



Arizona Department of Environmental Quality

Underground Injection Control Program Description 40 CFR 145.23

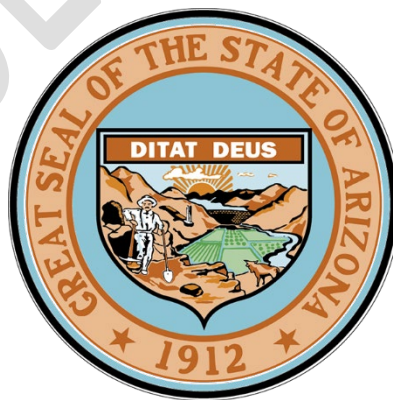


Table of Contents

I.	PROGRAM AUTHORITY AND SCOPE	3
II.	OVERVIEW OF THE STATE UIC PROGRAM (40 CFR 145.23(A)).....	3
III.	ADEQ ORGANIZATION AND STRUCTURE (40 CFR 145.23(B) & (B)(1)).....	5
IV.	ADEQ STAFFING AND RESOURCES (40 CFR 145.23(B) & (B)(1))	7
V.	ESTIMATED COSTS AND ADMINISTERING THE PROGRAM (40 CFR 145.23 (B)(2)).....	8
VI.	SOURCES AND AMOUNTS OF FUNDING (40 CFR 145.23 (B)(3))	5
VII.	PERMITTING, ADMINISTRATIVE AND JUDICIAL PROCEDURES (40 CFR 145.23 (C)) ...	11
VIII.	PERMIT DOCUMENTS (40 CFR 145.23(D))	19
IX.	COMPLIANCE TRACKING AND ENFORCEMENT (40 CFR 145.23 (E)).....	19
X.	SCHEDULE FOR ISSUING PERMITS (40 CFR 145.23 (F)(1) & (2)).....	19
XI.	MECHANICAL INTEGRITY TESTING (MIT) REQUIREMENTS (40 CFR 145.23 (F)(3))...	22
XII.	NEW PERMIT COMMUNICATION REQUIREMENTS (40 CFR 145.23 (F)(4))	23
XIII.	STATE UIC RULE (40 CFR 145.23 (F)(5))	24
XIV.	HYDROCARBON STORAGE COMPLIANCE PROGRAM (40 CFR 145.23 (F)(6)).....	24
XV.	STATE INJECTION WELL INVENTORY (40 CFR 145.23 (F)(7))	25
XVI.	USDW DESIGNATION, AQUIFER EXEMPTIONS AND INJECTION DEPTH WAIVERS (40 CFR 145.23 (F)(8) & (F)(9)).....	25
XVII.	PROGRAMMATIC BAN ON CLASS IV WELLS (40 CFR 145.23 (F)(10))	28
XVIII.	INVENTORY PLAN FOR EXISTING CLASS V WELLS (40 CFR 145.23 (F)(11)).....	29
XIX.	MOTOR VEHICLE WASTE DISPOSAL WELLS (40 CFR (145.23 (F)(12)).....	30
XX.	NOTIFYING ADJACENT GOVERNMENTS – CLASS VI (40 CFR 145.23 (F)(13)).....	30
XXI.	APPENDIX.....	30

I. PROGRAM AUTHORITY AND SCOPE

As mandated by the Safe Drinking Water Act of 1974 (as amended), the United States Environmental Protection Agency (EPA) has promulgated regulations establishing minimum requirements, technical criteria, and standards for State Underground Injection Control (UIC) programs to protect underground sources of drinking water (USDW). The SDWA charges EPA with the administration of the UIC program, including the promulgation of regulations and the authority to grant primacy to qualifying, individual states. Statutory authority for the UIC program can be found at 42 U.S.C. §300h *et seq.*

Arizona's Department of Environmental Quality (ADEQ) is submitting this program description as an element of an application to obtain primary enforcement authority (primacy) to administer the UIC program in the State of Arizona. In order to gain primacy for all UIC classes of injection wells, the State of Arizona UIC program closely follows the federal UIC program and, as demonstrated in this submittal, is at least as stringent as the federal standards.

The Arizona Revised Statutes (A.R.S., Title 49, Chapter 2, Article 3.3) and the Arizona Administrative Code (A.A.C., primarily Title 18, Chapter 9, Article 6) were revised to authorize the state's UIC program. State statutory authority to apply for primacy, promulgate rules and charge fees can be found at A.R.S. §§ 49-203(A)(6), 49-257.01(A) and 49-203(A)(9).

Any state that seeks primacy for the UIC program is required to submit a description of the program it proposes to administer in lieu of the federal program under state law, in accordance with 40 C.F.R. § 145.23. This program description (PD) aims to meet the delineated requirements of 40 C.F.R. § 145.23, as well as, to describe other necessary program details. Upon primacy, administration of the UIC program for all injection wells in Arizona is planned to be conducted by ADEQ – Water Quality Division (WQD).

With the submission of this PD and the rest of Arizona's primacy application to EPA, ADEQ applies for primacy under 42 U.S.C. §300h-1 (Section 1422) for the SDWA-UIC Program, Classes I through VI.

II. OVERVIEW OF THE STATE UIC PROGRAM (40 CFR 145.23(a))

Arizona's UIC program is designed to allow and regulate injection wells within the jurisdiction of the state of Arizona by protecting USDWs. A USDW is an aquifer(s) or its portion that:

- i. Supplies any public water system; or
- ii. Contains a sufficient quantity of ground water to supply a public water system; and
 - a. Currently supplies drinking water for human consumption; or
 - b. Contains fewer than 10,000 mg/l total dissolved solids; and
- iii. Is not an exempted aquifer.

Injection wells are wells used to place injectate or fluid underground into geologic materials ranging from deep porous rocks to shallow soils. Injectate may include stormwater, wastewater, brine (salt water) or water mixed with chemicals.

Arizona's UIC program regulates six classes of injection wells (known as Classes I through VI). Class I UIC wells are industrial and municipal waste disposal wells. Class II UIC wells are oil and gas related injection wells. Class III UIC wells are solution mining injection wells. Class IV UIC wells are shallow hazardous and radioactive waste injection wells and are prohibited. Class V UIC wells inject non-hazardous fluids into or above USDWs. Class VI UIC wells are geologic sequestration injection wells.

