United States Environmental Protection Agency

Public Meeting and Webinar:
The Fourth Unregulated Contaminant Monitoring Rule (UCMR 4) Meeting Presentations

Held April 12, 2017
USEPA, Office of Ground Water and Drinking Water

Office of Water (MLK 140) EPA 815-A-17-001 April 2017

The Fourth Unregulated Contaminant Monitoring Rule (UCMR 4)

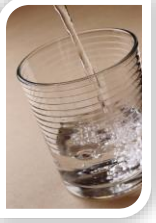
Public Meeting and Webinar

April 12, 2017

10:00 a.m. ET

USEPA

Office of Ground Water and Drinking Water



Welcome

Gregory Carroll, USEPA

General Meeting Information

- Purpose
  - Describe the requirements of EPA's UCMR 4 and provide a forum for public questions and discussion
- Schedule
  - Break for lunch at noon ET
  - Resume at 1:30 p.m. ET
  - 10 minute break at approximately 2:30 p.m. ET
- Public questions and discussion at the end of the meeting

Participating by Webinar

- Listen-only mode
- Click on "+" next to "Questions" in the control panel (Figure 1) to submit questions/comments
  - Type a question in the box; click send (Figure 2)
- Submit questions as soon as possible
  - Questions will be answered at the end of the presentations

Figure 1

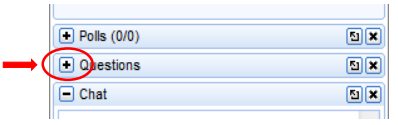
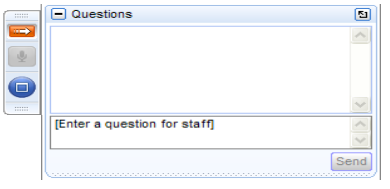


Figure 2



Agenda

10:00-10:10	Welcome, Introduction, Agenda	(10 minutes)
10:10-10:30	Overview of the UCMR Program	(20 minutes)
10:30-10:50	Overview of UCMR 4	(20 minutes)
10:50-11:40	UCMR 4 Sample Collection & Frequency	(50 minutes)
11:40-12:00	UCMR 4 Laboratory Approval Process and MRLs	(20 minutes)
	Q&A and Discussion – if presentations end early	(until lunch)
12:00-1:30	**Lunch Break**	**(90 minutes)**
1:30-2:30	SDWARS and Reporting Requirements	(60 minutes)
2:30-2:40	Risk Communication	(10 minutes)
2:40-2:50	Closing Remarks	(5 minutes)
2:50-3:00	**Break**	**(10 minutes)**
3:00-4:00	Q&A and Discussion	(60 minutes)

Overview of the UCMR Program

Gregory Carroll, USEPA

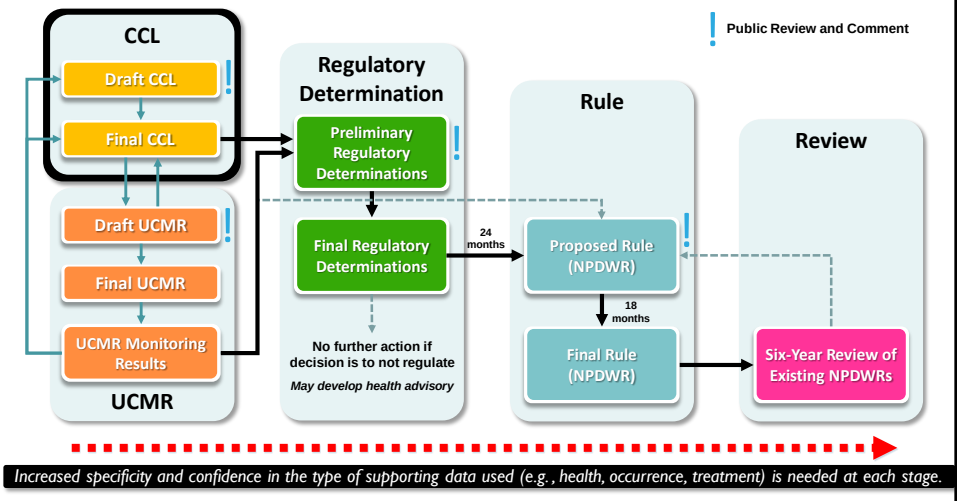
Overview

- Regulatory background for UCMR
  - SDWA authority
  - Relationships to:
    - Contaminant Candidate List (CCL)
    - Regulatory Determination
    - Six-Year Review
- UCMR
  - Objectives
  - Approach
  - Implementation

SDWA

- Passed in 1974, SDWA authorized EPA to set enforceable health standards for contaminants in drinking water
  - National Primary Drinking Water Regulations (NPDWRs)
- 1986 SDWA amendments were the basis for the original UCMR
  - State drinking water programs managed the original UCM program
  - PWSs serving > 500 people were required to monitor
- 1996 SDWA amendments changed the process of developing and reviewing NPDWRs
  - CCL
  - UCMR
  - Regulatory Determination
  - Six-Year Review

General Flow of SDWA Regulatory Processes

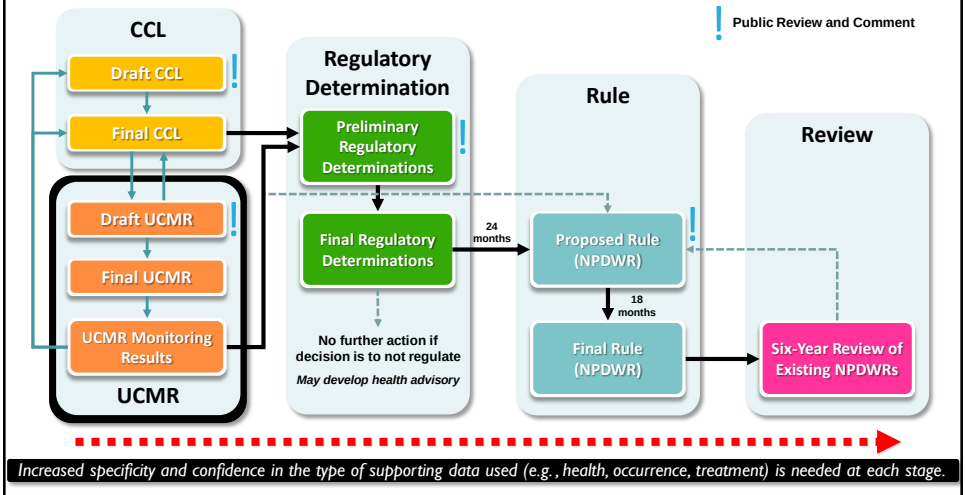


CCL

- List of priority unregulated contaminants
  - Published every five years
  - Known or anticipated to occur in public water systems (PWSs)
  - May require regulation under SDWA

The Final CCL 4 was published November 17, 2016 and included 97 chemicals or chemical groups and 12 microbes

General Flow of SDWA Regulatory Processes



UCMR

- SDWA section 1445(a)(2), established requirements for the UCMR Program:
  - Issue list of no more than 30 unregulated contaminants, once every 5 years
  - Require PWSs serving population >10,000 people as well as a nationally representative sample of PWSs serving ≤10,000 people to monitor
  - Store analytical results in the National Contaminant Occurrence Database for Drinking Water (NCOD)
  - EPA funds shipping/analytical costs for small PWSs
- EPA manages program in partnership with states

UCMR History

- UCMR 1 (2001-2005, 26 contaminants)
- UCMR 2 (2007-2011, 25 contaminants)
- UCMR 3 (2012-2016, 30 contaminants)
- UCMR 4 (2017-2021, 30 contaminants)
  - Published in the FR on December 20, 2016
  - PWSs monitor 2018-2020

Each new UCMR cycle is established via a revision to the rule for the ongoing/preceding cycle.

Objective of UCMR Program

- Collect nationally representative occurrence data for unregulated contaminants that may require regulation under the SDWA
  - Consider data collected as part of future EPA decisions on actions to protect public health
  - Provide data to States, local governments and to the public for their use in decisions regarding public health protection.

National occurrence data publically available:
http://www.epa.gov/dwucmr/occurrence-data-unregulated-contaminant-monitoring-rule

UCMR Approach

- UCMR approach relies on using one or more of 3 monitoring tiers
  - Assessment Monitoring (List 1)
  - Screening Survey (List 2)
  - Pre-Screen Testing (List 3)
- Based on:
  - Availability and complexity of analytical methods
  - Laboratory capacity
  - Sampling frequency
  - Relevant universe of PWSs
  - Other considerations (e.g., cost/burden)

Typical UCMR System Applicability

	System Type	Systems Serving > 10,000	Systems Serving ≤ 10,000
Assessment Monitoring (List 1 Contaminants)	CWS & NTNCWS	All systems	800 randomly selected systems
Screening Survey (List 2 Contaminants)	CWS & NTNCWS	All systems serving more than 100,000, and 320 randomly selected systems serving 10,001 to 100,000	480 randomly selected systems
Pre-Screen Testing (List 3 Contaminants)	May be conducted by a limited number of PWSs		

NOTE: UCMR 4 only includes Assessment Monitoring for List 1 Contaminants

General Process for Developing UCMR

- Early public stakeholder meetings
  - Discuss method development for emerging contaminants
  - Discuss anticipated elements of the proposal
- Agency development of the proposal
  - Includes a workgroup of multi-state and multi-office representatives, and tribal consultation
- Proposal publication in the Federal Register (FR)
  - Provides a 60-day public comment period
- Post-proposal public stakeholder meeting
- Final rule publication in the FR
- Post final-rule public stakeholder meeting
  - Review final rule and prepare for implementation

EPA Implementation Roles

- Review, track and determine PWS applicability and monitor progress
- Coordinate Laboratory Approval Program
- Provide technical support to Regions, states, PWSs and laboratories
- Coordinate outreach
- Assist and support Regional compliance efforts

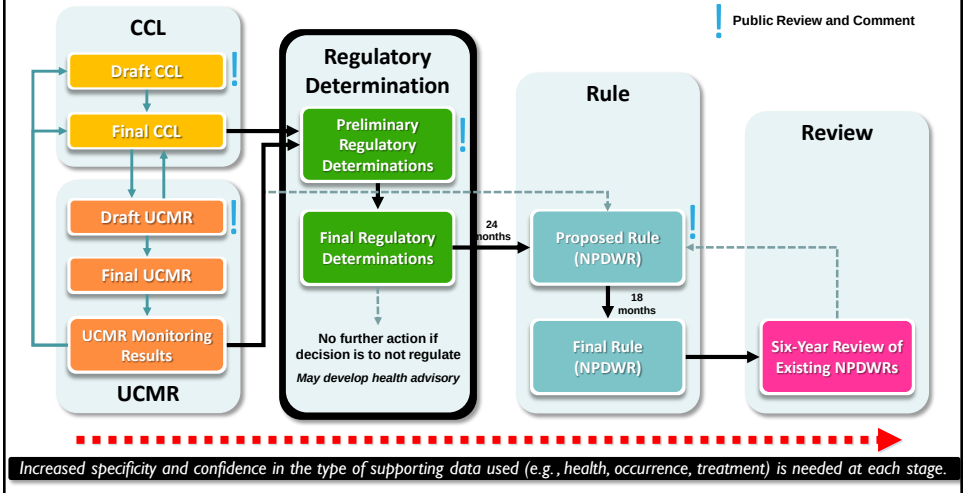
EPA Implementation Roles

- Small PWS support:
  - Fund small system testing including: kits, sample analysis and shipping
  - Manage sample kit distribution
  - Maintain lab and implementation contracts to support UCMR
  - Conduct data review
- Large and small PWS support:
  - Manage SDWARS reporting system and support users
- Posts data to NCOD

