin
2056	Diazinon; Spectracide
2057	Chlorpyrifos; Lorsban
2058	Malathion
2059	Azinphos-methyl (Guthion)
2060	Isofenphos; Oflanol
2061	Trithion
2062	Ethion
2063	2,3,7,8-TCDD (Dioxin)
2064	Parathion; Ethyl
2065	Heptachlor
2066	3-Hydroxycarbofuran
2067	Heptachlor epoxide
2068	Endosulfan I
2069	p,p'-DDE
2070	Dieldrin
2071	p,p'-DDD
2072	Endosulfan II
2073	Phosdrin
2074	Endosulfan sulfate
2075	p,p'-DDT
2076	Butachlor
2077	Propachlor
2078	Cryptosporidium
2079	Dibromoacetonitrile
2080	Cyanogen chloride
2081	Amyl acetate (mixture of isomers)
2082	Butane
2083	Butyl acetate
2084	n-Butyl alcohol
2085	sec-Butyl alcohol
2086	1-Chlorobutane
2087	1-Chlorohexane

Code	Description
2088	Ethyl acetate
2089	Ethyl alcohol
2090	Ethyl ether
2091	Isooctane
2092	Isobutyl acetate
2093	Isobutyl alcohol
2094	Isopropyl acetate
2095	Isopropyl alcohol
2096	RDX
2097	AMPA; Aminomethylphosphonic Acid
2098	Bromacil
2100	DCPA mono-acid degradate
2101	DCPA di-acid degradate
2102	Disulfoton
2103	Diuron
2104	Fonofos (Dyfonate)
2105	2,4-D
2106	2,4-DB
2107	Triclopyr
2108	DCPA mono/di-acid degradates
2110	2,4,5-TP; Silvex
2111	2,4,5-T
2112	Mecoprop; Mecopropp; MCPP
2113	MCPA
2114	Permethrin (mixed, cis & trans)
2200	2-Nitroaniline
2201	3-Nitroaniline
2202	Dibenzofuran
2203	4-Nitroaniline
2204	Azobenzene
2205	Chloramben
2206	Dichlorprop
2207	Benfluralin; Benetin
2209	Bromoxynil
2210	Chloromethane
2212	Dichlorodifluoromethane
2213	Chlorothalonil
2214	Bromomethane
2215	Chlorpyrifos

Code	Description
2216	Chloroethane
2217	Chlorsulfuron
2218	Trichlorofluoromethane
2219	Trichloroacetonitrile
2220	Demeton-Co; Dichrotophos
2221	Dimethoate
2222	Bis-2-chloroethyl ether
2223	Di-n-octylphthalate
2224	trans-1,3-Dichloropropene
2225	Hexachloroethane
2226	trans-1,2-Dichloropropene
2227	2-Methyl-4,6-dinitrophenol
2228	cis-1,3-Dichloropropene
2229	N-Nitrosodiphenylamine
2230	Aniline
2231	Benzyl alcohol
2232	1,2-Dibromoethylene, cis & trans
2233	2-Methyl-phenol (o-Cresol)
2234	2-Chloroethylvinyl ether
2235	4-Methylphenol
2236	Diiodomethane
2237	Benzoic acid
2238	Acrolein
2239	4-Chloroaniline
2240	Acrylonitrile
2241	2-Methyl naphthalene
2242	2,4,5-Trichlorophenol
2243	Acetone
2244	Bis(2-chloroisopropyl) ether
2245	Isopropyl ether
2246	Hexachlorobutadiene
2247	Methyl ethyl ketone
2248	Naphthalene
2249	Methyl isobutyl ketone
2250	Bis(2-chloroethoxy) methane
2251	Methyl-tert-Butyl-Ether (MTBE)
2252	Ethalfluralin; Sonalan
2253	Demeton-S-methyl; Metasystox
2254	Nitrobenzene