Classes I, II, III, and VI injection wells must be permitted. Upon submittal, each permit application will be reviewed for completeness. A preliminary decision to proceed with the development of a draft permit or a notice of intent to deny is then made. For applications moving on to the draft permit phase, a public notice will be issued allowing for 30 days of public comment. A public hearing may be held thereafter if a significant degree of public interest occurs. Response to comments collected during the written comment period and the public hearing (if held) will be responded to along with the issuance of a final permit. Applications must include, but are not limited to, a technical evaluation, an area of review, a corrective action plan, a demonstration of financial responsibility, a demonstration of mechanical integrity, a contingency plan, a proposed testing and monitoring plan, a well plugging and abandonment plan, and an injection well operating plan.

Shallow Class V injection wells can be authorized by rule and are required to submit basic inventory information; these wells do not need a permit to operate. However, the Director may require the owner or operator of any Class V injection well authorized by rule to apply for and obtain an individual or area UIC permit (*see* A.A.C. R18-9-I651). Class IV wells are prohibited under the federal program unless they are operating for the purposes of remediation. This prohibition and exception will remain the same under the state UIC program.

ADEQ is the lead agency for the Arizona UIC Program. ADEQ has regulatory and enforcement authority over all six classes of injection wells within the scope of the program. The Arizona UIC Program does not apply to injection activities outside of the scope of the program, such as the underground injection of natural gas for purposes of storage nor the underground injection of fluids or propping agents pursuant to hydraulic fracturing operations related to oil, gas, or geothermal production activities (*see* A.A.C. R18-9-A601(68); 42 U.S.C. 300h(b)(2); 42 U.S.C. 300h(d)(1)(b)).

Portions of USDWs may be exempted from the requirements of the program through the procedure and criteria listed in A.A.C. R18-9-A605 and R18-9-A606. These aquifer exemptions require public notice, a hearing and approval by EPA. Other than EPA-approved aquifer exemption expansions that meet the criteria for exempted aquifers, new aquifer exemptions will not be issued for Class VI injection well activities.

Arizona's program closely follows the federal UIC program and will not change the scope of regulation once primacy is approved by EPA. Arizona has many tens of thousands of Class V injection wells. Most are designated as drywells used to dispose of stormwater, while a smaller number are used to recharge aquifers with treated effluent. None of these wells are currently permitted under the federal UIC program, but are instead authorized by rule.

Arizona has three in situ solution mining facilities that use Class III injection wells, all of which have received UIC permits from EPA. These wells are used to inject fluids into the subsurface to dissolve minerals (salt or copper). The fluids are then extracted from groundwater and then processed to obtain the dissolved minerals. One facility uses injection wells to mine underground salt. The other two facilities mine underground copper. There are currently no UIC Class I, II, IV, or VI permitted facilities in Arizona.

Upon obtaining primacy, ADEQ will begin administering the existing EPA UIC permits within Arizona state jurisdiction. At that time, ADEQ will modify the existing permits in a non-substantive manner for administrative purposes. Thereafter, ADEQ does not anticipate issuing many, if any, modifications or new facility permits during the first few years of the State UIC Program. However, there are a number of future opportunities related to Class I brine disposal projects and Class VI carbon capture and sequestration that may increase the number of permits in the program.

Currently and into the future, expected population growth in Arizona will increase demands on water supply. Arizona has an estimated 600 million acre-feet of brackish groundwater that could be used to augment the state's water supply. Desalinization of brackish groundwater generates brine that must be disposed of properly and safely. One potential solution is to dispose of the brine via a Class I well through deep well injection below any USDWs. Such injection would require permitting through the UIC program. Other potential future permitting may occur for carbon sequestration wells, and for brine disposal wells, which could be Class I, II, V or VI, related to helium, carbon dioxide, oil and gas, and potash extraction.

III. ADEQ ORGANIZATION AND STRUCTURE (40 CFR 145.23(b) & (b)(1))

As was mentioned above, ADEQ will administer the UIC program in the State of Arizona's jurisdiction. ADEQ is headed by the ADEQ Director who oversees three divisions: Water Quality, Air Quality and Waste Programs and a number of supporting offices. Within the Water Quality Division is a section known as Groundwater Protection (GPS). Dedicated staff in the GPS will carry out most of the UIC duties required upon primacy. The GPS will be supported by ADEQ Leadership, ADEQ Administrative Counsel, ADEQ's Office of Business and Financial Services, Arizona's Attorney General's Office, as well as, other Arizona state and ADEQ offices in executing the duties, explained below.

A. Coverage of Programmatic Duties:

UIC application review, issuance, general project oversight (including site characterization, modeling, well construction, well testing, risk analysis, review of

operating, testing and monitoring data, injection well closure and potential post-closure remediation determinations) and other appropriate duties will be conducted by hydrogeologists and engineers in the GPS's Individual Permits Unit. These duties are represented as the "UIC Permit Specialist" role and the "UIC Data Management" role in the "Annual Program Costs" table in Section V below. The "UIC Permit Specialist" role will be dedicated 0.5 FTE at a cost of \$85,000 annually and the "UIC Data Management" role will be dedicated 0.25 FTE at a cost of \$27,500 annually.

An applicant's financial assurance demonstration will be reviewed by specialists in ADEQ's Office of Business and Financial Services (OBFS). ADEQ estimates the OBFS currently has the capacity to take on the occasional and incidental duties primacy will bring without adding dedicated full-time-equated (FTE) employees or a portion thereof to the office. ADEQ has the ability to adjust this estimate at any time through contractors or program funding revisions.

UIC Class V inventorying, billing and licensing time frame duties will be conducted by staff in the GPS's General Permits Unit. These duties are represented as the "Administrative Support" role and the "UIC Data Management" role in the "Annual Program Costs" table in Section V below. The UIC "Administrative Support" role will be dedicated 0.5 FTE at a cost of \$40,000 annually and the UIC "UIC Data Management" role will be dedicated 0.25 FTE at a cost of \$27,500 annually.

