ADEQ Arizona Department of Environmental Quality	**ADEQ/WQD Substantive Policy Statement**	Page 1 of 13
	Drinking Water Monitoring Schedules Requirements and Start Dates	Rev. 00XX.YEAR Effective:

1.0 Purpose

The purpose of this policy is to standardize the Monitoring Schedule requirements per the Safe Drinking Water Act and the start dates of monitoring schedules based on the activation or re-activation of a public water system's (PWS) water sources and/or entry point(s) to the distribution system (EPDS). When a new source of water is activated or reactivated, it is important for the PWS to perform a New Source Analysis on the source water to determine if the water quality being served meets the standards of the Safe Drinking Water Act. To ensure verifiable and quality data and pursuant to 40 CFR 141.28(c) and A.R.S. 18-4-105 (H) (3), the samples must be taken to an environmental laboratory that is certified by the Arizona Department of Health Services. The results of these analyses should be submitted to the correct ADEQ Drinking Water staff (identified in this policy) and on the approved Drinking Water Source Approval Form, which can be found at: http://static.azdeq.gov/forms/drinkingwater_sourceapproval.pdf.

This policy should be used in conjunction with ADEQ's Drinking Water Source Approval Policy for New Source Analysis.

This policy is accessible on the ADEQ website to ADEQ staff, public water system representatives, and the public. This policy will be periodically audited for compliance and updated for relevancy as documented within the specific policy.

The requirements and schedule start dates will be based on Arizona Administrative Code (A.A.C.) R18-4-105. This policy is not intended to change a law or rule but to simply elaborate on ADEQ's standard handling of these rules within the context of the monitoring schedule start dates and New Source Analysis requirements.

2.0 Definitions

ADEQ – Arizona Department of Environmental Quality.

CFR – Code of Federal Regulations Title 40, Section 141.

EPA – Environmental Protection Agency.

EPDS – Entry Point to the Distribution System means a compliance sampling point anywhere on a finished water line that is representative of a water

source and located after the well, surface water intake, treatment plant, storage tank, or pressure tank, whichever is last in the process flow, but prior to where the water is discharged into the distribution system and prior to the first service connection. [1]

IOC – Inorganic Chemicals per 40 CFR §141.23(c) include Antimony, Arsenic, Barium, Beryllium, Cadmium, Chromium, Cyanide, Mercury, Nickel, Selenium, and Thallium. Community water systems must also monitor for Fluoride and Sodium under this section.

New Source – Source of drinking water that has never been used by the public water system in question. For example, a newly drilled drinking water Well, or a new surface water inlet.

New Source Analysis – Comprehensive analysis that covers at least all EPA regulated drinking water contaminants. Samples must be taken from a raw water sampling point, and analyses must be performed by an environmental laboratory certified by the Arizona Department of Health Services.

PWS – Public water system means a system for the provision to the public of water for human consumption through pipes or, after August 5, 1998, other constructed conveyances, if such system has at least fifteen service connections or regularly serves an average of at least twenty-five individuals daily at least 60 days out of the year. Such term includes: any collection, treatment, storage, and distribution facilities under control of the operator of such system and used primarily in connection with such system; and any collection or pretreatment storage facilities not under such control which are used primarily in connection with such system. Such term does not include any "special irrigation district." A public water system is either a "community water system" or a "noncommunity water system." [2]

RAD – Radionuclides per 40 CFR §141.26 (a) include Gross Alpha particle activity, Radium-226, Radium-228, and Uranium.

Raw Water sampling point – A sampling station that is directly from the source for groundwater sources, or the Aquifer Storage and Recovery (ASR) well for surface water sources, prior to any treatment, storage or distribution system.

Reactivated Source – A source of drinking water that has previously been classified as Inactive, which is needed by the PWS and is being brought back on-line for use. Inactivation requires notice to the system's regulatory agency, as well as a picture showing an air gap in the source to the regulatory agency.

