



Unregulated Contaminant Monitoring Regulation (UCMR): Assessing Emerging/Unregulated Contaminants in Drinking Water

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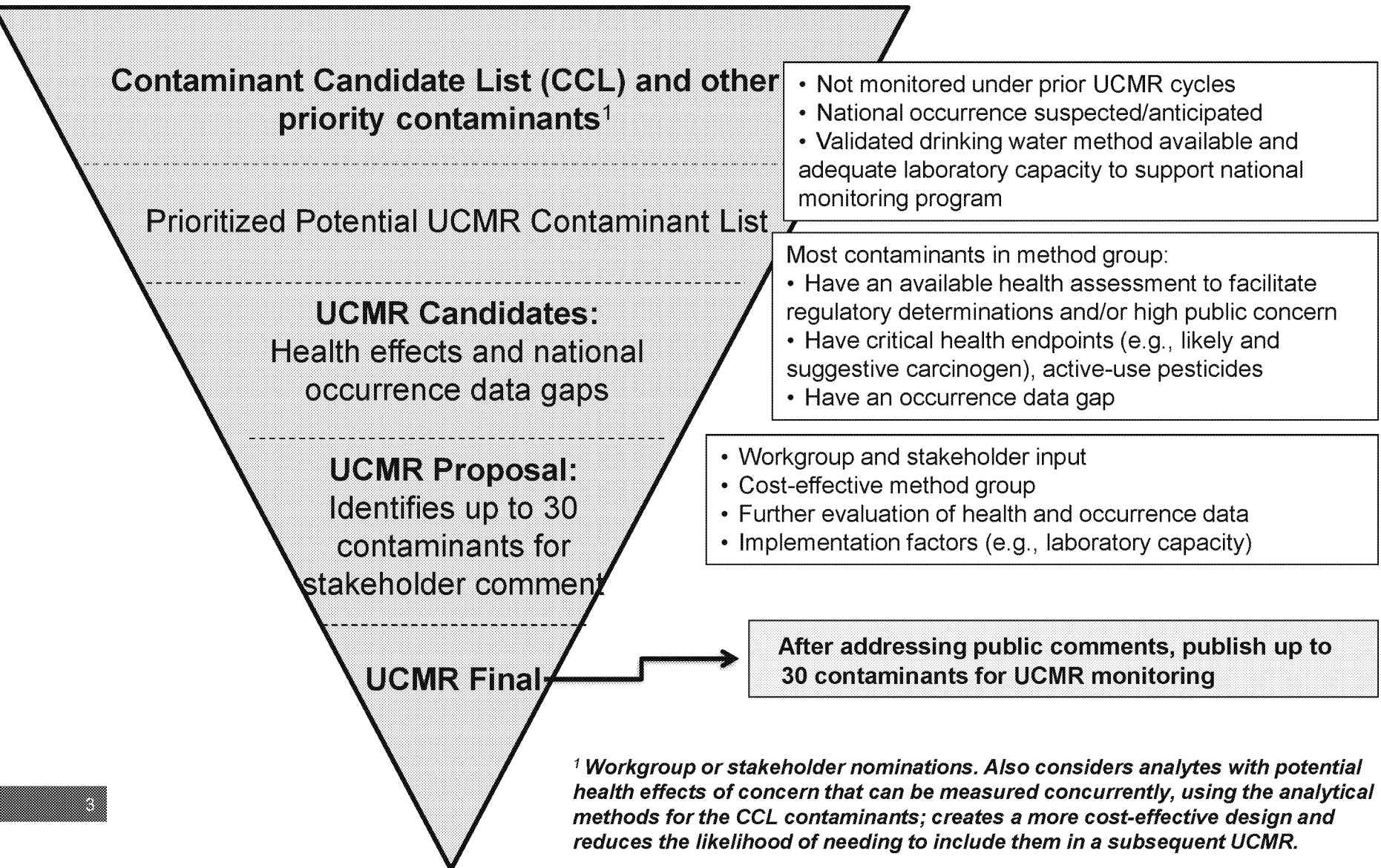
Region 4 State Commissioners' Visit to EPA RTP
August 30, 2017



UCMR Background

- ◆ **1996 SDWA amendments established data driven approach to evaluate unregulated contaminants that includes:**
 - Contaminant Candidate List (CCL)
 - UCMR
 - Regulatory Determination
- ◆ **UCMR Objective:**
 - Collect nationally representative drinking water occurrence data on priority unregulated contaminants
 - Data used to support 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

UCMR Contaminant Prioritization and Selection Process





UCMR 4 Analytes

Cyanotoxins - EPA Method 546 (Adda ELISA)

“total microcystins”