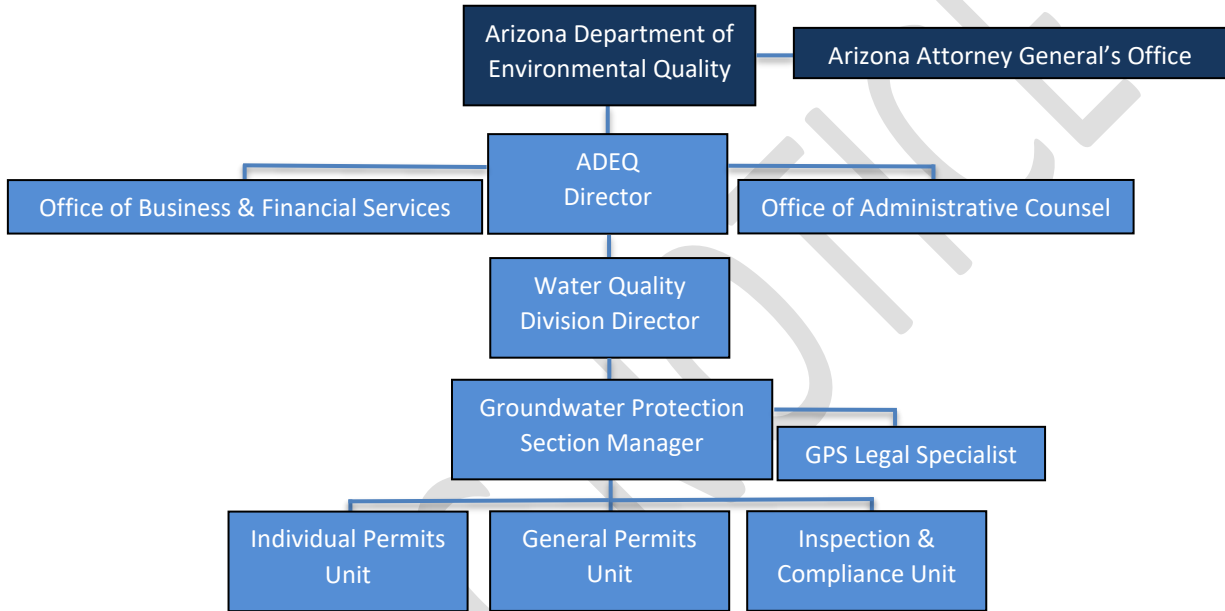
The duties including overall UIC program administration, oversight, as well as, policy matters, strategic planning and budgeting will be addressed by ADEQ's management and leadership teams which are represented as the "Leadership" role in the "Annual Program Costs" table in Section V below. The UIC "Leadership" role will be dedicated 0.3 FTE at a cost of \$49,500 annually.

Specific regulatory issues will be addressed by the GPS's Legal Specialist, ADEQ's Office of Administrative Counsel and, if necessary, the Arizona Attorney General's Office which are represented as the "Legal, Compliance Assurance & Enforcement Support" role and "Attorney General's Office Support" role in the "Annual Program Costs" table in Section V below. The UIC "Legal, Compliance Assurance & Enforcement Support" role will be dedicated 0.4 FTE at a cost of \$52,000 annually and the UIC "Attorney General's Office Support" role will be allocated \$25,000 annually.

UIC inspections, compliance assistance and compliance assurance will be conducted by GPS's Inspections and Compliance Unit. These duties are represented as the "UIC Inspections, Compliance, Enforcement" role and the "Legal, Compliance Assurance & Enforcement Support" role in the "Annual Program Costs" table in Section V below. The "UIC Inspections, Compliance, Enforcement" role will be dedicated 1.25 FTE at a cost of \$162,500 annually and the UIC "Legal, Compliance Assurance & Enforcement Support" role will be dedicated 0.4 FTE at a cost of \$52,000 annually.

UIC enforcement will be addressed by GPS's Inspections and Compliance Unit, with assistance from the GPS's Legal Specialist, the Office of Administrative Counsel and, if

necessary, the Arizona Attorney General’s Office. These duties are represented as the “Legal, Compliance Assurance & Enforcement Support” role and the “Attorney General Office Support” role in the “Annual Program Costs” table in Section V below. The “UIC Inspections, Compliance, Enforcement” role will be dedicated 1.25 FTE at a cost of \$162,500 annually, while the UIC “Legal, Compliance Assurance & Enforcement Support” role will be dedicated 0.4 FTE at a cost of \$52,000 annually. Also, the UIC “Attorney General’s Office Support” role will be allocated \$25,000 annually.



**IV. ADEQ STAFFING AND RESOURCES
(40 CFR 145.23(b) & (b)(1))**

To help carry out the duties of UIC primacy, ADEQ will dedicate 3.2 FTEs to the UIC program (detailed in Section III(A) above). While ADEQ expects the UIC program to grow, the current program scope is relatively small, including only 5 permits and approximately 65,000 Class V well inventories, authorized by rule. Until the program grows, ADEQ has calculated the 3.2 dedicated FTE (along with occasional and incidental assistance from ADEQ’s Office of Business and Financial Services and the Arizona Attorney General’s Office) will be sufficient to effectively carry out the duties of the UIC program. It should be noted that when the State UIC program adds permits, the program’s revenue will increase due to its fee and revenue structure. This will allow ADEQ to dedicate more FTE to the UIC program as it grows.

Additionally, ADEQ has access to contractors if a need arises. If ADEQ determines capacity or resource is lacking in a particular area of expertise necessary to carry out the duties of the program, appropriately qualified contractors are available for ADEQ to acquire at that time. The table below identifies the sources of expertise ADEQ plans to utilize in administering the UIC program:

Expertise Area	In-House	Contractor
Site Characterization , e.g., geologists, hydrogeologists, geochemists, and log analysts/experts to review site characterization data submitted throughout a project’s duration.	✓	✓
Modeling , e.g., hydrogeologists and environmental/reservoir modelers to evaluate area of review (AoR) delineation computational models during permitting and AoR reevaluations.	✓	✓
Well construction and testing , e.g., well engineers, log analysts/experts, and geologists to review well construction information and operational reports on the performance of Class VI wells and review/evaluate testing and monitoring reports.	✓	✓
Finance experts to review financial responsibility information during permitting and annual evaluations of financial instruments.	✓	
Risk analysts to evaluate emergency and remedial response scenario probabilities and remediation cost estimates.	✓	✓
Policy/regulatory experts on the UIC Program to evaluate compliance with UIC requirements	✓	
Enforcement/compliance , e.g., staff who can initiate and pursue appropriate enforcement actions when permit or rule requirements are violated.	✓	
Inspectors including well engineers or log analysts/experts to inspect wells or witness construction activities, workovers, and/or mechanical integrity tests.	✓	
Administrative Assistants to carry out Class V inventorying.	✓	✓
Environmental justice experts to evaluate the Environmental justice impact report, ensuring that the report is thorough, contextualized, and agrees with the demographic and environmental data from an EJ Screen tool or its equivalent.	✓	✓

**V. ESTIMATED COSTS AND ADMINISTERING THE PROGRAM
(40 CFR 145.23 (b)(2))**

In the initial years after primacy, ADEQ estimates that \$461,500 annually will cover the costs of running the UIC program. The program’s initial sources of funding include billing for permitting and administrative services, annual fees from existing permits, billing for technical review, well installation fees, an EPA Primacy grant and Class V inventory fees. As the program’s size and needs change with time, revenues and allocations will be adjusted accordingly (*see* the program’s fee and revenue rules; specifically, A.A.C. R18-14-115).