The Safe Drinking Water Act (SDWA) - federal law that protects public drinking water supplies throughout the nation. Under the SDWA, EPA sets standards for drinking water quality and with its partners, implements various technical and financial programs to ensure drinking water safety. [3]

SOC – Synthetic Organic Chemicals per 40 CFR §141.23(h) include Alachlor, Aldicarb, Aldicarb sulfoxide, Aldicarb sulfone, Atrazine, Benzo[a]pyrene, Carbofuran, Chlordane, Dalapon, 1,2-Dibromo-3-chloropropane, Di(2-ethylhexyl)adipate, Di(2-ethylhexyl)phthalate, Dinoseb, Diquat, 2,4-D, Endothall, Endrin, Ethylene dibromide, Glyphosate, Heptachlor, Heptachlor epoxide, Hexachlorobenzene, Hexachlorocyclopentadiene, Lindane, Methoxychlor, Oxamyl, Picloram, Polychlorinated biphenyls, Pentachlorophenol, Simazine, Toxaphene, 2,3,7,8-TCDD (Dioxin), and 2,4,5-TP (Silvex).

Value Stream - Within ADEQ's organizational structure, a Value Stream is a team of people working for a particular objective that protects public health and the environment. The Safe Drinking Water Value Stream in particular aims to encourage and achieve compliance with the Safe Drinking Water Act for public water systems statewide.

VOC – Volatile Organic Chemicals per 40 CFR §141.23(f) include Benzene, Carbon tetrachloride, Chlorobenzene, 1,2-Dichlorobenzene, 1,4-Dichlorobenzene, 1,2-Dichloroethane, cis-Dichloroethylene, trans-Dichloroethylene, Dichloromethane, 1,2-Dichloropropane, Ethylbenzene, Styrene, Tetrachloroethylene, 1,1,1-Trichloroethane, Trichloroethylene, Toluene, 1,2,4-Trichlorobenzene, 1,1-Dichloroethylene, 1,1,2-Trichloroethane, Vinyl Chloride, and Total Xylenes.

3.0 Policy Statement

This policy will be put into effect as of **[DATE]**. Any new sources that previously submitted Approval to Construct applications to ADEQ will follow the prior standard work related to monitoring schedule start dates. Any new sources that submit Approval to Construct applications to ADEQ on or after **[DATE]** will be subject to the New Source Analysis requirements and monitoring schedule start dates outlined in this policy.

Additionally, in cases of new or reactivated well(s) within 1 mile down-gradient, 0.5 miles side-gradient, or 0.25 miles up-gradient of an identified contaminated plume, that well will be placed on quarterly monitoring for the contaminant of concern.

3.1 New or Newly discovered (unpermitted) Public Water System

When activating new/newly discovered drinking water source(s), refer to the Drinking Water Source Approval Policy for New Source Analysis requirements, available on ADEQ's website.

Monitoring schedules and frequencies will be set according to the classification of the system per 40 CFR § 141, see Appendix A. Monitoring schedules will be initiated by ADEQ for the public water system as follows:

- Total Coliform/E. Coli bacteria, Surface Water Treatment Rule monitoring and Stage 1 Disinfection Byproducts (residual Chlorine/Chloramines, Chlorine Dioxide/Chlorite, Bromate)

schedules in the distribution system will start **in the month of activation**, if the activation date is prior to the 16th of the month. If activation is on the 16th or later, the schedules will begin the **first full month after activation**.

- Radionuclide schedule(s) will begin in the **first full quarter after activation**.
- Nitrate/Nitrite schedule(s) will begin in the **year of activation**. It is highly recommended that if the New Source Approval is more than one year old at the activation date that the Nitrate/Nitrite sample be taken in the first full quarter after activation.
- Lead and Copper standard schedule(s) for a two consecutive six-month monitoring period will begin **right away.** If there is less than three months in the current January-June or July-December period, the monitoring will begin in the next six-month period.
- IOC (including Asbestos), SOCs, and VOCs schedules will begin **January 1st of the first full calendar year** after activation.
- Stage 2 Disinfection Byproduct (TTHM/HAA5) schedule will begin in the year of the activation, provided that the activation date is on or prior to July 1st. If the activation date is after July 1st, this schedule will begin in the following calendar year.

3.2 Existing PWS with a new source(s) flowing to new EPDS

When activating new drinking water sources with their own EPDS at an already existing PWS, refer to the Drinking Water Source Approval Policy for New Source Analysis requirements, available on ADEQ's website.