Code	Description
2255	Pendimethalin
2256	Propazine
2257	Epichlorohydrin
2258	2-Chloronaphthalene
2259	1-Naphthol; 1-hydroxynaphthalene
2260	Acenaphthylene
2261	Acenaphthene
2262	Isophorone
2263	Tetrahydrofuran
2264	Fluorene
2265	Acrylamide
2266	2,6-Dinitrotoluene
2267	Prophos; Ethoprop
2268	1,2-Diphenylhydrazine
2269	2-Hexanone
2270	2,4-Dinitrotoluene
2271	Tebuthiuron
2272	Terbacil
2273	trans-Nonachlor
2274	Hexachlorobenzene; HCB
2275	trans-permethrin
2276	4-Bromophenyl phenyl ether
2277	4-Methyl-2-pentanone
2278	Phenanthrene
2280	Anthracene
2282	Dimethylphthalate
2283	Linuron
2284	Diethylphthalate
2286	Fluoranthene
2288	Pyrene
2289	Propanil
2290	Di-n-butylphthalate
2291	Diflubenzuron
2292	Benzidine
2293	Ethyl methacrylate
2294	Butyl benzylphthalate
2295	Methyl methacrylate
2296	Chrysene
2297	Fluometuron

Code	Description
2298	Bis(2-ethylhexyl) phthalate
2300	Benzo(a)anthracene
2301	Siduron
2302	Benzo[b]fluoranthene
2303	Thidiazuron
2304	Benzo[k]fluoranthene
2306	Benzo(a)pyrene
2308	Ideno(1,2,3-cd)pyrene
2310	Dibenzo[a,h]anthracene
2312	Benzo[ghi]perylene
2314	N-Nitrosodimethylamine
2316	N-Nitrosodi-N-propylamene
2318	4-Chlorophenyl phenyl ether
2320	3,3-Dichlorobenzidine
2324	Bis(chloromethyl) ether
2325	Pentane
2326	Pentachlorophenol
2327	Pentachloroethane
2328	2,4-Dinitrophenol
2330	p-Chloro-m-Cresol (4-Chloro-3-Methylphen
2331	Phenol
2332	2,4,6-Trichlorophenol
2334	2,4-Dichlorophenol
2336	2,4-Dimethylphenol
2340	2-Nitrophenol
2342	4-Nitrophenol
2344	2-Chlorophenol
2346	4,6-Dinitro-o-cresol
2348	alpha-BHC
2350	beta-BHC
2354	delta-BHC
2356	Aldrin
2365	o,p'-DDE
2367	o,p'-DDD
2369	o,p'-DDT
2370	Dicofol; Kelthane
2371	Tedion
2372	Endrin aldehyde
2374	Kerosene

Code	Description
2376	n-Hexane
2377	1,3,5-Trichlorobenzene
2378	1,2,4-Trichlorobenzene
2380	cis-1,2-Dichloroethylene
2383	Total Polychlorinated Biphenyls (PCB)
2384	Dichlorobiphenyl; 4,4'-Dichlorobiphenyl
2388	Aroclor 1016
2390	Aroclor 1221
2392	Aroclor 1232
2394	Aroclor 1242
2396	Aroclor 1248
2398	Aroclor 1254
2399	PCB 1262
2400	Aroclor 1260
2401	Dichlorobenzenes, Total
2402	Allyl chloride (3-chloro-1-propene)
2408	Dibromomethane
2410	1,1-Dichloropropene
2412	1,3-Dichloropropane
2413	1,3-Dichloropropene, cis & trans
2414	1,2,3-Trichloropropane
2416	2,2-Dichloropropane
2418	1,2,4-Trimethylbenzene
2419	1,2,3-Trimethylbenzene
2420	1,2,3-Trichlorobenzene
2422	n-Butylbenzene
2424	1,3,5-Trimethylbenzene
2426	tert-Butylbenzene
2428	sec-Butylbenzene
2430	Bromochloromethane
2440	Dicamba
2441	Methane
2442	Methyl acetate
2443	Methyl alcohol
2444	Methyl Cellosolve
2445	Propyl acetate
2446	n-Propyl alcohol
2447	Vinyl acetate
2449	Acetic Acid; Ethanoic Acid