Annual Program Costs and staff budget allocation are represented in the Annual Program Costs table below. For a description of the ADEQ staff who will carry out the State program, including the number, occupations, and general duties of the employees, please see Section III(A) above.

Annual Program Costs		
Role	Position	Cost
Administrative (Inventory, LTF, Fees, Billing)	Administrative Support (0.50 FTE)	\$ 40,000.00
UIC Data Management	Environmental Engineer (0.25 FTE)	\$ 27,500.00
UIC Inspections, Compliance, Enforcement	Inspector (1.25 FTE)	\$ 162,500.00
UIC Permit Specialist	Environmental Engineer/Hydrogeologist (0.5 FTE)	\$ 85,000.00
Legal, Compliance Assurance & Enforcement Support	Compliance Case Manager/Legal Specialist (0.40 FTE)	\$ 52,000.00
Leadership	Unit and Section Managers/Agency Director/WQD Director (0.3 FTE)	\$ 49,500.00
Other Direct Costs		
Annual Staff Training	Technical Staff	\$ 10,000.00
Staff Travel	Inspector	\$ 10,000.00
Attorney General Office Support (70 hrs/year)	Assistant Attorney General	\$ 25,000.00
Total Cost		\$ 461,500.00

Concerning the Annual Program Costs table above, the \$10,000 “Annual Staff Training” allocation includes development and maintenance of training modules for ADEQ UIC staff training, staff time spent in training, as well as, incidental staff attendance of virtual or in-person UIC-related conferences. The \$10,000 “Staff Travel” allocation covers staff transportation for inspections and conferences.

At the time the initial annual program costs were developed, there were only three permitted UIC facilities in the state. While ADEQ anticipates the UIC program to grow in the future, the initial budget and allocations reflect the program’s current size and a projection of its size in the first few years (significant growth is not expected). However, it should be noted that the fees associated with the UIC program in A.A.C. Title 18, Chapter 14, Article 1 were designed to generate funds as applications are received, allowing ADEQ to hire resources (both internally and externally) on an as-needed basis. If the need arises, ADEQ can hire from an established list of preferred professional service contractors or can hire outside of this list, should the need arise. Furthermore, ADEQ plans to adjust the budget and staff to align to the needs of the program on an ongoing basis (see A.A.C. R18-14-115).

VI. SOURCES AND AMOUNTS OF FUNDING (40 CFR 145.23 (b)(3))

As was stated in the previous section, the estimated cost for establishing, administering and then maintaining the Arizona UIC program in its first two years is \$923,000 (\$461,500 annually). In order to meet these projected costs, the program will operate on a fee-for-service model. ADEQ uses the term “fee-for-service” to mean a majority of the funding for the program will be generated through fees assessed to applicants and permittees of the program itself.

For Arizona’s UIC program, funding sources include revenue from hourly fees billed associated with permitting, administrative and technical review by ADEQ staff, annual fees billed for area permits, per well installation fees, Class V registration fees and an annual EPA UIC Primacy Grant. The projected annual revenue from the aforementioned sources are represented in the table below:

Fees	Annual Revenue
Permitting & Administrative Fees	\$72,500.00
Annual Fee for Area Permits	\$30,000.00
Technical Review Fees	\$142,100.00
Well Installation Fees	\$25,200.00
Class V Registration Fees	\$200,000.00
Grant	--
EPA Primacy Grant	\$105,000.00
Total Projected Revenue	\$574,800.00

In order to meet the amount of funding necessary, ADEQ projects its program and fees will collect approximately \$1,149,600 in the first two years which will comfortably cover the projected two-year cost of the program (\$923,000) and allow for a reasonable margin of error.

Permitting and Administrative review by ADEQ staff includes tasks such as application review and management, issuing public notice, collecting public comment and facilitating public hearings, as well as, ADEQ management and leadership review of draft permits. ADEQ estimates 500 hours of Permitting and Administration review annually in the initial years of the program. A \$10,000 Annual Fee will be assessed for the three existing UIC permittees. Technical Review will be billed by the hour and includes tasks such as groundwater and injection well modeling review, well pre-construction, construction and completion review, aquifer testing review, monitoring proposal review and periodic report review. ADEQ estimates 980 hours of Technical Review in the initial years of the program. Each UIC well installed will be charged a flat fee of \$200 under the Arizona UIC fee rules. ADEQ estimates 126 well installations annually in the initial years of the program. Also, each Class V well registration will be accompanied with a \$200 charge. ADEQ has data from its past drywell registration program suggesting over a thousand wells will be registered annually.

The permitting, administrative and technical review hourly rate fee can be found in A.A.C. R18-14-102(B). The annual fee for area permits can be found at A.A.C. R18-14-104, Table 3.1. The Well Installation and the Class V inventory fees can be found at A.A.C. R18-14-111(1) and R18-14-111(2), respectively. All UIC fees were determined by considering the necessary revenue needed to support the administration of the program and careful consideration of the appropriate locations to elicit that revenue.

Under the fee-for-service model, the primary source of funding in the early years of the program will come from Arizona's existing UIC permittees. The three permittees will support the program through annual fees, the per well charge for any new well installations, and ADEQ's billable hours in reviewing any permitting, administrative or technical-related materials by ADEQ staff.

ADEQ also expects the program to be supported by Class V drywell registrations. ADEQ projects over \$200,000 to be collected annually through these registrations based on data from Arizona's previous drywell registry. The \$200,000 breaks down to approximately 1,000 registrations annually at \$200 each. Additional revenue generation could occur should an application be submitted for a Class I, Class II, and Class VI well. Those fees can be found in A.A.C. R18-14-104 and A.A.C. R18-14-111. These funding sources will allow for sustained program growth.

Additionally, the program has established maximum account fees for billable hourly services which can be found in A.A.C. R18-14-102(C). For example, the maximum account fee for an application for permit, including permitting, administrative and technical review by ADEQ staff is \$200,000. Whereas, the maximum account fee that could be compiled in association with a complex modification is \$150,000. ADEQ purposely did not establish a maximum account fee for Class VI permit applications due to the potential complexity and nascent nature of carbon sequestration injection well processes.