Monitoring schedules and frequencies will be set according to the classification of the system per 40 CFR § 141, see Appendix A. Monitoring schedules will be initiated by ADEQ for the public water system as follows:

- Total Coliform/E. Coli bacteria, Surface Water Treatment Rule monitoring and Stage 1 Disinfection Byproducts (residual Chlorine/Chloramines, Chlorine Dioxide/Chlorite, Bromate) schedules in the distribution system will stay on the current monitoring schedule, unless there is a change in population, and/or surface water treatment.
- Radionuclide schedule(s) will begin in the **first full quarter after activation**.
- Nitrate/Nitrite schedule(s) will begin in the **year of activation**. It is highly recommended that if the New Source Approval is more than 1 year old at the activation date that the Nitrate/Nitrite sample be taken in the first full quarter after activation.
- Lead and Copper monitoring schedule(s) will return to standard monitoring *only* if a new source is being used and determined to impact corrosion control in the distribution system. Lead and Copper standard schedules(s) for a two consecutive six-month

monitoring period will begin **right away**. If there is less than three months in the current January-June or July-December period, the monitoring will begin in the next six-month period.

- IOC (including Asbestos), SOCs, and VOCs schedules will begin January 1 of the **first full calendar year after activation**.
- Stage 2 Disinfection Byproduct (TTHM/HAA5) schedule(s) will remain on the current monitoring schedule, unless there is a change in population.

3.3 Existing PWS with a new source(s) flowing to an existing EPDS

When activating new drinking water sources flowing to multiple source fed EPDS at an already-existing PWS, refer to the Drinking Water Source Approval Policy for New Source Analysis requirements, available on ADEQ's website.

Monitoring schedules and frequencies will be set according to the classification of the system per 40 CFR § 141, see Appendix A. Monitoring schedules will be initiated by ADEQ for the public water system as follows:

- Total Coliform/E. Coli bacteria, Surface Water Treatment Rule monitoring and Stage 1 Disinfection Byproducts (residual Chlorine/Chloramines, Chlorine Dioxide/Chlorite, Bromate) schedules in the distribution system will stay on the current monitoring schedule, unless there is a change in population and/or a change in surface water treatment.
- Radionuclide schedule(s) will begin in the **first full quarter after activation**.
- Nitrate/Nitrite schedules will remain on the current schedules.
- Lead and Copper schedule will return to standard schedule of two consecutive six-month monitoring only if a new source is being used and determined to impact corrosion control in the distribution system. In the case of returning to standard monitoring, Lead and Copper standard schedule(s) for a two consecutive six-month monitoring period will begin **right away.** If there is less than three months in the current January-June or July-December period, the monitoring will begin in the next six-month period
- IOCs (including Asbestos), SOCs and VOCs schedules will remain on the current schedules, unless the current schedule has an active waiver. Any IOC, SOC and/or VOC monitoring waiver(s) will be revoked and the public water system must re-apply.
- Stage 2 Disinfection Byproduct (TTHM/HAA5) schedule will remain on the current schedule, unless there is a change in population.

3.4 Reactivation of source(s) flowing to single source fed EPDS

New source analysis requirements for reactivated sources can be found in Appendix B.

New Source approval samples must be taken from the RAW water sampling point of the reactivated source.

In the case of reactivation of sources, the required New Source Analysis results should be delivered to the county's Compliance Assistance Coordinator. Current contact information for the Compliance Assistance Coordinators is online at http://static.azdeq.gov/comp/dw/coordinator_contact_list.pdf.

Monitoring schedules and frequencies will be set according to the classification of the system per 40 CFR § 141, see Appendix A. Monitoring schedules will be initiated by ADEQ for the public water system as follows:

- If the EPDS had not previously completed *initial monitoring* for Radionuclide initial monitoring, schedule(s) will begin in the **first full quarter after activation**.
- SOCs and VOCs *initial monitoring* schedules will begin January 1 of the **first full calendar year of activation**.
- If the EPDS has previously completed initial monitoring and the source has been *inactive for less than 5 years*, prior monitoring schedules will be resumed (whether increased, routine, or reduced).
- If the source has been *inactive for 5 years or more*, all reduced monitoring schedules will be returned to routine monitoring.
- Nitrate monitoring will always start in the **same year as reactivation**.
- All other EPDS sampled monitoring schedules will begin in the year of activation, unless the reactivation occurs between October 1 and December 31, in which case the monitoring schedules will begin January 1 of the following calendar year.
- If a source was inactive for more than 3 years, any IOC, SOC and/or VOC reduced monitoring waiver will be revoked and the public water system must re-apply.