States' Role in the UCMR Program

- Participation by states, tribes and territories (herein after referred to as "States") is voluntary
- State roles are documented via Partnership Agreements (PAs)
- States help EPA implement the UCMR program; help to ensure high data quality
- PA activities can include any/all of the following:
  - Review and revise state monitoring plans (SMPs)
  - Provide inventory for small and large systems
  - Review and approve proposed ground water representative monitoring plans (GWRMPs)
  - Provide compliance assistance
  - Notify and instruct systems
  - Collect samples
  - Other

General Flow of SDWA Regulatory Processes

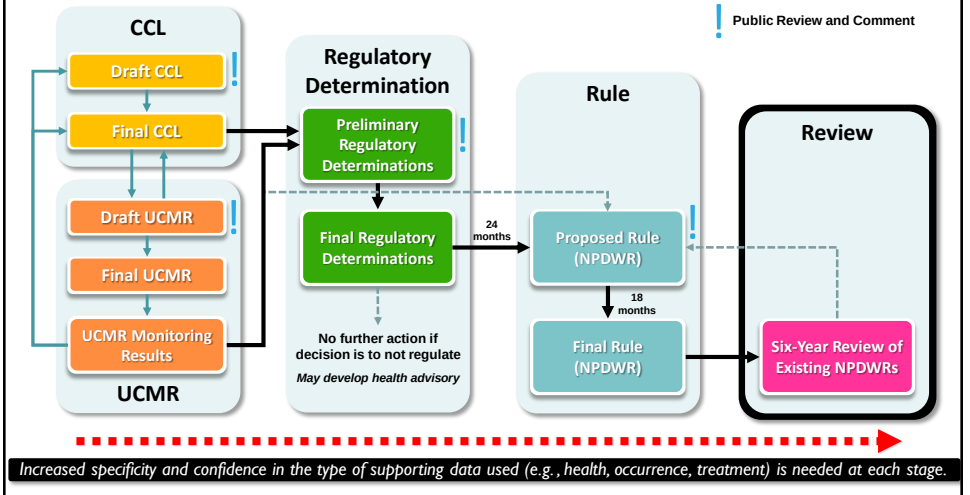


Regulatory Determinations

- Every five years, the Administrator shall, after notice of the preliminary determination and opportunity for public comment, for not fewer than five contaminants included on the CCL, make determinations on whether or not to regulate such contaminants.
- SDWA requires EPA to publish a maximum contaminant level goal (MCLG) and promulgate an NPDWR for a contaminant if the Administrator determines that:
  1. The contaminant may have an **adverse effect** on the health of persons;
  2. The contaminant is **known to occur or there is substantial likelihood** that the contaminant will occur in public water systems with a frequency and at levels of public health concern; **and**
  3. In the sole judgment of the Administrator, regulation of such contaminant presents a meaningful opportunity for health risk reduction for persons served by public water systems.

**SDWA Section 1412(b)(1)*

General Flow of SDWA Regulatory Processes



Six-Year Review

- Reviews existing NPDWRs and determines if a revision is appropriate
  - Includes the re-evaluation of exposure to regulated contaminants based on their health effects and occurrence in drinking water
  - Includes the evaluation of exposure to unregulated contaminants connected to regulated contaminants
- Any revisions to existing NPDWRs must maintain protection or provide for greater health protection
- Made every six years

Overview of UCMR 4

Brenda Parris, USEPA

Overview

- Applicability
- Timeline
- Contaminants to be monitored, methods, MRLs, health information

General UCMR 4 Applicability

- All large CWSs and NTNCWSs serving more than 10,000
- Nationally representative sample of small CWSs and NTNCWSs
- TNCWSs are not required to monitor

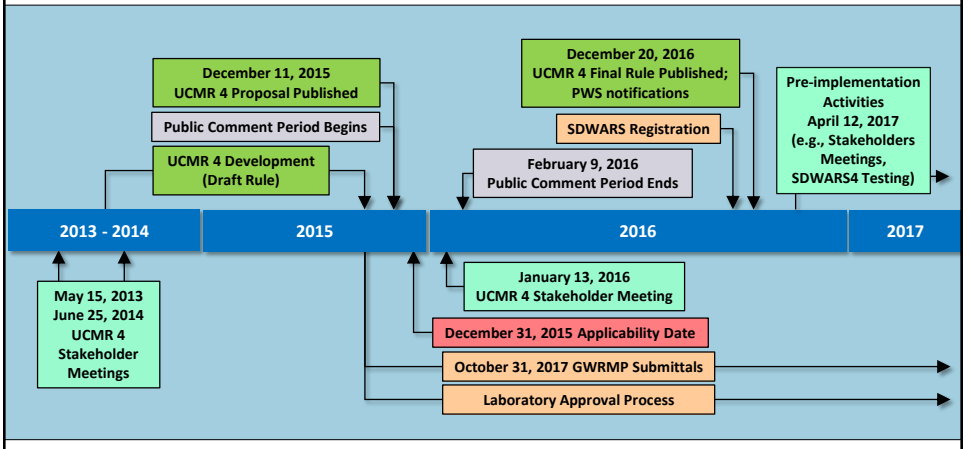
UCMR 4 Applicability to PWSs: Assessment Monitoring Design (List 1)

System Size (# of people served)	10 Cyanotoxins	20 Additional Chemicals*	Total # of Systems per Size Category
Small systems (25 – 10,000)	800 randomly selected SW or GWUDI systems	800 randomly selected SW, GWUDI and GW systems	1,600
Large systems** (10,001 and over)	All SW or GWUDI systems (1,987)	All SW, GWUDI and GW systems (4,292)	4,292
TOTAL	2,787	5,092	5,892

*Only systems subject to the Disinfectants and Disinfection Byproduct Rule (D/DBPR) need to monitor for the haloacetic acids (HAAs) and indicators

** Figures subject to change based on corrections to population served as of 12/31/15

Timeline of UCMR 4 Activities



Timeline of UCMR 4 Implementation

2017	2018	2019	2020	2021
Pre-monitoring Implementation • Continuation of Lab Approval • PWS SDWARS registration/notification/Inventory • PAs, SMPs, SSIs, LSIs • GWRMP submittal • Outreach/trainings	**Assessment Monitoring List 1 Contaminants** **Implementation Activities** • Assist PWSs with compliance • Implement small system monitoring • Post data quarterly to NCOD **Reporting and analysis of data** • All large systems serving more than 10,000 people; • 800 SW and GWUDI small systems serving 10,000 or fewer people for cyanotoxins; • 800 small systems serving 10,000 or fewer people for the 20 additional contaminants.			**Post-monitoring Phase** • Complete resampling • Conclude data reporting • Finalize NCOD • Continued enforcement

Contaminants to be Monitored

Cyanotoxins

EPA Method 544 (LC/MS/MS[1])

Analyte	CAS Registry Number	MRL[2]	EPA HA[3]
microcystin-LA	96180-79-9	0.008 µg/L	1.6 µg/L (ten-day HA for school-age children and adults); 0.3 µg/L (ten-day HA for bottle-fed infants and young children)
microcystin-LF	154037-70-4	0.006 µg/L	
microcystin-LR	101043-37-2	0.02 µg/L	
microcystin-LY	123304-10-9	0.009 µg/L	
microcystin-RR	111755-37-4	0.006 µg/L	
microcystin-YR	101064-48-6	0.02 µg/L	
nodularin	118399-22-7	0.005 µg/L	

EPA Method 546 (Adda-ELISA)[4]

Total Microcystins	N/A	0.3 µg/L	EPA HA applies

[1]Liquid Chromatography/Tandem Mass Spectrometry
[2] Minimum Reporting Level
[3] Health Advisory from the Office of Water
[4](2S,3S,8S,9S,4E,6E)-3-amino-9-methoxy-2,6,8-trimethyl-10-phenyl-4,6-decadienoic acid enzyme-linked immunosorbent assay

Cyanotoxins

EPA Method 545 (LC/ESI-MS/MS[1])

Analyte	CAS Registry Number	MRL[2]	EPA HA[3]
anatoxin-a	64285-06-9	0.03 µg/L	
cylindrospermopsin	143545-90-8	0.09 µg/L	3 µg/L (ten-day HA for school-age children through adults); 0.7 µg/L (ten-day HA for bottle-fed infants and young children)

[1]Liquid Chromatography Electrospray Ionization-Tandem Mass Spectrometry
[2]Minimum Reporting Level
[3]Health Advisory from the Office of Water

Haloacetic Acids (HAAs)

EPA Method 552.3 (GC-ECD)[1] or EPA Method 557 (IC-ESI-MS/MS)[2]

Analyte	CAS Registry Number	MRL[3]	MCLG[4]	HAA5 Group	HAA6Br Group	HAA9[7] Group
dichloroacetic acid (DCAA)	79-43-6	0.2 µg/L	0 µg/L	HAA5 Group MCL[5,6] = 60 µg/L		HAA9
monochloroacetic acid (MCAA)	79-11-8	2.0 µg/L	70 µg/L			
trichloroacetic acid (TCAA)	76-03-9	0.5 µg/L	20 µg/L			
monobromoacetic acid (MBAA)	79-08-3	0.3 µg/L	N/A		HAA6Br	
dibromoacetic acid (DBAA)	631-64-1	0.3 µg/L	N/A			
bromochloroacetic acid (BCAA)	5589-96-8	0.3 µg/L	N/A			
bromodichloroacetic acid (BDCAA)	71133-14-7	0.5 µg/L	N/A			
chlorodibromoacetic acid (CDBAA)	5278-95-5	0.3 µg/L	N/A			
tribromoacetic acid (TBAA)	75-96-7	2.0 µg/L	N/A			

[1]Gas Chromatography with Electron Capture Detection
[2]Ion Chromatography Electrospray Ionization Tandem Mass Spectrometry
[3]Minimum Reporting Level
[4]Maximium Contaminant Level Goals (MCLGs) established under the D/DBPRs
[5]Disinfection Byproduct Information Collection Rule (DBP ICR) (1997-1998)
[6]The HAA5 group is currently regulated in drinking water at a MCL of 60 µg/L per D/DBPRs
[7]PWSs are required to monitor for the indicators total organic carbon (TOC) and bromide in their source water at the same time as their HAA samples. Consecutive connections are not required to take TOC and bromide samples.