Also, ADEQ will conduct reviews of its UIC budget, revenues, costs and allocations every three years, pursuant to A.A.C. R18-14-115. These reviews will ensure fees associated with the program and costs necessary to administer the program are reasonably balanced. In addition, these assessments will include consideration for the burden fees place on stakeholders.

VII. PERMITTING, ADMINISTRATIVE AND JUDICIAL PROCEDURES (40 CFR 145.23 (c))

A. Permitting

All permitting requirements in 40 CFR 145.11 are represented and required in state law through the Arizona Revised Statutes or the Arizona Administrative Code (*see* the Attorney General's Statement component of Arizona's Primacy Application for more information).

The UIC application process will be initiated through a pre-application meeting with the applicant in order to discuss proposed injection well(s), the site and the requirements for application submittal under A.A.C. R18-9-C616 (for permits, Classes I, II, III and V) and

A.A.C. R18-9-J657 (for Class VI). It should be noted that owners or operators of Class VI wells must submit all required reports, submittals, and notifications under Part J of A.A.C. Title 18, Chapter 9, Article 6 to ADEQ and EPA via the Geologic Sequestration Data Tool (GSDT) (*see* A.A.C. R18-9-J666(5)).

The application itself will be comprised of two main sections, the administrative requirements and the technical report. The administrative requirements section consists of general information gathering, such as the type of permit being applied for, the facility operator, the facility owner, the facility's land type and more (*see* A.A.C. R18-9-C616). The Technical Report section of the application will consist of a determination of the area of review (AoR), a facility and well map, an AoR map, a USDW map, lithologic maps of the local and regional area and more well class specific technical requirements which can be found in Parts E, F, C and I of the Arizona UIC rule (A.A.C. Title 18, Chapter 9, Article 6).

ADEQ's UIC permitting and regulatory process will include application submittal, administrative completeness review, substantive review, issuance of the draft permit, public notice, and final permit approval.

B. Application Review

The following steps will be taken in reviewing permit applications and issuing the final permit decision:

1. First, submittal of the application will occur electronically via MyDEQ (ADEQ's e-Permitting Online Portal (<https://www.azdeq.gov/mydeq>)) for Classes I, II, III and V. Electronic submittal for Class VI wells will occur electronically via the Geologic Sequestration Data Tool (GSDT).
 - a. MyDEQ has the ability for applicants to earmark their submitted application information as confidential. Thereafter, confidential business information (CBI) will be kept separate and confidential in ADEQ's databases and records.
 - b. The submittal package must also include the appropriate registration fee in accordance with A.A.C. R18-14-104.
 - c. For Class VI applications, an Environmental Justice (EJ) report must accompany the application submittal (for more on Class VI EJ procedures see Section VII(C) below).
2. Next, an initial review of the application will be conducted in order to determine administrative completeness (A.A.C. R18-1-503).
3. Next, the substantive review process will determine if the proposed injection well(s) meet the requirements of the applicable rules (A.A.C. R18-1-504).
4. If the reviewers identify any elements that may appear to be deficient with regard to an applicable requirement, a request for additional information and a list of concerns and comments relevant to the application package will be prepared (A.A.C. R18-1-504(C)).
 - a. If the applicant does not sufficiently respond to the request for additional information (A.A.C. R18-1-504(C)) with the proper application information

specified in A.A.C. R18-1-503 or the applicable requirements in A.A.C. Title 18, Chapter 9, Article 6, within a reasonable amount of time, the application will be denied and a denial letter will be issued to the applicant pursuant to A.A.C. R18-1-507.

- b. Please note that an administratively incomplete application does not rise to the level of a Draft Permit under A.A.C. R18-9-C618.
5. When all comments, information requests, and concerns have been satisfactorily addressed by the applicant, the Director will tentatively decide whether to prepare a draft permit or to deny the application (A.A.C. R18-9-C618).
 - a. If the Director decides to issue a draft permit, the applicant will be provided with the draft permit and the fact sheet and allowed reasonable time for informal comment prior to publicly noticing the draft permit and fact sheet.
 - b. (*see* A.A.C. R18-9-C618(B) and (D) for application denial procedure)
6. Next, the Director will give public notice that a draft permit has been prepared and allow 30 days for public comment (A.A.C. R18-9-C620).
 - a. A public hearing can be requested by a member of the public during the public comment period (A.A.C. R18-9-C621 and R18-9-C622).
 - b. Pursuant to A.A.C. R18-9-C620(D)(1)(b) and (c), recipients of a copy of the public notice include:
 - i. any affected federal, state, tribal, or local agency, or council of government.
 1. In implementing this requirement, ADEQ will evaluate which entities from the list are affected based on the UIC permit going to public notice and deliver a copy thereto. Further implementation will include searching ADEQ's internal databases for the facility applying for the permit to see if other regulatory programs apply to the facility.
 - ii. the Advisory Council on Historic Preservation (ACHP)
 1. the Advisory Council on Historic Preservation (ACHP) is considered an affected federal agency under A.A.C. R18-9-C620(D)(1)(b) and will receive a copy of each public notice pursuant to 40 CFR 124.10(c)(1)(iii), in conjunction with 40 CFR 145.11(a)(28).
 - iii. for Class I injection well UIC permits only, state and local oil and gas regulatory agencies and state agencies regulating mineral exploration and recovery; and
 - iv. any agency which has issued or is required to issue a permit for the same facility or activity.
 1. This determination will be made by ADEQ Staff prior to public notice issuance.
 - c. Pursuant to 40 CFR 124.10(c)(1)(ii), recipients of a copy of the public notice include:

- i. any other agency which the Director knows has issued or is required to issue a RCRA, UIC, PSD (or other permit under the Clean Air Act), NPDES, 404, sludge management permit, or ocean dumping permit under the Marine Research Protection and Sanctuaries Act for the same facility or activity (including EPA when the draft permit is prepared by the State).
 - d. Pursuant to A.A.C. R18-9-C620(D)(1)(b), recipients of a copy of the public notice include:
 - i. the Advisory Council on Historic Preservation (ACHP)
 - ii. *See* 40 CFR 124.10(c)(1)(iii), in conjunction with 40 CFR 145.11(a)(28).
 - e. When Public Notices or Hearings are made, the Department will take reasonable measures to provide access to department services for individuals with limited ability to speak, write or understand English and/or to those with disabilities. Stakeholders may request language translation, American Sign Language (ASL) interpretation, Communication Access Realtime Translation (CART) captioning services or disability accommodations by contacting ADEQ's Title VI Nondiscrimination Coordinator.
- 7. Thereafter, the Director will respond to comments and issue a final permit decision (A.A.C. R18-9-C623 and R18-9-C627). After a decision to issue a permit has been made, a package including the permit, a brief summary, an updated fact sheet, and a public notice announcement will be prepared for the Director approval (*see* A.A.C. R18-9-C623 and R18-9-C627).
 - a. In the event of permit denial, a letter stating the reasons for denial will be sent to the applicant. The decision to deny the permit may be appealed (R18-9-C627(B)); *see* subsection (G) below for administrative and judicial appeal procedure).
- 8. An approved permit is signed by the Director, assigned an issuance date, an effective date, and an expiration date per A.A.C. R18-9-C628, if applicable.
- 9. New injection operations may not commence until well construction is complete, construction requirements are met, financial responsibility has been properly demonstrated, mechanical integrity has been demonstrated, and approval has been granted by the Director (A.A.C. R18-9-D636).

C. Environmental Justice – Class VI

As part of the Class VI application process, ADEQ will request the owner or operator to conduct an Environmental Justice (EJ) review and submit a report alongside or as a component of the application, itself. EJ review will be encouraged as early in the process as possible, including at initial, pre-application meetings. At a minimum, the report would include the identification of EJ areas in the Area of Review (AoR). Evaluations of the report will consider the presence of existing environmental hazards, cumulative impacts, potential exposure pathways, and vulnerable sub-populations, as well as the likely distribution of any environmental and public health benefits from the proposed Class VI project in affected communities.

When the application is submitted, ADEQ staff will use EPA's EJScreen, or a similar tool, to evaluate the location of the project and to identify environmental and social

stressors in specific communities. ADEQ will use the results to determine if an enhanced public comment period will be required for the application. An enhanced public comment period may extend the public comment period for the application and may require a more inclusive public participation process such as targeted public outreach and creation of visual tools and approachable language. Enhanced public outreach may also include scheduling public meetings at times convenient for residents with appropriate translation services where needed, enabling face-to-face or written feedback on permit applications early in the review process, convening local stakeholders and community groups for safety planning, and supporting the development of community benefits agreements.

ADEQ will proactively work within its legal authority to prevent and/or reduce any adverse impacts to underground sources of drinking water from well construction and operational activities. While the UIC program is designed to protect underground sources of drinking water (USDWs), ADEQ may consider other mitigation measures in order to ensure Class VI projects do not increase environmental impacts and public health risks in already overburdened communities such as carbon dioxide monitoring, release notification networks and installation of enhanced pollution controls. Additional considerations include the adoption of other measures to offset impacts by improving environmental amenities for communities identified within the delineated area and providing resources for clean-up of previously degraded public areas, as authorized by state law.

D. Notes on Public Notice

In state regulation, at A.A.C. R18-9-C620(D)(1)(b), UIC public notices must be delivered to any affected federal, state, tribal, or local agency, or council of government. Affected agencies include those known to have issued or who are required to issue a RCRA, UIC, PSD (or other permit under the Clean Air Act), NPDES, 404, or sludge management permit for the same facility or activity. To identify affected agencies, ADEQ will search internal databases to determine whether other regulatory programs apply to the facility applying for the permit.

Also, the Advisory Council on Historic Preservation (ACHP) is considered an affected federal agency under A.A.C. R18-9-C620(D)(1)(b) and will receive a copy of each public notice for a UIC Permit.

For Class I UIC permits, state and local oil and gas regulatory agencies and state agencies regulating mineral exploration and recovery are considered affected state and local agencies under A.A.C. R18-9-C620(D)(1)(b) and will receive a copy of the public notice for those permits.

For the purposes of A.A.C. R18-9-C620(D)(1)(e), the contact list developed from past permit proceedings and public outreach refers to a UIC-specific email subscription list that includes all current UIC permittee contacts, all past UIC permit commenters (both oral and written) and any email subscribers to the UIC-specific email subscription. In addition, UIC public notices will be posted on ADEQ's website and will be posted on

appropriate public bulletin boards in the communities immediately adjacent to the proposed facility.

For the purposes of A.A.C. R18-9-A601(44), “major facility” means all facilities requiring a permit under the UIC program. “Major facility” does not include UIC Class V wells authorized by rule under A.A.C. R18-9-I650 *et seq.*

E. Arizona’s Aquifer Protection Permit Program and UIC Class V Wells

1. UIC Class V Wells

All UIC Class V wells are required to comply with the inventory requirements detailed in A.A.C. R18-9-I652, unless specifically notified to apply for a permit under A.A.C. R18-9-I651. Under the UIC program, most Class V wells will:

- not require a permit,
- will be subject to the R18-9-I652 inventory requirements, and
- will be considered authorized by rule (ABR).

2. UIC / APP Interface

Per A.R.S. § 49-250(B)(26) and A.A.C. R18-9-103(6), all UIC wells with permits are exempt from Arizona’s APP program. Concerning Class V ABR wells, some (but not all) are additionally subject to the APP program.

It should be noted that APP permit coverage does not replace the UIC inventory requirements.

3. Class V Wells Subject to Both Programs

This subsection identifies and describes wells subject to both UIC Class V ABR and APP program requirements upon primacy.

Generally, A.A.C. R18-9-A604(E)(1) delineates a non-exhaustive list of UIC Class V ABR wells. A vast majority of Arizona’s UIC Class V ABR wells are stormwater injection wells (A.A.C. R18-9-A604(E)(1)(d)). ADEQ estimates Arizona has more than 65,000 stormwater injection wells that qualify and must follow the UIC Class V ABR requirements. However, when it comes to the APP program, most stormwater injection wells are exempt under A.R.S. § 49-250(B)(23). Additionally, it should be noted that Arizona repealed its state stormwater drywell regulatory program in 2022 in order to avoid duplicative regulation with the UIC Class V ABR requirements.

The APP program regulates, and will continue to regulate upon primacy, a small subset of stormwater injection wells with a greater risk of groundwater contamination under A.A.C. R18-9-C301 and A.A.C. R18-9-C304. These permits (known as APP General Permits, Types 2.01 and 2.04) regulate injection wells that drain stormwater in areas where:

- Type 2.01 - hazardous substances are used, stored, loaded, or treated, and at
- Type 2.04 - motor fuel dispensing facilities where motor fuels are used, stored, or loaded.