3.5 Reactivation of source(s) flowing to multiple source fed EPDS

New source requirements for reactivated sources can be found in Appendix B.

New Source approval samples must be taken from the RAW water sampling point.

For reactivation of sources, the required New Source parameter results should be submitted to the county's Compliance Assistance Coordinator, prior to serving water to the public from the source in question. Current contact information for the Compliance Assistance Coordinators is online at http://static.azdeq.gov/comp/dw/coordinator_contact_list.pdf.

Monitoring schedules and frequencies will be set according to the classification of the system per 40 CFR § 141, see Appendix A. Monitoring schedules will be initiated by ADEQ for the public water system as follows:

- Monitoring schedules will remain on the current schedules, unless the source's inactivation was due to contaminant issues, in which case, that contaminant (or contaminant group in the case of VOCs) would start on increased monitoring in the first full quarter after activation.
- If the reactivated source was not included in the prior sampling, any IOC, SOC and/or VOC reduced monitoring waiver will be revoked and the public water system must re-apply.

3.6 PWS reclassified to a more stringent PWS classification

New Source analyses are not required for PWS being reclassified into a more stringent classification type.

Monitoring schedules and frequencies will be set according to the classification of the system per 40 CFR § 141, see Appendix A. Monitoring schedules will be initiated as follows on an as-needed basis depending on the new classification:

- Total Coliform/E. Coli bacteria and Surface Water Treatment Rule monitoring schedules in the distribution system will stay on the current monitoring schedule, unless there is a change in population and/or a change in surface water treatment.
- Stage 1 Disinfection Byproducts (residual Chlorine/Chloramines, Chlorine Dioxide/Chlorite, Bromate) schedules in the distribution system will start in the **first full month after activation**.
- Radionuclide schedule(s) will begin in the **first full quarter after activation**.
- Nitrate/Nitrite schedules will remain on the current monitoring schedules.
- Lead and Copper standard schedule(s) for a two consecutive six-month monitoring period will begin **right away.** If there is less than three months in the current January-June or July-December period, the monitoring will begin in the next six-month period.
- IOC (including Asbestos), SOCs, and VOCs schedules will begin January 1st of the first full calendar year after activation.
- Stage 2 Disinfection Byproduct (TTHM/HAA5) schedule will begin in the year of the activation, provided that the activation date is on or prior to July 1st. If the activation date is after July 1st, this schedule will begin in the following calendar year.

4.0 Audience

This policy should be used by ADEQ employees and delegated regulatory agencies that initiate, develop, and update monitoring schedules for public water systems. This policy can also be utilized by the public water systems in planning and budgeting for newly activated or re-activated water sources and EPDSs.

5.0 Policy Owner (Position Responsible for Implementing & Maintaining the Policy – Title/Unit/Section/Division)

The owners of this policy are the ADEQ Drinking Water Value Stream's Compliance Assistance Coordinators in the Drinking Water Monitoring and Protection Unit. These individuals, as well as delegated regulatory agency personnel who handle PWS monitoring requirements, are responsible for implementing the policy.

The manager of the ADEQ Drinking Water Monitoring and Protection Unit, or a person appointed by the manager, is responsible for maintaining this policy.

6.0 Communication & Training

This policy will be communicated to the intended audience through internal trainings within the Drinking Water Value Stream at ADEQ, as well as external outreach trainings and events hosted by ADEQ Drinking Water Value Stream. Additionally, this policy will be posted on the ADEQ website, available to the public. A link to this policy will be included in the Approval to Construct permit to inform public water systems activating new sources of water.