Cyanotoxins - EPA Method 544 (LC-MS/MS)

microcystin-LA	microcystin-RR
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microcystin-LF	microcystin-YR
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microcystin-LR	nodularin
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microcystin-LY	
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Pesticides - EPA Method 525.3 (GC/MS)

alpha-hexachlorocyclohexane	profenofos
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chlorpyrifos	tebuconazole
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dimethipin	total permethrin (cis- & trans)
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ethoprop	tribufos
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oxyfluorfen	
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DBPs - EPA Method 552.3 (GC/ECD) or 557 (IC/ESI-MS/MS)

HAA5 (regulated)	HAA9
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HAA6Br	
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Alcohols - EPA Method 541 (GC/MS)

1-butanol	2-propen-1-ol
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2-methoxyethanol	
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Cyanotoxins - EPA Method 545 (LC/ESI-MS/MS)

anatoxin-a	cylindrospermopsin
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Metals - EPA Method 200.8 (ICP-MS), SM or ASTM

germanium	manganese
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Semivolatile Organics - EPA Method 530 (GC/MS)

butylated hydroxyanisole	quinolone
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o-toluidine	
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UCMR Analytical Methods

- Pre-rule-development stakeholder meeting (2-3 years prior to proposal) to discuss methods for unregulated contaminants
- Focus on robust, validated methods suitable for national, large-scope monitoring
- Consider cost-effectiveness (including ability to measure multiple analytes of interest)
- Consider method sensitivity, relative to available health effects information
- Public comment on methods invited in conjunction with UCMR proposal

UCMR Laboratories

- **EPA administers laboratory approval for UCMR**
 - State laboratory certification programs generally don't address new UCMR methods
- **To receive/maintain approval, labs must:**
 - Be certified for one or more compliance monitoring parameters
 - Perform initial demonstration of capability (including ability to meet Minimum Reporting Levels) and successfully participate in EPA's Proficiency Testing study
 - Participate in on-site and/or remote audits by EPA
 - Adhere to Quality Assurance (QA)/Quality Control (QC) measures in the methods, rule language and the UCMR 4 Laboratory Approval Manual
 - Post analytical results and required QC data via web-based reporting system ("SDWARS") within 120 days of sample collection

State Engagement/Partnering

- **UCMR was established as a direct-implementation program**
 - EPA leads oversight
- **Significant engagement and support from states/territories through voluntary, customized “Partnership Agreements,” which *can* include:**
 - Reviewing State Monitoring Plans (identify participating public water systems (PWSs))
 - Providing sample-location inventory information
 - Initial notification of PWSs
 - Reviewing groundwater representative monitoring plans
 - Assisting with sample collection
 - Following up with PWSs regarding monitoring responsibilities
 - Other support
- **47 states/territories partnering with EPA for UCMR 4**
- **States continue to be able to review data via SDWARS prior to public release (state must establish SDWARS account)**

Communicating UCMR Results

- Laboratories report results to large PWS (via SDWARS) within 120 days of sample collection (EPA’s contract laboratories report small-system results to EPA for EPA review)
- Large PWSs have 60 days to review results posted by lab and take action; results not reviewed in the period default to “approved” and become available (via SDWARS) for review by EPA and states; EPA and states have ongoing access to approved results in SDWARS
- Beginning ~fall of first-year monitoring (e.g., 2018 for UCMR 4), EPA posts compilation of detailed UCMR results (along with a *Data Summary*) to publically-available National Contaminant Occurrence Database (NCOD)
[\[https://www.epa.gov/dwucmr/occurrence-data-unregulated-contaminant-monitoring-rule\]](https://www.epa.gov/dwucmr/occurrence-data-unregulated-contaminant-monitoring-rule)
- EPA updates NCOD ~quarterly thereafter
 - EPA posts final UCMR data set to NCOD ~1 year after the end of the monitoring period
- PWSs must identify UCMR detections in annual Consumer Confidence Reports

UCMR “Reference Concentrations”

- UCMR minimum reporting levels (MRLs) are based on capability of the methods
- UCMR “reference concentrations” are based on published health-effects information, where available, from: CCL Contaminant Information Sheets; EPA Drinking Water Standards and Health Advisories document; Human Health Benchmarks for Pesticides; CCL Regulatory Determinations; and Integrated Risk Information System (IRIS)
- Purpose is to aid in the interpretation of the UCMR results
- EPA will consult with states (as we did for UCMR 3) in developing the reference concentrations (and accompanying narrative) for UCMR 4
- UCMR *Data Summary* displays results relative to reference concentrations and includes an explanation of their origin/significance
 - 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
- Additional sources of information regarding critical studies, other health effects, chemical properties, sources, exposure, etc. include: Integrated Risk Information System; Office of Pesticides Programs; Agency for Toxic Substances and Disease Registry

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