Code	Description
2450	Monochloroacetic acid
2451	Dichloroacetic Acid
2452	Trichloroacetic Acid
2453	Monobromoacetic acid
2454	Dibromoacetic acid
2455	Bromochloroacetic Acid
2456	Total Haloacetic Acids (HAA5)
2460	Chloral hydrate
2461	Dichloroacetonitrile
2462	Bromochloroacetonitrile
2463	1,1-Dichloropropanone
2464	1,1,1-Trichloropropanone
2465	Chloropicrin
2466	Chloroacetonitrile
2468	Propionitrile
2469	2-Nitropropane
2470	Acetaldhyde
2471	Propanal
2472	Butanal
2473	Pentanal
2474	Glyoxal
2475	Methyl gloyoxal
2476	Hexanal
2477	Heptanal
2478	Octanal
2479	Benzaldehyde
2480	Nonanal
2481	Decanal
2485	AOC/BDOC
2520	Vinyl 2-chloroethyl ether
2545	Terbufos; Counter
2570	Dyfonate; fonofos
2590	Mocap; Ethoprop
2595	Metribuzin
2605	Phorate; Thimet
2615	Prowl
2620	Amiben
2625	Bentazon; Basagran; 3-isopropyl-1H-2,1,3
2626	Molinate; S-ethyl hexahydro-1H-azepine-1

Code	Description
2627	Thiobencarb; Bolero; S-4-chlorobenzyl di
2635	Bolstar; sulprofos
2650	Dichlorethylene, Total
2655	1,3-Dichloropropylene, Total
2904	Trichlorotrifluoroethane (Freon 113)
2905	Foaming Agents (Surfactants)
2910	Phenols
2919	Carbon, Dissolved Organic (DOC)
2920	Carbon, Total-Organic
2921	Total Organic Halide (TOX)
2922	UV Absorbance @254 nm
2930	Kepone
2931	1,2-Dibromo-3-chloropropane; DBCP
2932	Mirex
2933	Dichloran; Dicloran; Botran; 2,6-dichlor
2934	PCNB; Terraclor; pentachloronitrobenzene
2940	HMPA; Hexamethylphosphoramide
2941	Chloroform
2942	Bromoform
2943	Bromodichloromethane
2944	Dibromochloromethane
2946	Ethylene dibromide (EDB)
2949	Maximum Total Trihalomethane Potential
2950	TTHM
2951	Simulated Distribution System Test (SDS)
2955	Xylenes, Total
2959	Chlordane
2960	Ethylene glycol
2961	Formaldehyde
2962	p-Xylene
2964	Dichloromethane; methylene chloride
2965	o-Chlorotoluene
2966	p-Chlorotoluene
2967	m-Dichlorobenzene
2968	o-Dichlorobenzene
2969	p-Dichlorobenzene
2970	trans-1,4-Dichloro-2-butene
2975	Dichloroiodomethane
2976	Vinyl chloride

Code	Description
2977	1,1-Dichloroethylene
2978	1,1-Dichloroethane
2979	trans-1,2-Dichloroethylene
2980	1,2-Dichloroethane
2981	1,1,1-Trichloroethane
2982	Carbon tetrachloride
2983	1,2-Dichloropropane
2984	Trichloroethylene
2985	1,1,2-Trichloroethane
2986	1,1,1,2-Tetrachloroethane
2987	Tetrachloroethylene
2988	1,1,2,2-Tetrachloroethane
2989	Monochlorobenzene; Chlorobenzene
2990	Benzene
2991	Toluene
2992	Ethylbenzene
2993	Bromobenzene
2994	Isopropylbenzene
2995	m-Xylene
2996	Styrene
2997	o-Xylene
2998	n-Propylbenzene
2999	Note: (Reserved by MSIS)
2A01	Gasoline
2A02	Fuel oil no. 2
2A03	Jet Fuel
2A04	Fuel oil no. 4
2A05	Fuel oil no. 5; Kerosene
2A06	Motor Oil
2A07	Submersible Pump Oil
2A08	Varsol; mineral spirits
2A09	Propane
2U15	15 Unregulated Phase 1 VOCs
2U34	34 Unregulated Phase 1 VOCs
2U36	36 Unregulated Phase 1 VOCs
2V07	7 Regulated Phase 1 VOCs
2V08	8 Regulated Phase 1 VOCs
3000	Coliform (Pre-TCR)
3001	Heterotrophic Bacteria (HPC or SPC)