Sampling Locations – HAA Groups

- PWS HAA results will be reported for three groups (HAA5, HAA6Br and HAA9)
  - Resample only locations that did not produce valid results for all analytes
    - All HAAs must pass QC for summation

HAA Groups			
dichloroacetic acid (DCAA)	HAA5 (MCL 0.060 mg/L)		HAA9
monochloroacetic acid (MCAA)			
trichloroacetic acid (TCAA)			
monobromoacetic acid (MBAA)		HAA6Br	
dibromoacetic acid (DBAA)			
bromochloroacetic acid (BCAA)			
bromodichloroacetic acid (BDCAA)			
chlorodibromoacetic acid (CDBAA)			
tribromoacetic acid (TBAA)			

HAA Indicators

- TOC, bromide measured in conjunction with HAA monitoring
- Use the following methods:
  - **TOC:** SM 5310B, SM 5310C, SM 5310D, SM 5310B–00, SM 5310C–00, SM, 5310D–00, EPA Method 415.3 (Rev. 1.1 or 1.2)
  - **Bromide:** EPA Methods 300.0 (Rev. 2.1), 300.1 (Rev. 1.0), 317.0 (Rev. 2.0), 326.0 (Rev. 1.0), ASTM D 6581–12

Metals

EPA Method 200.8[1] (ICP-MS[2])

Analyte	CAS Registry Number	MRL[3]	CCL 4 HRL[4]
germanium	7440-56-4	0.3 µg/L	
manganese	7439-96-5	0.4 µg/L	300 µg/L

[1] Metals can also be measured by alternate Standard Methods (SM) 3125 or SM 3125-09 or ASTM International D5673-10
[2] Inductively Coupled Plasma-Mass Spectrometry
[3]Minimum Reporting Level
[4] Health Reference Level

Pesticides

EPA Method 525.3 (SPE GC/MS[1])

Analyte	CAS Registry Number	MRL[2]	Health Effects
alpha-hexachlorocyclohexane	319-84-6	0.01 µg/L	**CCL 4 HRL[3]:** 0.006 µg/L
chlorpyrifos	2921-88-2	0.03 µg/L	**EPA HA[4]:** 2 µg/L
dimethipin	55290-64-7	0.2 µg/L	**HHBP[5]:** 140 µg/L
ethoprop	13194-48-4	0.03 µg/L	**HHBP[5]**: 1.14 µg/L
oxyfluorfen	42874-03-3	0.05 µg/L	**HHBP[5]**: 200 µg/L
profenofos	41198-08-7	0.3 µg/L	**HHBP[5]**: 0.3 µg/L[6]
tebuconazole	107534-96-3	0.2 µg/L	**HHBP[5]**: 190 µg/L
total permethrin (cis- & trans-)	52645-53-1	0.04 µg/L	**HHBP[5]**: 3.34 µg/L
tribufos	78-48-8	0.07 µg/L	**HHBP[5]**: 0.6 µg/L

[1]Solid Phase Extraction and Capillary Column Gas Chromatography-Mass Spectrometry
[2]Minimum Reporting Level
[3]Health Reference Level
[4]Office of Water Health Advisory
[5]Human Health Benchmark for Pesticides (HHBP)

Alcohols

EPA Method 541 (GC/MS[1])

Analyte	CAS Registry Number	MRL[2]	CCL 4 HRL[3]
1-butanol	71-36-3	2.0 µg/L	700 µg/L
2-propen-1-ol	109-86-4	0.4 µg/L	35 µg/L
2-methoxyethanol	107-18-6	0.5 µg/L	

[1]Gas Chromatography-Mass Spectrometry
[2]Minium Reporting Level
[3]Health Reference Level

Semivolatile Organic Chemicals

EPA Method 530 (GC/MS[1])

Analyte	CAS Registry Number	MRL	CCL 4 HRL[2]
butylated hydroxyanisole	25013-16-5	0.03 µg/L	
o-toluidine	95-53-4	0.007 µg/L	0.194 µg/L
quinoline	91-22-5	0.02 µg/L	0.01 µg/L

[1]Gas Chromatography-Mass Spectrometry
[2] Minimum Reporting Level
[3]Health Reference Level

UCMR 4
Sample Collection & Frequency

Brenda Parris, USEPA

Overview

- Sampling frequency and timing
- Sampling locations, approach
  - Phased sample-analysis for microcystins
  - Haloacetic acid (HAA) groups
  - HAA indicators
- Representative sampling
  - Ground water representative monitoring plans (GWRMPs)
  - Schedules

Sampling Frequency and Timing

Contaminant Type	Water Source	Time Frame	Frequency
List 1 Contaminants - **Cyanotoxins**	SW or GWUDI	March – November*	Systems must monitor twice a month for 4 consecutive months (total of 8 sampling events) Sample events must occur two weeks apart
List 1 Contaminants – **Additional Chemicals**	SW or GWUDI	Year-Round	Systems must monitor 4 times during a consecutive 12-month monitoring period Sample events must occur 3 months apart
	GW		Systems must monitor 2 times during a consecutive 12-month monitoring period Sample events must occur 5-7 months apart

*Reflects the warmer months when harmful algal blooms are more likely to occur

Example of Sampling Frequency – Cyanotoxins

Contaminant Type	Water Source	Time Frame	Frequency Examples
List 1 Contaminants - **Cyanotoxins**	SW or GWUDI	March – November*	1st & 2nd samples are collected in July (weeks 1 and 3) 3rd & 4th samples are collected in August (weeks 1 and 3) 5th & 6th samples are collected in September (weeks 1 and 3) 7th & 8th samples are collected in October (weeks 1 and 3)

- Reflects the warmer months when harmful algal blooms are more likely to occur
- The Safe Drinking Water Accession and Review System (SDWARS 4) will be prepopulated with the 1st & 3rd week or the 2nd & 4th week. No samples will be scheduled for the 5th week
- Because of the monitoring frequency, resampling may not be practical. Suggest collecting duplicate samples

Example of Sampling Frequency – Additional Contaminants

Contaminant Type	Water Source	Time Frame	Frequency Examples
List 1 Contaminants – **Additional Chemicals**	SW or GWUDI	Year-Round	If the first sample is taken in January, the second must occur any time in April, the third any time in July and the fourth any time in October
	GW		If the first sample is taken in April, the second sample must occur anytime in September, October or November

Sampling Locations

- HAA Groups and Indicators
  - HAAs: D/DBPR **TTHM/HAA5** distribution system(DS) locations
  - Indicators: source water (SR) influent locations representing untreated water
- Cyanotoxins & Remaining UCMR 4 contaminants
  - Entry point to the distribution system (EPTDS) after treatment is applied

Sampling Locations – Cyanotoxins

Three samples collected at the EPTDS for cyanotoxins (two for potential microcystin analysis and one for cylindrospermopsin/anatoxin).

- One sample analyzed for total microcystins by EPA Method 546 (Adda ELISA)
- One sample analyzed for cylindrospermopsin and anatoxin-a using EPA Method 545

EPA Method 546 result evaluated (minimum reporting level for total microcystins = 0.3 µg/L)

- ELISA result <0.3 µg/L → EPTDS result reported to EPA and the 544 sample will not be analyzed for this particular sampling event
- ELISA result ≥0.3 µg/L → EPTDS result will be reported to EPA and the other microcystin sample must be analyzed using Method 544 to identify particular microcystin congeners

Sampling Locations – HAA Groups

Contaminant/ Disinfectant	Coverage		Stage 2 DBPR
	Source Water	Population	Total Distribution System Monitoring Locations
TTHM/ HAA5	SW and GWUDI (Subpart H)	< 500	2
		500 - 3,300	2
		3,301 - 9,999	
		10,000 - 49,000	4
		50,000 - 249,999	8
		250,000 - 999,999	12
		1,000,000 - 4,999,999	16
		≥ 5,000,000	20
	Ground water	< 500	2
		500-9,999	
		10,000-99,999	4
		100,000-499,999	6
		≥ 500,000	8

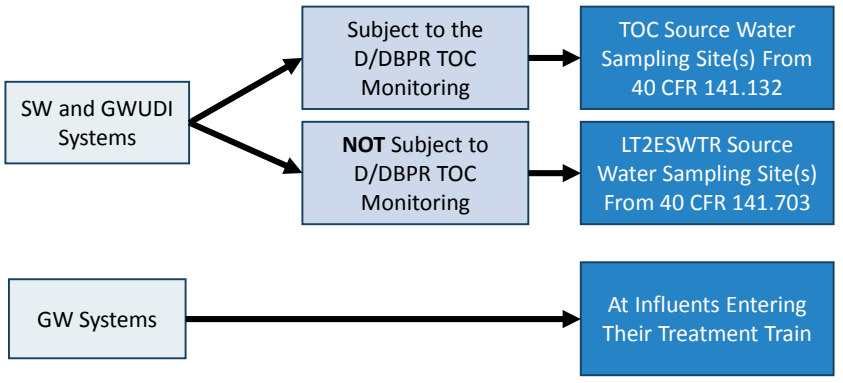
HAA Sampling Locations, Approach

- UCMR 4 HAA/indicator samples and D/DBPR compliance samples can be collected at the same time
- Input inventory into SDWARS based on current D/DBPR monitoring requirements and status (routine or reduced)
  - PWSs can change their sampling schedules in SDWARS or request a change after December 31, 2017 at UCMR_Sampling_Coordinator@epa.gov
- The inventory used for your first sampling event must be used for subsequent sampling events
- Systems on a reduced frequency D/DBPR monitoring status must comply with the UCMR 4 frequency requirements
- Need to send UCMR 4 and D/DBPR samples to different labs for analysis UNLESS:
  - A UCMR 4 approved laboratory is also certified to analyze compliance samples (using EPA Method 552.3 or 557) in your state

HAA Indicator Sampling Locations, Approach

- Sample for TOC and bromide at:
  - Source water influent locations representing untreated water entering the water treatment plant (i.e., a location prior to any treatment)
  - The same time as HAA samples (or as close as is feasible)
  - Entry points associated with 100% purchased water (consecutive connections) do not need to be sampled for TOC and bromide

TOC and Bromide Monitoring



TOC and Bromide Sampling Locations

- SW and GWUDI (Subpart H systems) subject to D/DBPR TOC sampling requirements
  - Using conventional filtration
  - NOT using conventional filtration but taking TOC source samples to reduce their D/DBPR monitoring
- Take UCMR 4 indicator samples at D/DBPR source water TOC locations:
  - Prior to any treatment
  - 1 sample per surface water source

TOC and Bromide Sampling Locations

- SW and GWUDI (Subpart H systems) not subject to D/DBPR TOC sampling requirements
  - Not using conventional filtration/or trying to reduce D/DBPR monitoring requirements
- Take UCMR 4 indicator samples at LT2 source water locations:
  - For each plant at a point prior to chemical treatment

TOC and Bromide Sampling Locations

- GW Systems not subject to D/DBPR TOC sampling requirements
- Take UCMR 4 indicator samples at ALL influents entering treatment train
  - Can use combined taps prior to treatment
  - If have an approved GWRMP only need to take indicator samples representing those EPs
  - Only take indicator samples from active wells at time of collection
    - Add a comment in SDWARS for the non-active locations

Sampling Reminders

- Follow the instructions in the kit
- Complete the sample tracking form for each kit
- Freeze ice packs ahead of time
- Sample Monday through Wednesday or when the laboratory designates
- Fill bottles completely but do not overfill
- Tightly secure the caps to the correct bottles
- Record the data elements for SDWARS

Representative Monitoring

Ground Water Representative Monitoring Plans (GWRMPs)

and

Representative Connections

Two Types of Representative Sampling

- Ground Water Representative Monitoring Plans (GWRMPs) - large ground water systems with multiple EPTDSs can sample at representative sampling locations rather than at each EPTDS if prior approval is received
  - Representative sampling plans approved under prior UCMRs will be recognized, a copy of the approval from their state or EPA must be submitted to the UCMR_Sampling_Coordinator@epa.gov
- Representative Connections - systems that purchase water with multiple connections from the same wholesaler may select one representative connection from that wholesaler

GWRMPs

- Systems can submit a GWRMP if:
  - Ground water as a source
  - All of their well sources have either the same treatment or no treatment
  - Multiple EPTDSs from the same source
- Submit documentation to support your proposal that the specified wells are representative of other wells
- Must demonstrate that the representative EPTDS:
  - Draws from the same aquifer as the wells it will represent
  - Is representative of the highest annual volume producing and most consistently active wells in the representative array
  - Will be in use at the scheduled sampling time

GWRMPs

- Must submit the following information for each proposed representative sampling location:
  - PWSID Code
  - PWS Name
  - PWS Facility Identification Code
  - PWS Facility Name
  - PWS Facility Type
  - Sampling Point Identification Code
  - Sampling Point Name

Representative Sampling

- New or previously approved GWRMPs must be submitted to the UCMR_Sampling_Coordinator@epa.gov by:
  - October 31, 2017
  - Note: the original deadline of April 19, 2017 was extended
- All approved representative locations must be loaded into SDWARS by PWS no later than:
  - December 31, 2017