These permits do not authorize disposal of hazardous substances, nor motor vehicle waste, but do acknowledge the increased risk these wells pose to the environment. In fact, A.A.C. R18-9-C301(D)(1) and R18-9-C304(E)(1) explicitly require permittees to maintain and operate Type 2.01 and 2.04 injection wells only for the subsurface disposal of stormwater. Such injection wells are additionally required to inventory as UIC Class V wells ABR.

Aquifer storage and recovery (ASR) wells (A.A.C. R18-9-A604(E)(1)(f)) are subject to the UIC Class V ABR requirements, but may additionally be subject to the APP program. A number of ASR wells in Arizona currently hold individual APP permits (see A.A.C. Title 18, Chapter 9, Article 2).

A.A.C. R18-9-A604(E)(2)(a) exempts single-family residential septic system wells or non-residential septic system wells used solely for the disposal of sanitary waste with a design capacity of less than 3,000 gallons per day from regulation under the UIC Program. This rule effectively exempts the vast majority of the APP program's onsite wastewater treatment facility subprogram (A.A.C. Title 18, Chapter 9, Article 3, Part E) from the UIC Program because all but one of the permits in the subprogram have a design capacity of less than 3,000 gallons per day. Onsite wastewater treatment facilities used solely for the disposal of sanitary waste with a design capacity of more than 3,000 gallons per day are subject to the APP Type 4.23 General Permit, which provides requirements for onsite wastewater treatment facilities with a design flow of 3,000 to less than 24,000 gallons per day. These facilities are subject to both the UIC Class V ABR requirements and the APP Type 4.23 General Permit requirements.

F. Applicable Standards – National Primary Drinking Water Regulations Maintenance

A.A.C. R18-9-B608(A) prohibits the movement of fluid containing any contaminant into USDWs, if the presence of that contaminant may cause a violation of any primary drinking water regulation under this Article, as shown in Table 1 (see A.A.C. Title 18, Chapter 9, Article 6, Table 1 – located at the end of the article). During the Arizona state UIC rulemaking, Table 1 was compiled based on contaminants identified in 40 C.F.R. § 141 (Maximum Contaminant Levels – MCLs) that could occur as a result of underground injection.

Upon the establishment of new applicable MCLs or the changing of existing applicable MCLs in 40 C.F.R. § 141, ADEQ will open a rulemaking docket in order to align Table 1: Applicable Standards – National Primary Drinking Water Regulations with 40 C.F.R. § 141. Through the Arizona state rulemaking process, ADEQ will update Table 1 in a timely fashion.

G. Administrative and Judicial Procedures

1. Final permit decisions are appealable agency actions. Upon a final permit decision, an applicant or an adversely affected person may appeal the decision to one of two state administrative appeal bodies, depending on the type of permit (*see* A.A.C. R18-9-C627A).
 - a. Individual permits may be appealed to the Water Quality Appeals Board (WQAB) pursuant to A.R.S. § 49-323. The WQAB allows for the appeal of any grant, denial, modification or revocation of any individual permit issued as part of the UIC Program by any person who is adversely affected by the action or by any person who may with reasonable probability be adversely affected by the action and who has exercised any right to comment on the action as provided in A.R.S. § 41-1092.03. Any interested person may intervene in the appeal as a matter of right. The board shall hold a hearing if questions of material fact are at issue in the appeal. Notice and hearing procedures are subject to Title 41, Chapter 6, Article 10.
 - b. Any UIC appeal from a final permit decision that does not fall into the jurisdiction of the WQAB may be appealed to the Office of Administrative Hearings (OAH) pursuant to A.R.S. § 41-1092 *et seq.* Appealable agency action is defined as “an action that determines the legal rights, duties or privileges of a party, including the administrative completeness of an application...and that is not a contested case....” (*see* A.R.S. § 41-1092(3)).
2. Arizona Administrative Appeals Summary:
 - a. Any UIC appeal from a final permit decision that does not fall into the jurisdiction of the WQAB, would be appealable to OAH if the decision is an appealable agency action.
3. After exhausting their administrative rights, a party may appeal the final administrative decision from the WQAB or the OAH to the applicable Arizona superior court as a judicial review of an administrative appeal. *See* A.R.S. §§ 49-323(B), 41-1092.08(H).

H. Data Management

ADEQ maintains an electronic document receiving system to accept electronic documents under the proposed UIC program sufficient to meet the requirements for a reporting system under an EPA-authorized state program pursuant to 40 CFR § 3.2000. Specifically, ADEQ will utilize a comprehensive data management program, to receive electronic documents in satisfaction of requirements under the UIC program, that is able to generate all data necessary with respect to such electronic documents including an enforceable copy of record (COR). The generated data, including the COR, meets all security, recordkeeping, and certification requirements of 40 CFR § 3.2000(b) Finally, the Arizona Attorney General’s Office certifies that the State of Arizona has sufficient legal authority over enforcement of an electronic reporting system such that ADEQ’s proposed data management program for UIC complies with the requirements of 40 CFR

§3.2000(c) (*see* the Attorney General’s Statement component of Arizona’s Primacy Application for more information).

**VIII. PERMIT DOCUMENTS
(40 CFR 145.23(d))**

A. Applications

Application forms for Classes I, II, III, V and VI permits are provided in Appendix, Document A-1. The applicant shall submit an original Permit Application and a Technical Report. The Technical Report is described above in Section VII. Both documents shall be submitted electronically through MyDEQ, ADEQ's e-Permitting Online Portal at <https://www.azdeq.gov/mydeq>, or, in the case of a Class VI application, using the Geologic Sequestration Data Tool (GSDT).

B. Permits

Permit templates for Classes I, II, III, V and VI are provided in Appendix A-2.

C. Reporting

ADEQ will use existing EPA 7520 and inventory forms for reporting purposes. UIC permitting and compliance/inspection data collected through forms 7520-1, -2A, -2B, -3, and -4 and annual well inventory will be reported to EPA via the UIC Data Application (<https://uicdata.epa.gov/>). The 7520 forms are important informational documents covering Arizona UIC Program activities such as permit review, issuance, compliance, and inspections. The Arizona UIC Program will submit the 7520 form data to EPA Region 9 biannually in accordance with the schedule below. The 7520 forms and instructions are available at EPA’s UIC website, <https://www.epa.gov/uic/underground-injection-control-reporting-forms-state-summary-information>.