Code	Description
3002	Enterococci /100 ml
3003	Fecal Streptococcus
3004	Staphylococcus
3005	Non-coliform Growth Identification
3006	Iron Bacteria Id
3007	Salmonella-Shigella
3008	Giardia lamblia
3009	Fungus /ml
3010	Virus PFU/gal
3011	Actinomycetes /ml
3012	Legionella
3013	Fecal Coliform
3014	E. Coli (Eschericia Coli)
3015	Cryptosporidium
3100	Coliform (TCR)
3200	Aeromonas hydrophila
3201	Aeromonas spp.
3210	Helicobacter pylori
3300	Cyanobacteria (blue green algae)
3301	Microcystin
3302	Cylindrospermopsin
3310	Algal Toxins
3400	Echoviruses
3410	Coxsackieviruses
3420	Calciviruses
3430	Adenoviruses
3500	Microsporidia
4000	Gross Alpha, Excl. Radon & U
4002	Gross Alpha, Incl. Radon & U
4004	Radon
4006	Combined Uranium
4007	Uranium-234
4008	Uranium-235
4009	Uranium-238
4010	Combined Radium (-226 & -228)
4012	Photon Emitters
4020	Radium-226
4030	Radium-228
4040	Alpha, Dissolved

Code	Description
4041	Alpha, Suspended
4042	Beta, Dissolved
4043	Beta, Suspended
4044	Potassium-40, Total
4100	Gross Beta Particle Activity
4101	Man-Made Beta Particle & Photon Emitters
4102	Tritium
4104	Beryllium-7
4106	Beryllium-10
4108	Carbon-14
4109	Gross Alpha Particle Activity
4110	Sodium-22
4112	Phosphorus-32
4114	Sulfur-35
4116	Chlorine-36
4118	Calcium-45
4120	Calcium-47
4122	Scandium-46
4124	Scandium-47
4126	Scandium-48
4128	Vanadium-48
4130	Chromium-51
4132	Manganese-54
4134	Iron-55
4136	Iron-59
4138	Cobalt-57
4140	Cobalt-58
4142	Cobalt-60
4144	Nickel-59
4146	Nickel-63
4148	Zinc-65
4150	Germanium-71
4152	Arsenic-73
4154	Arsenic-74
4156	Arsenic-76
4158	Arsenic-77
4160	Selenium-75
4162	Selenium-79
4164	Bromine-82

Code	Description
4166	Rubidium-86
4168	Rubidium-87
4170	Strontium-85
4172	Strontium-89
4174	Strontium-90
4176	Yttrium-90
4178	Yttrium-91
4180	Yttrium-91M
4182	Zirconium-93
4184	Zirconium-95
4186	Niobium-93
4188	Niobium-95
4190	Molybdenum-93
4192	Molybdenum-99
4194	Technetium-96
4196	Technetium-97M
4198	Technetium-97
4200	Technetium-99
4202	Technetium-99M
4204	Ruthenium-97
4206	Ruthenium-103
4208	Ruthenium-106
4210	Rhodium-105
4212	Palladium-103
4214	Palladium-107
4216	Silver-105M
4218	Silver-110M
4220	Silver-110
4222	Silver-111
4224	Cadmium-109
4226	Cadmium-113M
4228	Cadmium-115M
4230	Cadmium-115
4232	Indium-115
4234	Tin-113
4236	Tin-123
4238	Tin-125
4240	Antimony-122
4242	Antimony-124