UCMR 4 Laboratory Approval Process and MRLs

Brenda Parris, USEPA

UCMR 4 Laboratory Approval Program

- Laboratory Approval Program started on December 11, 2015 with the publication of the proposal
- Similar to the process used in all previous UCMR cycles
- Only UCMR 4 EPA-approved laboratories can analyze UCMR 4 samples collected at PWSs
  - Approval is by method and by individual laboratory locations
  - A laboratory may apply for approval for any method
- Laboratories need to meet:
  - UCMR 4 approval program criteria
  - Required equipment criteria
  - Laboratory performance criteria
  - Data reporting criteria

UCMR 4 Laboratory Approval Manual

- Procedures for obtaining UCMR 4 approval and procedures for revocation of approval
- Quality assurance (QA) and quality management requirements
- Initial demonstration of capability (IDC)
- Minimum reporting level (MRL) verification

UCMR 4 Laboratory Approval Manual

- Quality control (QC) requirements:
  - Extraction/Analysis Batch
  - Initial calibration of analytical instruments
  - Continuing calibration checks (CCC)
  - Surrogate and internal standard
  - Laboratory reagent blanks (LRB) and laboratory fortified blanks (LFB)
  - Quality control samples (QCS)
  - Laboratory fortified sample matrix (LFSM)
- Sample handling requirements
- Uploading data to SDWARS

Laboratory Approval General Procedure

- Step 1: Request to Participate
- Step 2: Registration
- Step 3: Application Package
- Step 4: EPA Review of Application Package
- Step 5: Proficiency Testing (PT)
- Step 6: Written EPA approval

Step 1 – Request to Participate

- Interested laboratories submitted a written request to the UCMR_Sampling_Coordinator@epa.gov
- EPA then provided:
  - Registration material
  - Customized application package

Step 2 – Registration

- Completed registration sheet included:
  - List of the UCMR 4 methods, for which the laboratory sought approval
  - Laboratory information
  - Mailing and shipping address
  - Contact information
- Registration closed **February 21, 2017** (except TOC and bromide)
  - Laboratories (including PWS labs) that only wish to analyze TOC and/or bromide may apply for approval through **December 1, 2017**
  - These PWS laboratories must complete registration and submit documentation that they are authorized by their primacy state to analyze TOC and/or bromide compliance monitoring samples under the Stage 2 Disinfectants and Disinfection Byproducts Rule by **December 15, 2017.**

Step 3 – Application Package

- Separate application for each method
- Application must include:
  - Proof of current drinking water laboratory certification (for select compliance monitoring methods)
  - Personnel information
  - QA information
  - Information regarding analytical equipment and sample handling procedures
  - Data submission for each method (e.g., IDC study, QC sample results, quantification reports)
  - Confirmation on reporting to SDWARS
- Must complete and submit the general application materials by **April 19, 2017** (one week from today)

Step 4 – Review of Application Package

- EPA reviews application package
  - If deficiencies are identified the lab will have an opportunity to make corrective actions and submit new application information
  - If all requested information is present and acceptable, EPA will notify the laboratory that they are eligible to participate in corresponding PT studies

Step 5 – Proficiency Testing

- EPA provides method-specific PT samples
- Laboratories:
  - Analyze PT sample(s) for each analyte and method
  - One successful PT per method
  - No PT studies after monitoring begins but audits on-going during monitoring

Step 6 – Written EPA Approval

- After successful participation in a PT study for a specific method, EPA will notify the laboratory in writing
- EPA will post a list of approved laboratories and associated methods at: https://www.epa.gov/dwucmr

Maintaining Approval

- Adhere to QA/QC measures in the methods, rule language and the UCMR 4 Laboratory Approval Manual
- Post analytical results and required QC data via SDWARS within 120 days of sample collection
- Successfully address audit findings (as needed) and meet all the other stated conditions

MRL Background

- MRL is an estimate of the quantitation level, achievable with a 95% confidence, by at least 75% of laboratories nationwide
- Established by EPA with data from several laboratories performing LCMRL studies
- LCMRL – estimate of lowest concentration at which measurements of specified quality can be repeatedly made
  - Simultaneous application of precision and accuracy

MRLs

- Established to achieve quality and consistency across laboratories, while allowing for reasonable national laboratory capacity
- MRLs are generally established as low as is feasible; typically lower than current HRLs and health advisories
- EPA will consider raising MRLs if there is evidence that an MRL is unattainable/impractical

Lunch

12:00 to 1:30

SDWARS & Reporting Requirements

Melissa Simic, EPA

Overview

- Central Data Exchange (CDX) account
  - Customer retrieval keys (CRKs)
- Large System Workflow
  - Notification letter and tracking
  - Update contact/inventory/schedule
- Reporting requirements and data elements

CDX

- EPA will again be using an internet-based electronic reporting system that utilizes a secure access portal, the CDX, to gain access to SDWARS
  - https://cdx.epa.gov/
  - https://www.epa.gov/dwucmr/reporting-requirements-fourth-unregulated-contaminant-monitoring-rule-ucmr-4

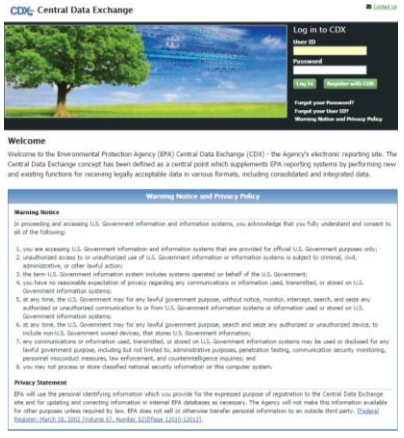
CDX

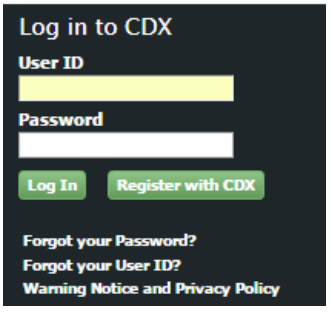
- To register to use the CDX:
  - Go to http://cdx.epa.gov/preregistration/
  - Enter the customer retrieval key (CRK) you received by mail
    - All large (that did not pre-register) and small systems should have received a CRK; if you lost/did not receive a CRK, please contact the UCMR_Sampling_Coordinator@epa.gov
    - Labs will receive CRKs upon UCMR 4 approval
  - Follow the directions to complete registration
- We recommend you do this as soon as possible

SDWARS Large System Workflow

1. Log in to CDX UCMR 4 (applies to small systems)
2. Select SDWARS4 and accept notification letter (applies to small systems)
3. Add official and technical contacts
4. Add inventory
5. Review/edit inventory
6. Review sampling schedule
7. Add zip codes
8. Nominate user for your PWS (optional)

Step 1: Log in to CDX UCMR 4



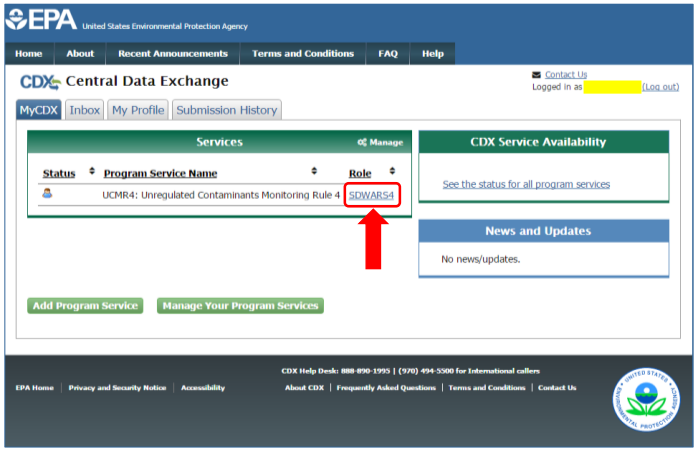


https://cdx.epa.gov/

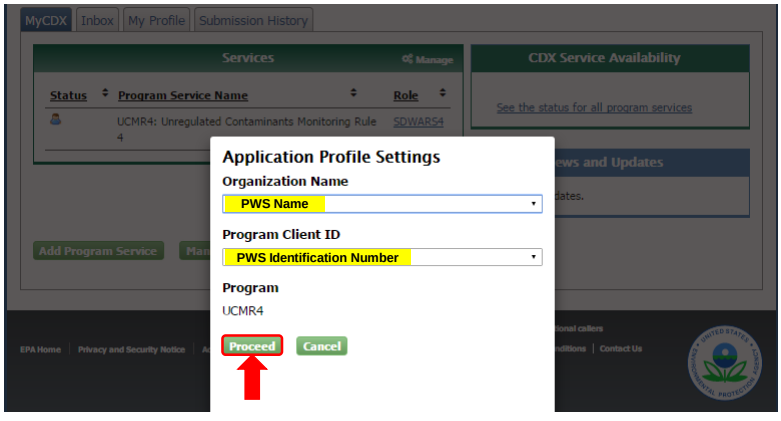
Step 2: Select SDWARS4 and Accept Notification Letter

- Applies to large and small systems
- To view and accept your notification letter you must log in to SDWARS4
- Status of acceptance of notification is tracked in SDWARS4