7.0 Review, Audit & Revision Schedule

All existing ADEQ substantive policies will be reviewed annually each November by the manager of the Drinking Water Monitoring and Protection Unit, or person appointed by the manager. This policy will be audited at least once every three years by the Office of Administrative Counsel (OAC) using ***Tool No. 4 -- Policy Owner Review & OAC Review/Audit Checklist,*** per the standard work**.** OAC and the Policy Owner will also evaluate ADEQ staff use of and compliance with this policy. It will be the responsibility of the Administrative Counsel to complete written Audit Recommendations and to deliver them to the Policy Owner within ten business days after performance of the audit. OAC files will include a copy of the completed Audit Recommendations and Checklist. See 6.0 Storage Policy Standard Work.

8.0 Additional Documentation Templates and Checklists for the Final Policy

The decisions in this policy are supported by the referenced materials identified below:

- Drinking Water Source Approval Policy – (link)

- Code of Federal Regulations Title 40, Section 141
  http://static.azdeq.gov/comp/dw/rules_40cfr.pdf
- EPA's Quick Reference Guides on Drinking Water regulations
- EPA's Optimal Corrosion Control Treatment Evaluation Technical Recommendations for Primacy Agencies and Public Water Systems
  https://www.epa.gov/sites/production/files/2016-03/documents/occtmarch2016.pdf

9.0 Approved by;

Title	Name	Signature	Date
ADEQ Director, if necessary	Misael Cabrera		
Affected Director(s) [Division, HPO, or OBFS]	Trevor Baggiore		
	Jennifer Peterson		
Administrative Counsel as to form	*Edwin Slade*		

10.0 Historical Note

Date	Number, Name, and Issue Date of Previous Version	Replaces Listed Sections/Entire Document	Reason

References:

1 40 Code of Federal Regulations §141.2
2 Arizona Administrative Code R18-4-103
3 "Safe Drinking Water Act (SDWA)." *EPA,* Environmental Protection Agency, 12 Jan. 2017, www.epa.gov/sdwa.

Appendix A:
Sampling Requirements by Public Water System Type

	Community	Non-Transient, Non-Community	Transient, Non-Community
Revised Total Coliform Rule	✓	✓	✓
Groundwater Rule (GW Only)	✓	✓	✓
Nitrate & Nitrite	✓	✓	✓
Lead and Copper Rule	✓	✓	
Asbestos	✓	✓	
IOCs	✓ (including F- & Na)	✓ (excluding F- & Na)	
VOCs	✓	✓	
SOCs	✓	✓	
Radionuclides	✓		
Consumer Confidence Reports	✓		
MRDLs	✓	✓	
Stage 2 DBPs	✓	✓	
Turbidity (SW Only)	✓	✓	✓
Residual Disinfectant Concentration (SW Only)	✓	✓	✓
LT2 (SW Only)	✓	✓	✓

Only if your System regularly treats/disinfects your PWS with Chlorine/Chloramines.

Only if you are a Surface Water (or Groundwater Under the Direct Influence of Surface Water – GUDI) System.

Appendix B:
New Source Analysis Requirements for Reactivated Sources

1.0 Requirements for Reactivated Sources

Per sections 3.4 and 3.5 of the Safe Drinking Water Monitoring Schedules Requirements and Start Dates Policy, new source analysis requirements for reactivated sources are as follows:

- If the source has been inactive for less than one year, a Total Coliform/E. Coli bacteria sample is recommended. Best industry practices indicate that any DW source that is down due to maintenance or disuse should test for Total Coliform/E. Coli bacteria prior to serving to the public.
- If the source has been inactive for one to three years, Total Coliform/E. Coli bacteria, Nitrate, and Nitrite (acute contaminants) samples are required.
- If the source has been inactive for three to five years, Total Coliform/E. Coli bacteria, Nitrate, Nitrite, and the IOC suite (Arsenic, Barium, Cadmium, Chromium, Cyanide, Fluoride, Mercury, Sodium, Selenium, Antimony, Beryllium, and Thallium) samples are required.
- If a source has been inactive for more than five years, an entire New Source Analysis is required.

2.0 Sampling Location

New Source approval samples must be taken from the RAW water sampling point of the reactivated source.

3.0 Temporarily out of service vs. Inactive

If a drinking water source or facility is out of service for less than a year ADEQ will add an out of service (OUTS) indicator to the SDWIS database. Sources and facilities that are out of service for a year or more will be inactivated in the SDWIS database and will be subject to Appendix B 1.0.