Code	Description
4244	Antimony-125
4246	Antimony-127
4248	Tellurium-125M
4250	52-Tellurium-127M
4252	Tellurium-127
4254	52-Tellurium-129M
4256	Tellurium-129
4258	Tellurium-132
4260	Iodine-126
4262	Iodine-129
4264	Iodine-131
4266	Cesium-131
4270	Cesium-134
4272	Cesium-135
4274	Cesium-136
4276	Cesium-137
4278	Barium-140
4280	Lanthanum-140
4282	Cerium-141
4284	Cerium-143
4286	Cerium-144
4288	Praseodymium-143
4290	Neodymium-147
4292	Promethium-147
4294	Promethium-148
4296	61-Promethium-148M
4298	Promethium-149
4300	Samarium-151
4302	Samarium-153
4304	Europium-152
4306	Europium-154
4308	Europium-155
4310	Europium-156
4312	Gadolium-153
4314	Terbium-160
4316	Dysprosium-166
4318	Holmium-166
4320	Holmium-166M
4322	Erbium-169

Code	Description
4324	Thulium-170
4326	Thulium-171
4328	Ytterbium-175
4330	Lutetium-177
4332	Hafnium-181
4334	Tantalum-182
4336	Tungsten-181
4338	Tungsten-185
4340	Tungsten-187
4342	Rhenium-183
4344	Rhenium-186
4346	Rhenium-187
4348	Osmium-185
4350	Osmium-191
4352	Osmium-193
4354	Iridium-190
4356	Iridium-192
4358	Platinum-191
4360	78-Platinum-193M
4362	Platinum-193
4364	Gold-196
4366	Gold-198
4368	Thallium-204
4370	Lead-203
4372	Lead-210
4374	Bismuth-206
4376	Bismuth-207
4378	Bismuth-210
4380	Polonium-210
4382	Protactinium-233
5000	Lead & Copper Rule
7000	Consumer Confidence Rule
7500	Public Notice Rule
8000	Revised Total Coliform Rule (RTCR)

Unit of Measure Permitted Values

The table below lists the permitted values for unit of measure.

Code	Unit of Measure Description
%LUM	Percent Luminance
%PUR	Percent Purity
ADMIU	ADMI Color Value
AGGR	Aggressive Index
C	Degrees Celsius
CM-1	Per Centimeter
CT	Contact Time
CU	Color Units
F	Degrees Fahrenheit
FTU	Flavor Threshold Units
L/MG-CM	Liter per Milligram-Centimeter
/MG-M	Liter per Milligram-Meter
LANG	Langlier Index
LBS/CFT	Pounds per Cubic Foot
LBS/GAL	Pounds per Gallon
MFL	Million Fibers per Liter
MG/L	Milligrams per Liter
MREM	Millirems
MREMY	Millirems per Year
NG/L	Nanogram per Liter
NM	Nanometer
NTU	Nephelometric Units
OBSVNS	Observations/field at 100 Power
PCI/L	Picocurie per Liter
PH	pH
RATIO	Ratio of Actual/Required TOC removal
SU	Standard Units
TON	Threshold Odor Number
UG/L	Micrograms per Liter
UMHO/CM	Micromhos per Centimeter
UNITS	Units

Optional Data Elements

SDWIS/FedRep Data Element Name	SDWIS/FedRep XML Schema Tags	Comments	Format/ Permitted Values
FACILITY ID	<ActionsDataFlow> <Violations> <ViolationDetails> <PWSFacilityIdentifier>	ID of the water system facility where the violation was detected	AN(12)

Enforcement Action Business Object

Describes actions taken against a public water system by the primacy usually in response to rule violations. However, primacy agencies may issue enforcement actions without a violation occurring (also called an "orphan" enforcement).

Required Data Elements

SDWIS/FedRep Data Element Name	SDWIS/FedRep XML Schema Tags	Comments	Format/ Permitted Values

PWS ID	\<ActionsDataFlow\>
	  \<Enforcements\>
	   \<EnforcementDetails\>
	    \<PWSIdentifier\>
			AN(9)

ENFORCEMENT ID	\<ActionsDataFlow\>
	  \<Enforcements\>
	   \<EnforcementDetails\>
	    \<EnforcementIdentifier\>
		Uniquely identifies an enforcement action for a water system	AN(20)

ENFORCEMENT DATE	\<ActionsDataFlow\>
	  \<Enforcements\>
	   \<EnforcementDetails\>
	    \<EnforcementDate\>
		Date the enforcement action was taken	DATE(YYYYMMDD)

ACTION CODE	\<ActionsDataFlow\>
	  \<Enforcements\>
	   \<EnforcementDetails\>
	    \<SDWAEnforcementActionCode\>
	     \<EnforcementActionCode\>
	      \<SDWAEnforcementActionCode\>
		State enforcement action codes start with "S"; those taken by the EPA Region start with "E"	AN(3)
			 See the Enforcement Action Code Permitted Values section.