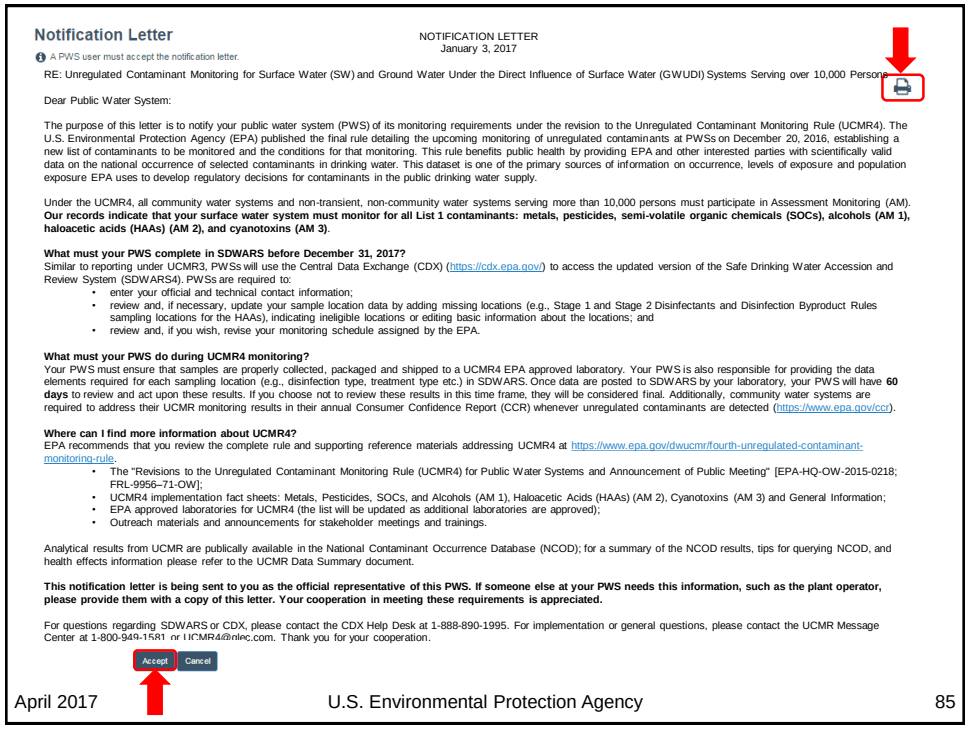
Step 2a: Select SDWARS4



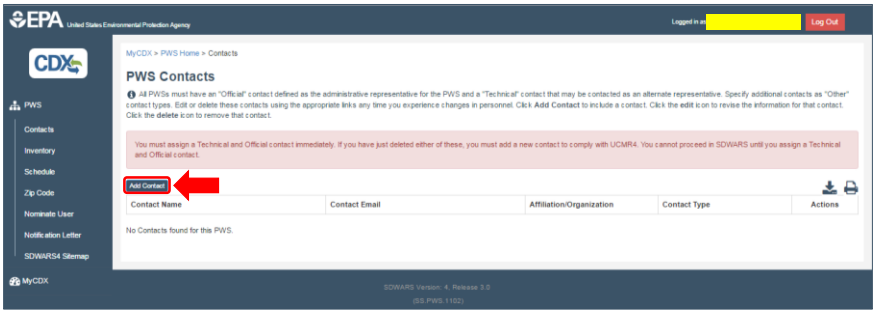
Step 2b: Application Profile Settings



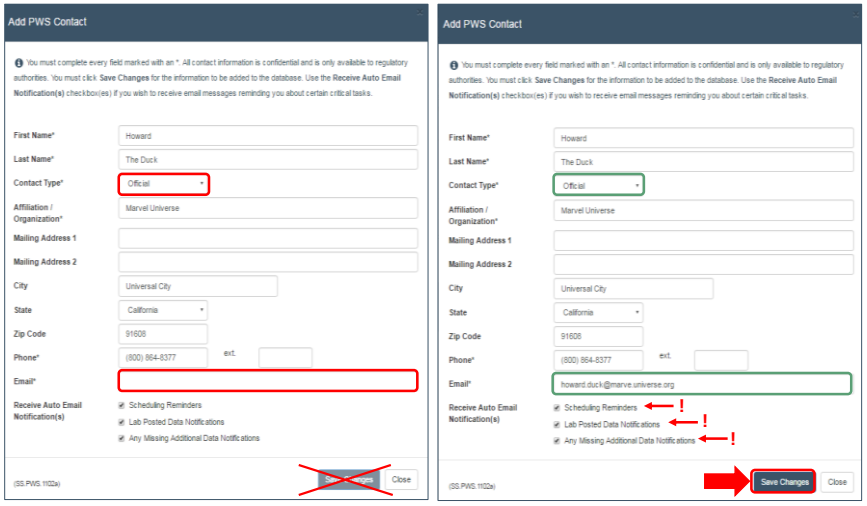
Once logged-in your personal PWS ID and name will appear in those sections, which are marked in yellow above. Click “Proceed” to view Notification Letter.



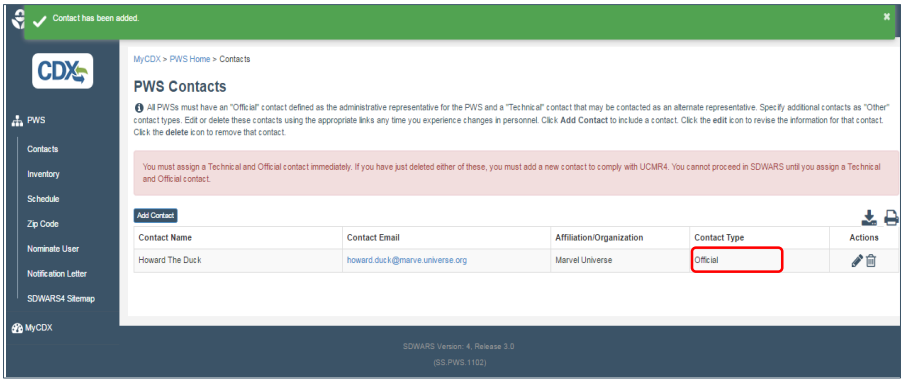
Step 3: Add Contacts



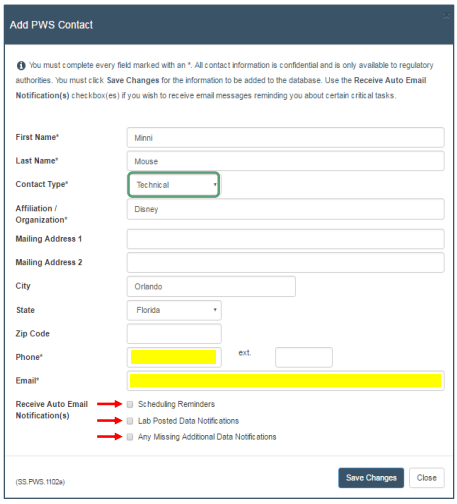
Step 3a: Add Official Contact



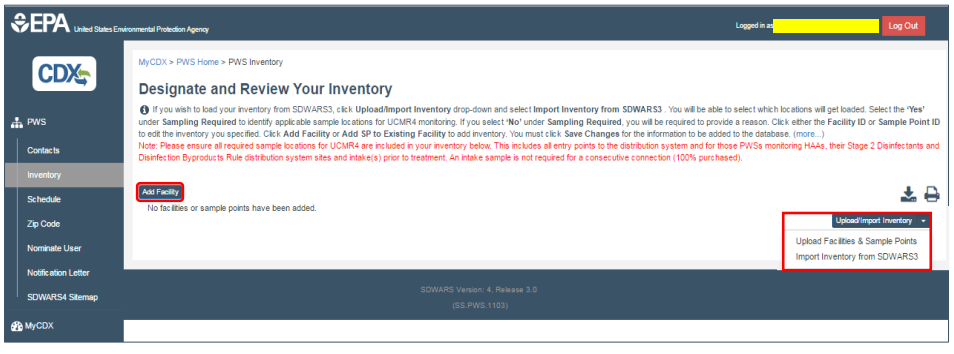
Step 3b: Confirm Official Contact



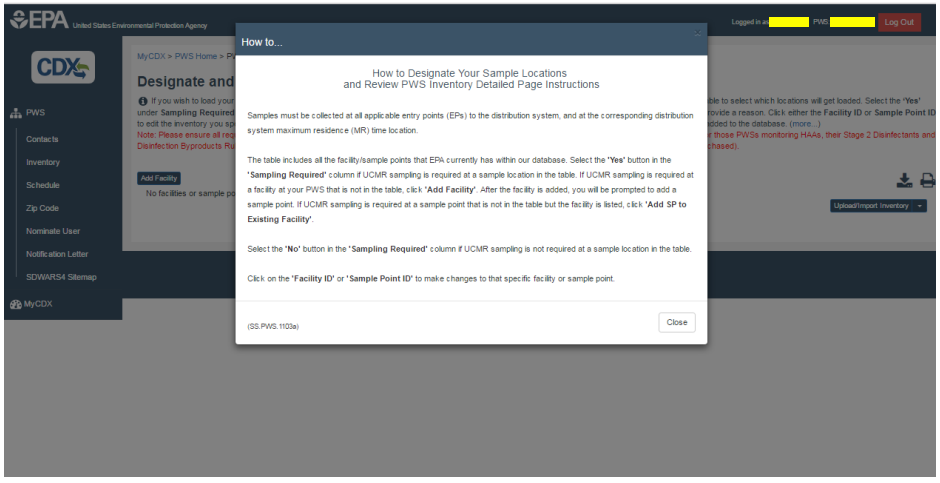
Step 3c: Add Technical Contact



Step 4: Add Inventory



Step 4: Add Inventory



Step 4: Add Inventory

- Inventory can be:
  - Typed in manually (Figure 1)
    OR
  - Uploaded by creating a text file (Figure 2)

Figure 1

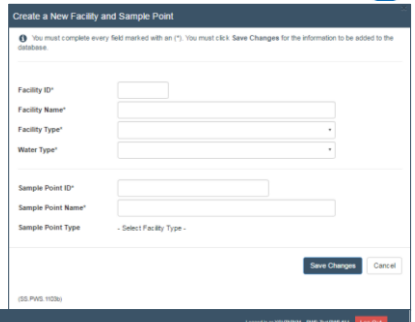
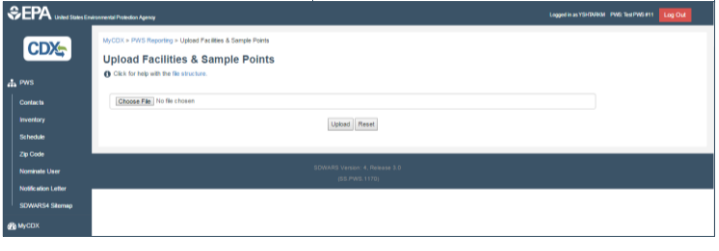
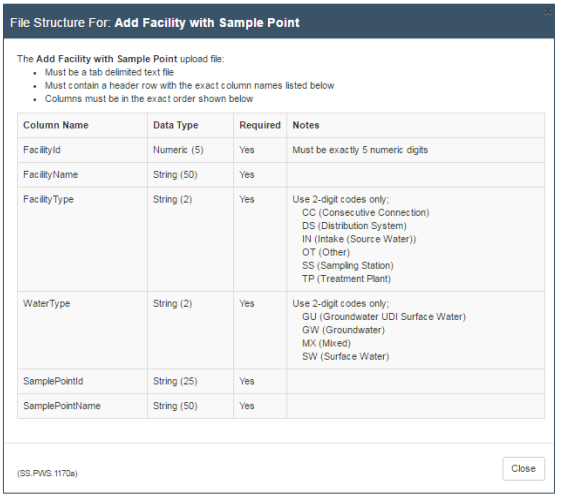


Figure 2



Step 4: Add Inventory

- Create a file for a bulk upload using the following format
- If subject to the D/DBPRs include your D/DBPR distribution and source water locations for the HAA monitoring



File Structure For: **Add Facility with Sample Point**

The **Add Facility with Sample Point** upload file:

- Must be a tab delimited text file
- Must contain a header row with the exact column names listed below
- Columns must be in the exact order shown below

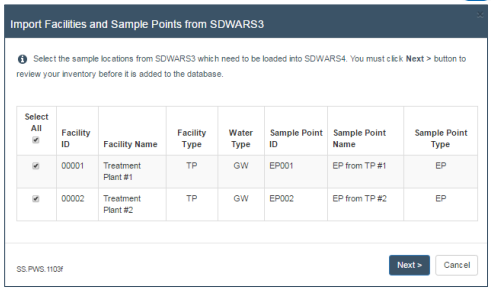
Column Name	Data Type	Required	Notes
FacilityId	Numeric (5)	Yes	Must be exactly 5 numeric digits
FacilityName	String (50)	Yes	
FacilityType	String (2)	Yes	Use 2-digit codes only; CC (Consecutive Connection) DS (Distribution System) IN (Intake (Source Water)) OT (Other) SS (Sampling Station) TP (Treatment Plant)
WaterType	String (2)	Yes	Use 2-digit codes only; GU (Groundwater UDI Surface Water) GW (Groundwater) MX (Mixed) SW (Surface Water)
SamplePointId	String (25)	Yes	
SamplePointName	String (50)	Yes	

(SS.PWS.1170a)

Close

Step 4: Add Inventory

- Use inventory (only includes entry points) from the previous SDWARS3 system
- Select those Facilities that are valid and import
- If subject to the D/DBPRs, manually add your D/DBPR distribution and source water locations for the HAA monitoring



Import Facilities and Sample Points from SDWARS3

Select the sample locations from SDWARS3 which need to be loaded into SDWARS4. You must click **Next >** button to review your inventory before it is added to the database.

Select All	Facility ID	Facility Name	Facility Type	Water Type	Sample Point ID	Sample Point Name	Sample Point Type
☑	00001	Treatment Plant #1	TP	GW	EP001	EP from TP #1	EP
☑	00002	Treatment Plant #2	TP	GW	EP002	EP from TP #2	EP

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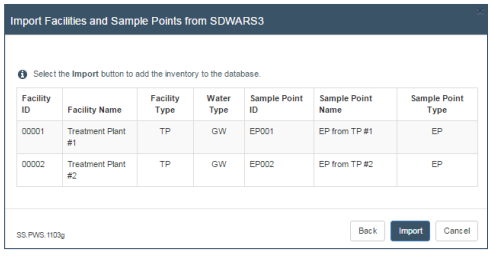
Next > Cancel



Import Facilities and Sample Points from SDWARS3

Select the **Import** button to add the inventory to the database.

Facility ID	Facility Name	Facility Type	Water Type	Sample Point ID	Sample Point Name	Sample Point Type
00001	Treatment Plant #1	TP	GW	EP001	EP from TP #1	EP
00002	Treatment Plant #2	TP	GW	EP002	EP from TP #2	EP

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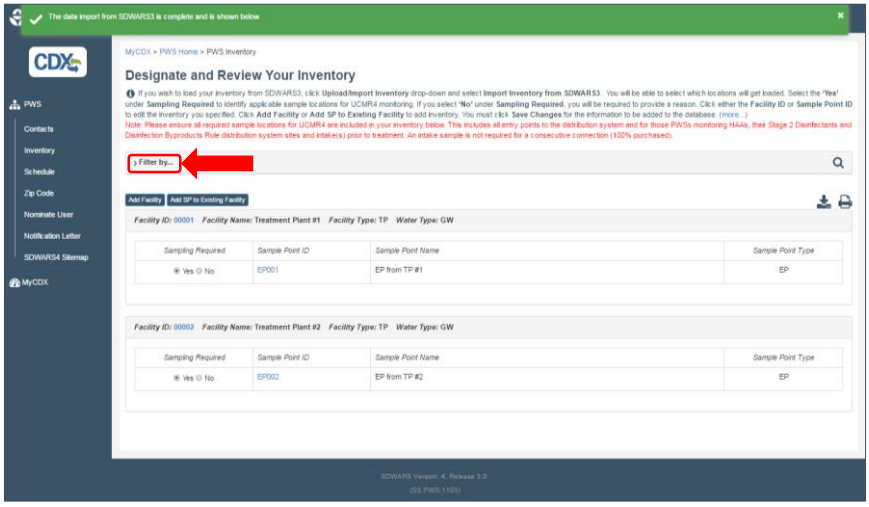
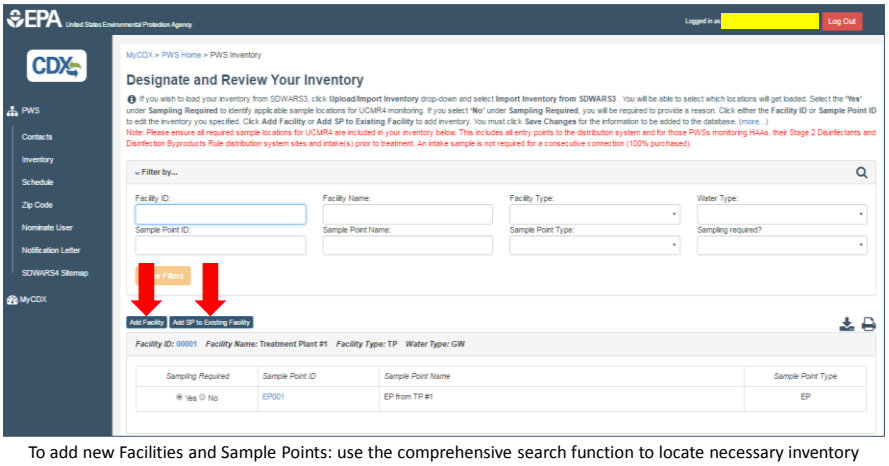
Back Import Cancel

Step 5: Review/Edit Inventory



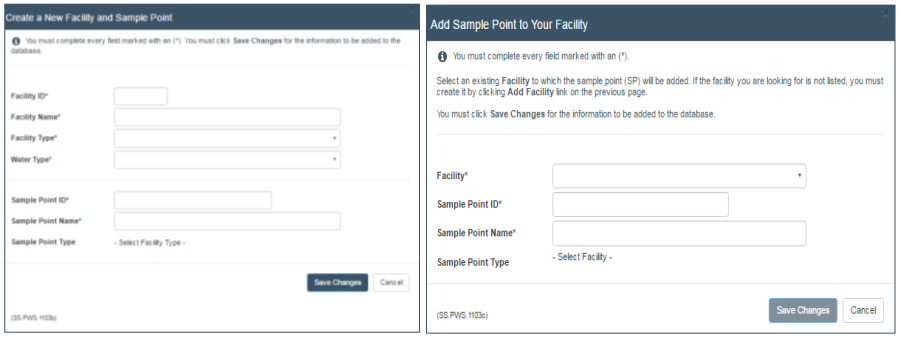
Step 5: Review/Edit Inventory



To add new Facilities and Sample Points: use the comprehensive search function to locate necessary inventory

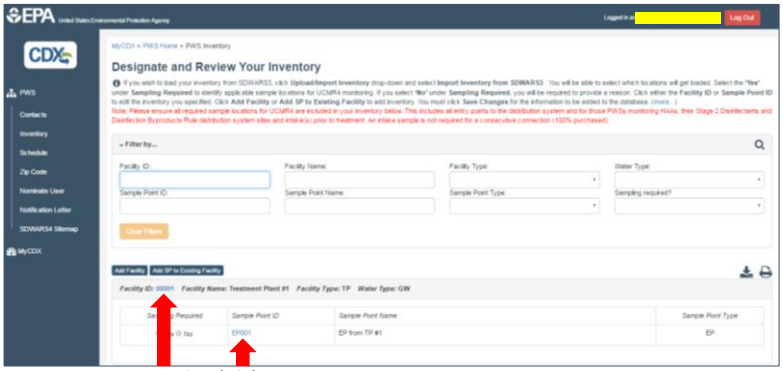
Step 5: Review/Edit Inventory

- Create a new Facility and Sample Point
- Add a Sample Point to an existing Facility



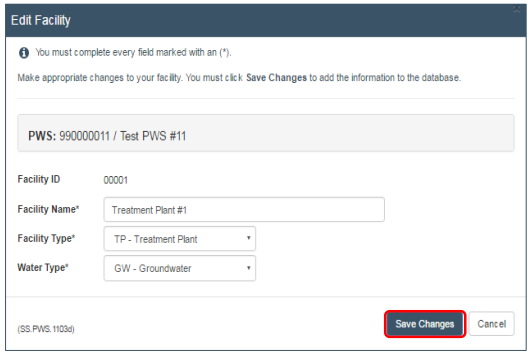
Step 5: Review/Edit Inventory

- Review or edit inventory by clicking on either Facility ID or Sample Point ID



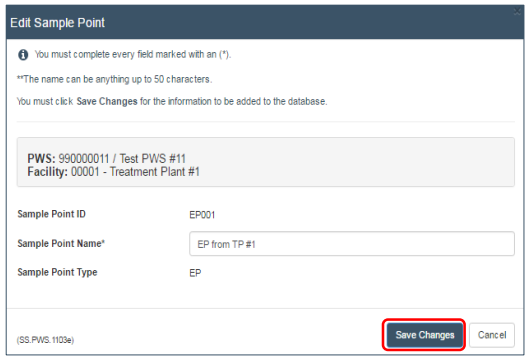
Step 5: Review/Edit Inventory

- Once Facility information is complete, save changes
  - A green bar will appear at the top of the page



Step 5: Review/Edit Inventory

- Once Sample Point information is complete, save changes
  - A green bar will appear at the top of the page

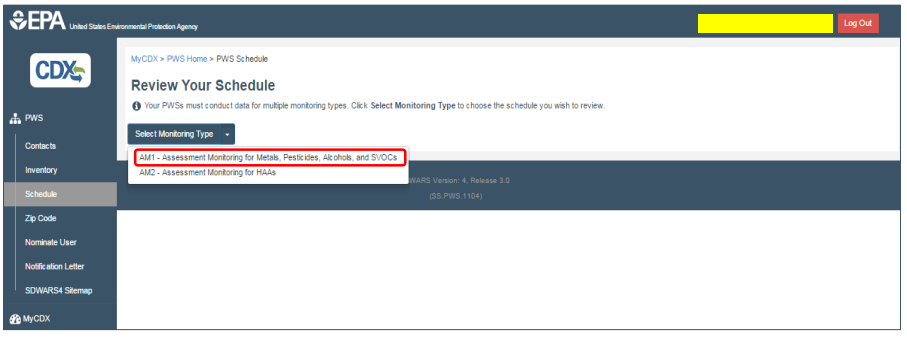


Step 6: Schedules

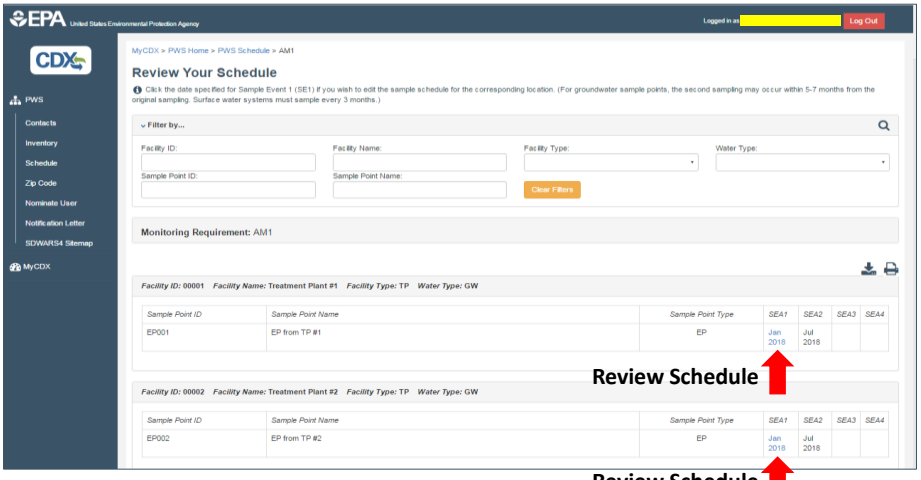
- Large system schedules
  - EPA initially drafts schedule
  - Partnered state has opportunity to review and modify
  - PWS has opportunity to review and modify
    - Systems must NOT modify their schedules to avoid a suspected vulnerable period
- Small system schedules
  - EPA initially drafts schedule
  - Partnered state has opportunity to review and modify

Step 6: Review Sampling Schedule

- Select Monitoring Type to review sampling schedules for each Sampling Point

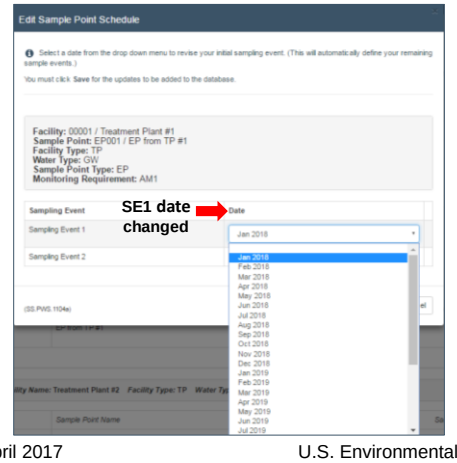


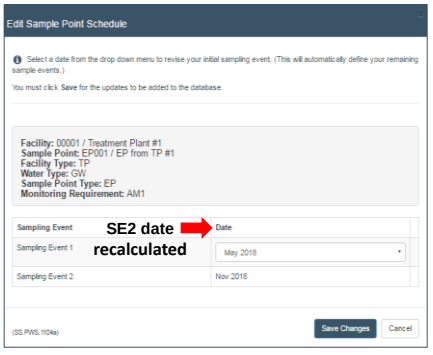
Step 6: Review Sampling Schedule



Step 6: Review Sampling Schedule

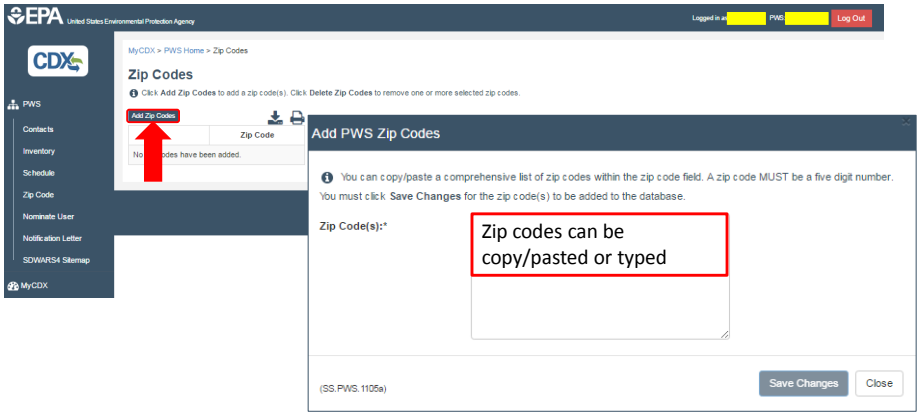
- If you change SE1 month and year, the schedule for SE2 is automatically updated