Enforcement Action Code Permitted Values

The table below lists the enforcement action codes and their descriptions.

Code	Description
SF%	Civil Case concluded
SF&	Crim Case referred to AG
SF2	Referred for Higher St Level Review
SF3	Case appealed
SF4	Case dropped
SF5	Hook-up/Extension Ban
SF9	Civil Case referred to AG
SFG	Public Notif issued
SFH	Boil Water Order
SFJ	Formal NOV issued
SFK	BCA signed
SFL	AO (w/o penalty) issued
SFM	State - Admin Penalty assessed

Code	Description
SFN	Show-cause Hearing
SFO	AO (w/penalty) issued
SFP	Civil Case under development
SFQ	Civil Case filed
SFR	Consent Decree/Judgement
SFS	Default Judgement
SFT	Injunction
SFU	Temp Restrain Order/Prelim Injunc
SFV	Crim Case filed
SFW	Crim Case concluded
SIA	Violation/Reminder Notice
SIB	Compliance Meeting conducted
SIC	Tech Assistance Visit
SID	Site Visit (enforcement)
SIE	Public Notif requested
SIF	Public Notif received
SII	CCR Follow-up Notice
SO+	State Close Out Action No addtl Formal Action needed
SO0	No Longer Subject to Rule
SO6	Intentional no-action
SO7	Unresolved
SO8	Other
SOX	Compliance achieved
SOY	Variance/Exemption issued
SOZ	Turbidity Waiver issued
EF-	CFP Consent Order/Decree w/penalty
EF!	PAO issued
EF%	Civil Case concluded
EF&	Crim Case referred to DOJ
EF/	1431 (Emergency) Order
EF<	CFP issued
EF=	CFP Default Judgement
EF2	Referred for Higher Fed Level Review
EF9	Civil Case referred to DOJ
EFG	Public Notif issued
EFH	Boil Water Order
EFJ	Formal NOV issued
EFK	BCA signed
EFL	FAO issued
EFN	Show-cause Hearing
EFQ	Civil Case filed
EFR	Consent Decree/Judgement
EFS	Default Judgement
EFT	Injunction
EFU	Temp Restrain Order/Prelim Injunc
EFV	Crim Case filed
EFW	Crim Case concluded
EIA	Violation/Reminder Notice
EIB	Compliance Meeting conducted
EIC	Tech Assistance Visit

Code	Description
EID	Site Visit (enforcement)
EIE	Public Notif requested
EIF	Public Notif received
EII	CCR Follow-up Notice
EO+	No addtl Formal Action needed
EO0	No Longer Subject to Rule
EO6	Intentional no-action
EO7	Unresolved
EO8	Other
EOX	Compliance achieved
EOY	Variance/Exemption issued
EOZ	Turbidity Waiver issued
ESX	Implicit SWTR RTC
ETX	Implicit TCR RTC

Optional Data Elements

Element Name	XML Schema Tags	Comments	Permitted Values
ENFORCEMENT COMMENT	<ActionsDataFlow> <Enforcements> <EnforcementDetails> <EnforcementCommentText>		AN (2000)
ASSOCIATED J5000 GROUP	<ActionsDataFlow> <Enforcements> <EnforcementAssignments> <EnforcementAssignmentDetails> <EnforcementAssociationDetails> <AssociatedViolationCriteriaDetails>	This element is no longer used.	AN (0)
ASSOCIATED VIOLATION IDS (Y5000)	<ActionsDataFlow> <Enforcements> <EnforcementAssignments> <EnforcementAssignmentDetails> <EnforcementAssociationDetails> <AssociatedViolationIdentifier> <EnforcementDetails>	One or more Violation IDs that are associated to the Enforcement Action.	AN (12)