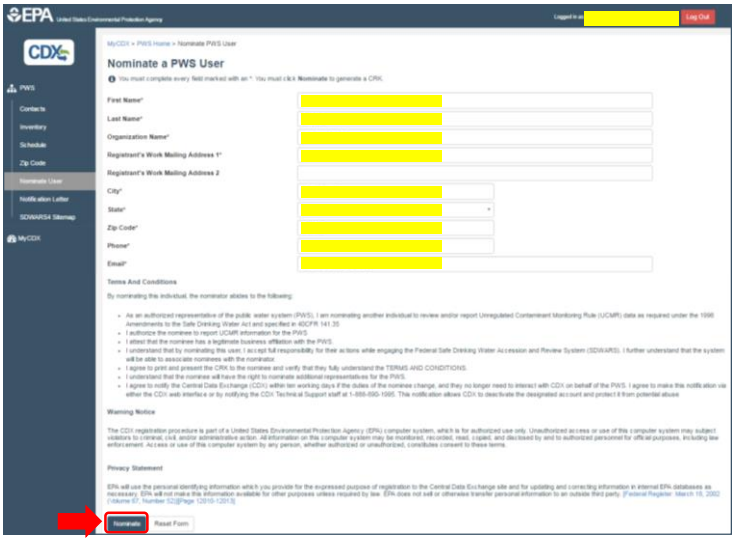


Step 7: Zip Codes

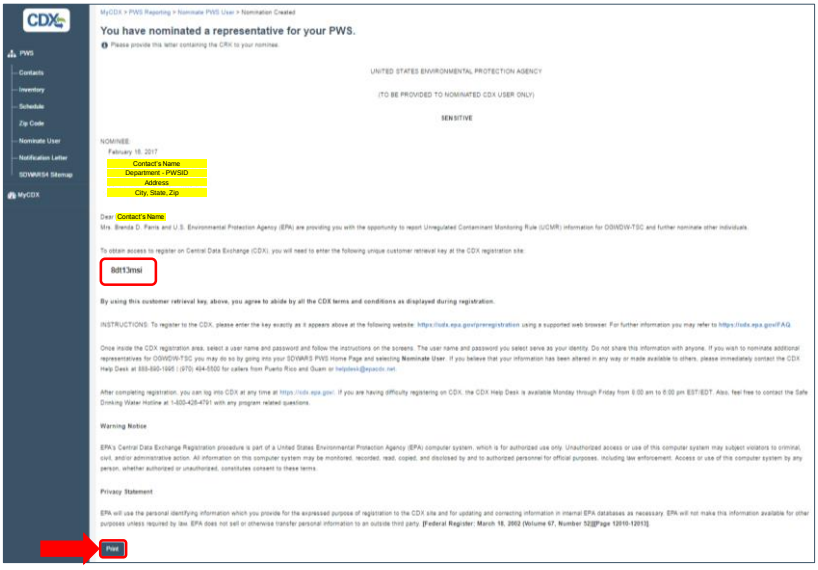
- Click “Add Zip Codes” button
- Pop-up window lets you add zip codes



Step 8: Nominate User for Your PWS



Step 8: Nominate User for Your PWS



SDWARS Large Systems Workflow: Review

- **Step 1: Log in to CDX and select SDWARS4**
  - That should automatically open your systems notification letter
- **Step 2: Read and accept the Notification Letter**
  - It can be printed and viewed at any time
- **Step 3: Error in red will indicate that you need to add official and technical contacts**
  - Make sure you check boxes to receive SDWARS notifications
- **Step 4: Once both contacts are in the system, add inventory**
  - Manually type in, bulk upload, import from SDWARS3
  - Add D/DBPR distribution and source water locations
  - Use filter to search through multiple entries

SDWARS Large Systems Workflow: Review

- **Step 5: Option of editing, deleting or adding new Facilities/Sample Points**
  - To review/edit click on actual Facility ID or Sample Point ID
- **Step 6: Review sampling schedules**
  - By changing the SE1 month and year, schedule for the SE2, SE3 etc. will automatically update
- **Step 7: Add zip codes**
  - Type zip codes or copy and paste
- **Step 8: Nominate a user for your PWS (optional)**
  - Read the terms and conditions and provide CRK to nominee

Remember

- All notifications and nominations can be printed into PDF and saved for your records
- Every page with data has a download and print icon on the top right

Reporting Requirements and Data Elements

Large System Reporting

- Sampling location information
  - PWS enter via SDWARS by December 31, 2017
  - Some partnered states will provide this information to EPA for you (LSI)
  - Changes after deadline must be submitted (with reason) and approved by EPA's UCMR_Sampling_Coordinator@epa.gov

Large System Reporting

- Change schedule
  - Enter via SDWARS by December 31, 2017
  - Basis for change includes:
    - Update to most vulnerable months for cyanotoxin monitoring
    - Sync with compliance monitoring for the UCMR 4 HAA monitoring
    - Budget/planning considerations
    - Other

Large System Reporting

- Samples
  - PWSs must input all data elements specified in §141.35(e) Table 1 (e.g., disinfectant type, treatment information and disinfectant residual) into SDWARS
- Monitoring results
  - Entered by UCMR 4 approved laboratory to SDWARS
  - Reviewed and submitted by PWS (default approval after 60 days)

Small System Reporting

- Provide the most up-to-date contact and inventory information for your PWS on the monitoring review sheet (MRS)
  - Will be mailed to you by an EPA contractor
- Some partnered states will provide this information to EPA for you (SSI)
- An EPA contractor will input the data into SDWARS (e.g., inventory, zip codes and schedule) and send the PWSs the supplies necessary for the sample collection

Small System Reporting

- Why is SDWARS 4 important to small systems?
  - Notification Letter
  - View sampling locations
  - View schedule
  - **MOST IMPORTANTLY** view your analytical results in "real-time"

Small System Reporting

- Samples
  - PWSs must report all data elements specified in §141.35(e) Table 1 on each sample tracking form (STF) as appropriate (e.g., disinfectant type, treatment information and disinfectant residual)
- Monitoring results
  - Entered by EPA-contracted laboratory into SDWARS
  - Reviewed data from contracted laboratory by EPA
  - Viewed by PWS
    - Contact EPA if there are any concerns with the data

Large and Small Systems – Reporting Data Elements §141.35(e)

1. Public Water System Identification (PWSID) Code	16. Analytical Method Code
2. Public Water System Name	17. Extraction Batch Identification Code
3. Public Water System Facility Identification Code	18. Extraction Date
4. Public Water System Facility Name	19. Analysis Batch Identification Code
5. Public Water System Facility Type	20. Analysis Date
6. Water Source Type	21. Sample Analysis Type (more details)
7. Sampling Point Identification Code	22. Analytical Results—Sign
8. Sampling Point Name	23. Analytical Result—Measured Value
9. Sampling Point Type Code	24. Additional Value
10. Disinfectant Type (more details)	25. Laboratory Identification Code
11. Treatment Information (more details)	26. Sample Event Code
12. Disinfectant Residual Type	27. Bloom Occurrence
13. Sample Collection Date	28. Cyanotoxin Occurrence
14. Sample Identification Code	29. Indicator of Possible Bloom - Treatment
15. Contaminant	30. Indicator of Possible Boom – Source Water Quality Parameters

Disinfectant Type – Data Element 10

- **PEMB** = permanganate (applied before SR sample location)
- **HPXB** = hydrogen peroxide (applied before SR sample location)
- **CLGA** = gaseous chlorine
- **CLOF** = offsite generated hypochlorite (stored as a liquid form)
- **CLON** = onsite generated hypochlorite
- **CAGC** = chloramine (formed from gaseous chlorine)
- **CAOF** = chloramine (formed from offsite hypochlorite)
- **CAON** = chloramine (formed from onsite hypochlorite)
- **CLDB** = chlorine dioxide (applied before SR sample location)
- **OZON** = ozone
- **ULVL** = ultraviolet light
- **OTHD** = all other types of disinfectant/oxidant
- **NODU** = no disinfectant/oxidant used

Treatment Information – Data Element 11

- **CON** = conventional (non-softening)
- **SFN** = softening conventional
- **RBF** = river bank filtration
- **PSD** = pre-sedimentation
- **INF** = in-line filtration
- **DFL** = direct filtration
- **SSF** = slow sand filtration
- **BIO** = biological filtration
- **UTR** = unfiltered treatment
- **PAC** = application of powder activated carbon
- **GAC** = granular activated carbon (not part of filters in CON, SCO, INF, DFL or SSF)
- **AIR** = air stripping (packed towers, diffused gas contactors)
- **POB** = pre-oxidation/disinfection with chlorine (applied before SR sample location)
- **MFL** = membrane filtration
- **IEX** = ionic exchange
- **DAF** = dissolved air floatation
- **CWL** = clear well/finished water storage without aeration
- **CWA** = clear well/finished water storage with aeration
- **ADS** = aeration in distribution system (localized treatment)
- **OTH** = all other types of treatment
- **NTU** = no treatment used
- **DKN** = Do not know

Disinfectant Residual Type – Data Element 12

- **CL2** = Chlorine (i.e., originating from addition of free chlorine only)
- **CLO2** = chlorine dioxide
- **CLM** = Chloramines (originating from with addition of chlorine and ammonia or pre-formed chloramines)
- **CAC** = Chlorine and chloramines (if being mixed from chlorinated and chloraminated water)
- **NOD** = No disinfectant residual

Sample Analysis Type – Data Element 21

- **CF** = concentration fortified; the concentration of a known contaminant added to a field sample reported with sample analysis types LFSM, LFSMD, LFB, CCC and QCS.
- **CCC** = continuing calibration check; a calibration standard containing the contaminant, the internal standard, and surrogate analyzed to verify the existing calibration for those contaminants.
- **FS** = field sample; sample collected and submitted for analysis under this rule.
- **IS** = internal standard; a standard that measures the relative response of contaminants.
- **LFB** = laboratory fortified blank; an aliquot of reagent water fortified with known quantities of the contaminants and all preservation compounds.
- **LRB** = laboratory reagent blank; an aliquot of reagent water treated exactly as a field sample, including the addition of preservatives, internal standards, and surrogates to determine if interferences are present in the laboratory, reagents, or other equipment.
- **LFSM** = laboratory fortified sample matrix; a UCMR field sample with a known amount of the contaminant of interest and all preservation compounds added.
- **LFSMD** = laboratory fortified sample matrix duplicate; duplicate of the laboratory fortified sample matrix.
- **QCS** = quality control sample; a sample prepared with a source external to the one used for initial calibration and CCC. The QCS is used to check calibration standard integrity.
- **QHS** = quality HAA; HAA sample collected and submitted for quality control purposes.
- **SUR** = surrogate standard; a standard that assesses method performance for each extraction.

Bloom Occurrence – Data Element 27

Preceding the finished water sample collection, did you observe an algal bloom in your source waters near the intake?

- **YES** = if yes, select all the YESs that apply:
  - **YD** = yes, on the day the UCMR cyanotoxin sample was collected
  - **YW** = yes, between the day the sample was taken and the past week
  - **YM** = yes, between the past week and past month
  - **YY** = yes, between the past month and past year
  - **YP** = yes, prior to the past year
- **NO** = have never seen a bloom
- **NA** = purchased consecutive connection and no source water

Cyanotoxin Occurrence – Data Element 28

Preceding the finished water sample collection, were cyanotoxins ever detected in your source waters near the intake and prior to any treatment (based on sampling by you or another party)?

- **YES** = if yes, select all the YESs that apply:
  - **YD** = yes, on the day the UCMR cyanotoxin sample was collected
  - **YW** = yes, between the day the sample was taken and the past week
  - **YM** = yes, between the past week and past month
  - **YY** = yes, between the past month and past year
  - **YP** = yes, prior to the past year
- **NO** = have never detected cyanotoxins in source water
- **NS** = unaware of any source water cyanotoxin sampling
- Select all that apply (i.e., all that were detected) if you answered YES to detecting cyanotoxins in source water:
  - **MIC** = Microcystins
  - **CYL** = Cylindrospermopsin
  - **ANA** = Anatoxin-A
  - **SAX** = Saxitoxins
  - **OTH** = Other
  - **DK** = Do not know

Indicator of Possible Bloom – Treatment Data Element 29

Preceding the finished water sample collection, did you notice any changes in your treatment system operation and/or treated water quality that may indicate a bloom in the source water?

- **YES** = if yes, select all that apply:
  - **DFR** = Decrease in filter runtimes
  - **ITF** = Increase in turbidity in filtered water
  - **ICD** = Need for increased coagulant dose
  - **TOI** = Increase in taste and odor issues in finished water
  - **IOD** = Need for increase in oxidant/disinfectant dose
  - **IDB** = Increase in TTHM/HAA5 in finished water
  - **OTH** = Describe other changes
- **NO** = no changes

Indicator of Possible Bloom – Source Water Quality Parameters – Data Element 30

Preceding the finished water sample collection, did you observe any notable changes in source water quality parameters (if measured)?

- **YES** = if yes, select all that apply to the source water:
  - **ITP** = Increase in water temperature
  - **ITU** = Increase in turbidity
  - **IAL** = Increase in alkalinity
  - **ITO** = Increase in total organic carbon
  - **ICD** = Increase in chlorine demand
  - **IPH** = Increase in pH
  - **ICA** = Increase in chlorophyll a
  - **IPY** = Increase in phycocyanin
  - **INU** = Increase in nutrients (example: nitrogen or phosphorus)
  - **OTH** = Describe other changes
- **NO** = no changes observed

Timing of Reporting Results

- Large systems
  - Laboratory posts results to SDWARS within 120 days of sample collection
  - Systems review, approve and submit to state and EPA within 60 days of laboratory's post
- Small systems
  - EPA will still manage laboratory contracts for small water systems
  - Laboratory posts results to SDWARS within 120 days of sample collection (shorter for contracts)
  - Systems access their data in SDWARS

SDWARS4 Development

- File formats for laboratories will be made available this summer/fall
  - Text files
  - XML
- Training
  - Webinar for laboratories
  - Webinar for water systems
- Laboratory beta-testing of SDWARS4
  - Improvements to user interface
  - Practice uploading data

Risk Communication

Melissa Simic, USEPA

Overview

- Reference Concentrations
- Consumer Confidence Reports
- Public Notification requirements

Risk Communication

- UCMR reference concentrations are compiled from publically available EPA sources
- Review the supporting documentation referenced in the UCMR Data Summary (updated quarterly)
  - Examples of secondary sources
    - Drinking Water Standards and Health Advisories
    - CCL 4 Contaminant Information Sheets
    - Human Health Benchmark for Pesticides (HHBPs)
  - Examples of sources where you can find additional information on the critical study, other health effects, chemical properties, sources, exposure etc.
    - Integrated Risk Information System (IRIS)
    - Office of Pesticides Program (OPP)
    - Office of Water – Drinking Water Contaminant Human Health Information
    - Agency for Toxic Substances & Disease Registry (ATSDR)
- UCMR 4 Compendium

Risk Communication

- The reference concentration does not represent an "action level" (EPA requires no particular action based simply on the fact that UCMR monitoring results exceed draft reference concentrations)
- The reference concentration should not be interpreted as any indication of agency intent to establish a future drinking water regulation at this or any other level
- Decisions whether or not to regulate the contaminant in drinking water will continue to be made following the agency's Regulatory Determination process

Risk Communication

- The intent of the UCMR reference concentrations is to provide, where possible, context around the detection of a particular UCMR contaminant above the MRL
- EPA will continue to look for ways to improve the UCMR Data Summary to make sure we are connecting you to the most appropriate information and messaging materials
- Follow state, Consumer Confidence Report and Public Notification requirements

Public Access to UCMR Results

- UCMR results can be viewed by the public:
  - At https://www.epa.gov/dwucmr
  - In annual Consumer Confidence Reports (CCRs)
    - Required by §141.153(d)(7) Community water systems (CWSs)
      - **Detected unregulated contaminants**, for which monitoring is required (except Cryptosporidium), the table(s) must contain the average and range at which the contaminant was detected. The report may include a brief explanation of the reasons for monitoring for unregulated contaminants.
      - **Example language:** unregulated contaminants are those, for which EPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist EPA in determining the occurrence of unregulated contaminants in drinking water and whether future regulation is warranted.
    - For additional information: https://www.epa.gov/ccr

Public Access to UCMR Results

- In Public Notification
  - Required by §141.207 for CWS and NTNCWS
  - PWSs must notify persons served of the availability of the results no later than 12-months after monitoring results are known
  - Follows Tier 3 public notice §141.204(c), (d)(1) and (d)(3)
    - Special requirement– notice must identify a person and the telephone number to contact for information on monitoring results
  - CWSs may include their public notice within their CCRs
  - For additional information: https://www.epa.gov/dwreginfo/public-notification-rule

Closing Remarks

Melissa Simic, USEPA

Webinar Participant Questions

- Click on "+" next to "Questions" in the control panel (Figure 1) to submit questions/comments
  - You may need to unhide the control panel to ask a question (Figure 2)
- Type a question in the box; click send (Figure 3)

Figure 1

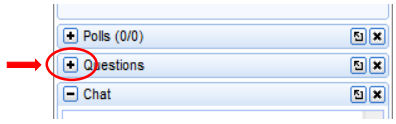
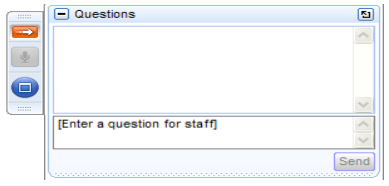


Figure 2

Figure 3

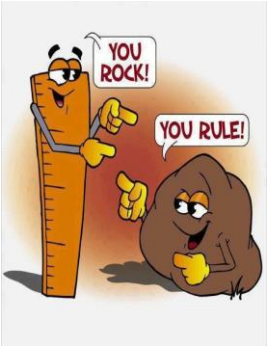


If You Have Questions Following This Meeting/Webinar

- UCMR Homepage:
  - https://www.epa.gov/dwucmr
- UCMR 4:
  - https://www.epa.gov/dwucmr/fourth-unregulated-contaminant-monitoring-rule
  - Go to UCMR 4 Docket (EPA-HQ-OW-2015-0218) at http://www.regulations.gov for federal register notice and supporting documents
- Occurrence Data:
  - https://www.epa.gov/dwucmr/occurrence-data-unregulated-contaminant-monitoring-rule

UCMR Contacts

- UCMR Questions/SDWARS Data Entry?
  - UCMR Message Center: (800) 949-1581
  - UCMR4@glec.com
  - UCMR_Sampling_Coordinator@epa.gov
- CDX Help?
  - SDWARS registration and technical issues
  - Provide details and screen shots
    - CDX Help Desk: (888) 890-1995
    - helpdesk@epacdx.net
- Lab Approval Program:
  - UCMR_Lab_Approval@epa.gov
- Safe Drinking Water Questions?
  - Safe Drinking Water Hotline: (800) 426-4791



Break

2:50 to 3:00

Questions and Discussion

Abbreviations and Acronyms

- **CCC** – Continuing Calibration Check
- **CCL** – Contaminant Candidate List
- **CDX** – Central Data Exchange
- **CWS** – Community Water System
- **CRKs** – Customer Retrieval Keys
- **D/DBPRs** – Disinfectants and Disinfection Byproduct Rules (including Stage 1 and Stage 2 D/DBPRs)
- **DS** – Distribution System
- **ELISA** – Enzyme-linked Immunosorbent Assay
- **EPTDS** – Entry Point to Distribution System

Abbreviations and Acronyms

- **FR** – Federal Register
- **GC** – Gas Chromatography
- **GC-ECD** – Gas Chromatography with Electron Capture Detection
- **GC/MS** – Gas Chromatography/Mass Spectrometry
- **GW** – Ground Water
- **GWRMPs** – Ground Water Representative Monitoring Plans
- **GWUDI** – Ground Water Under the Direct Influence of Surface Water

Abbreviations and Acronyms

- **HAAs** – haloacetic acids
- **HAA5** –dichloroacetic acid, monochloroacetic acid, tribromoacetic acid, monobromoacetic acid, dibromoacetic acid
- **HAA6Br** - monobromoacetic acid, dibromoacetic acid, bromochloroacetic acid, bromodichloroacetic acid, chlorodibromoacetic acid, tribromoacetic acid
- **HAA9** – dichloroacetic acid, monochloroacetic acid, trichloroacetic acid, monobromoacetic acid, dibromoacetic acid,
- bromochloroacetic acid, bromodichloroacetic acid, chlorodibromoacetic acid, tribromoacetic acid,
- **ICR** – Information Collection Request
- **IC-ESI-MS/MS** – Ion Chromatography Electrospray Ionization Tandem Mass Spectrometry

Abbreviations and Acronyms

- **IDC** – Initial Demonstration of Capability
- **IS** – Internal Standard
- **LC/ESI-MS/MS** – Liquid Chromatography/Electrospray Ionization/Tandem Mass Spectroscopy
- **LC-MS/MS** – Liquid Chromatography/Tandem Mass Spectrometry
- **LFB** – Laboratory Fortified Blank
- **LFSM** – Laboratory Fortified Sample Matrix
- **LRB** – Laboratory Reagent Blank
- **LSI** – Large System Inventory
- **LT2** – Long Term 2 Enhanced Surface Water Treatment Rule

Abbreviations and Acronyms

- **MCLG** – Maximum Contaminant Level Goal
- **MRL** – Minimum Reporting Level
- **MRS** – Monitoring Review Sheet
- **NCOD** – National Contaminant Occurrence Database
- **NPDWRs** – National Primary Drinking Water Regulations
- **NTNCWS** – Non-transient Non-community Water System
- **PA** – Partnership Agreement
- **PT** – Proficiency Testing
- **PWS** – Public Water System
- **PWSID** – Public Water System Identification

Abbreviations and Acronyms

- **QA** – Quality Assurance
- **QC** – Quality Control
- **QCS** – Quality Control Sample
- **QHS** – Quality HAA Sample
- **SDWA** – Safe Drinking Water Act
- **SM** – Standard Methods for the Examination of Water and Wastewater
- **SMP** – State Monitoring Plan

Abbreviations and Acronyms

- SPE – Solid Phase Extraction Phase
- **SR** – Source water
- **SSI** – Small System Inventory
- **SUR** – Surrogate Standard
- **SW** – Surface Water
- **TNCWS** – Transient Non-community Water System
- **TTHM** – Trihalomethanes
- **TOC** – Total Organic Carbon
- **UCMR** – Unregulated Contaminant Monitoring Rule