Reporting Requirements	Midyear (Second Quarter) Forms (7520 -2A, -2B, -4)	End of Year (Fourth Quarter) Forms (7520-1, -2A, -2B, -3, -4, inventory)
Reporting Period	October 1 – March 30	April 1 – September 30
Final Submittal to EPA UIC Data Application	May 15	November 15

**IX. COMPLIANCE TRACKING AND ENFORCEMENT
(40 CFR 145.23 (e))**

A. Compliance Monitoring

Compliance monitoring will, at a minimum, include on-site inspections conducted by inspectors in the GPS’s Inspections and Compliance Unit and a review of operating and monitoring reports submitted in compliance with permit requirements and the applicable UIC rules in Title 18, Chapter 9, Article 6 of the Arizona Administrative Code to verify that the construction, completion, operation, maintenance, and site closure of UIC

projects are performed according to approved plans and specifications and meet all permit and regulatory requirements. Please reference ADEQ's Compliance and Enforcement Handbook (Appendix, Document A-6) for current and detailed policies on compliance and enforcement.

The state's compliance monitoring program includes the following activities:

- Reviewing plans and reports (e.g., well completion reports, test results, workover reports) submitted by permit applicants or owners or operators.
- Conducting site inspections to verify or witness construction, operation and testing/maintenance procedures. Site inspections will be conducted by inspectors in the GPS's Inspections and Compliance Unit and will be followed by the issuance of an inspection report on the facility's compliance status with applicable state law and the UIC program.
- Issuing "action update letters" (AULs) providing a regulated party with status updates on agency action resulting from an inspection or a file review.
- Investigating complaints alleging improper construction, completion, operation or maintenance of a UIC project.
- Performing compliance monitoring (e.g., reviewing monitoring, operating and maintenance data) to verify compliance with permit conditions, regulations and any other conditions or stipulations.
- Conducting annual inspections and compliance follow-up inspections of UIC projects.

ADEQ shall submit to the EPA quarterly non-compliance reports as specified in 40 CFR § 144.8(a). Quarterly reports will be submitted in accordance with the following schedule (or as otherwise specified in ADEQ's FY UIC Workplan):

- October, November, December – due January 30
- January, February, March – due April 30
- April, May, June – due July 30
- July, August, September – due October 30

B. Enforcement Procedures

Any person violating applicable Arizona Revised Statutes, Arizona Administrative Code, or any condition of a UIC permit, or any rule or order of ADEQ is subject to enforcement action. The agency is responsible for initiating, pursuing and resolving enforcement actions. Enforcement proceedings may result in modification, revocation or suspension of any permit issued under authority of the UIC Program.

The agency will handle minor UIC program violations in accordance with ADEQ's Compliance and Enforcement Handbook, Chapter 3: Informal Enforcement (Appendix, Document A-6). Tools for handling minor violations include, correspondence between agency staff and the alleged violator and issuance of a Notice of Opportunity to Correct

(NOC) or a Notice of Violation (NOV). The Handbook includes procedures for escalating enforcement if the violation is not remedied.

The agency will handle escalated or major UIC program violations in accordance with ADEQ's Compliance and Enforcement Handbook, Chapter 4: Formal Enforcement (Appendix, Document A-6). Tools for handling escalated or major violations include, issuance of a Consent Order, a Compliance Order, Civil Referral and Criminal Referral (to the Attorney General's Office (AGO)).

ADEQ staff use a database to electronically track all NOCs, NOVs, Consent Orders, Compliance Orders, and AGO referrals.

The Class VI regulations include strong protections for communities to prevent contamination of underground drinking water sources (USDWs). These regulatory protections include a variety of measures, including proper site characterization and strict construction, operating, and monitoring requirements to ensure well and formation integrity, proper plugging of wells, and long-term project management and post-injection site care to ensure leakage prevention. ADEQ will properly implement and enforce these requirements to protect communities from potential harms associated with injection wells. ADEQ will make reports of enforcement activities accessible to the public.

X. SCHEDULE FOR ISSUING PERMITS (40 CFR 145.23 (f)(1) & (2))

The land within the state of Arizona under state jurisdiction has a total of five (5) federally issued UIC permits. All five permits authorize Class III well injection through either Area or Class III permits. The permits are spread across three permittees. Two permittees hold Area permits for their Class III wells (in-situ copper mines), while the remaining permittee holds three individual permits for Class III wells (in-situ salt mine). These permits were issued by the EPA.

ADEQ does not anticipate issuing any new permits in the near future and therefore has not drafted a priority schedule for permit issuance.

Upon primacy, ADEQ and EPA have agreed that EPA will transfer the 5 Federal UIC permits to ADEQ for administration. Thereafter, ADEQ plans to make administrative modifications to the permits as soon as possible under the authority in rule, A.A.C. R18-9-C632(E)(3). These administrative modifications will be limited to regulation reference updates, from the Code of Federal Regulations (CFR) to the corresponding rules in the Arizona Administrative Code (AAC), as well as other non-substantive modifications for the purpose of adjusting the permits to fit within the state authorities and program.

The administrative modifications will be "modifications" as opposed to a "minor modifications" as defined in the UIC rules at A.A.C. R18-9-C631, C632 and C633. These modifications will follow the draft permit process like any other UIC modification pursuant to A.A.C. R18-9-C631(C) and A.A.C. R18-9-C618. This process includes ADEQ's issuance of a fact sheet, as well as the allowance of informal comment by the permittee, followed by public notice, public

comment, a public hearing, final permit decision and a responsiveness summary to comments. Please note that A.A.C. R18-9-C631(D) limits the scope of comments on a proposed modification to the conditions up for modification and not the rest of the permit.

**XI. MECHANICAL INTEGRITY TESTING (MIT) REQUIREMENTS
(40 CFR 145.23 (f)(3))**

A. MIT Implementation Table

Well Class	Internal MIT	External MIT
I (not incl. HW)	5 years	Continuous monitoring of annulus pressure (except for municipal wells)
II	5 years	Once
III	5 years ¹	5 years ¹
IV	Illegal wells	
V	None	None
VI	-	1 year

¹MIT at least once every five years during the life of the well for salt solution mining. Internal and external MIT frequencies for other types of solution mining will be specified in the UIC Permit.

B. MIT Implementation

Permittees shall conduct Mechanical Integrity Testing (MIT) to demonstrate that there is no significant leak in the casing, tubing, or packer; and there is no significant fluid movement into an USDW through channels adjacent to the well bore. To evaluate the absence of significant leaks the operator will, following an initial annulus pressure test, continuously monitor injection pressure, rate, injected volumes, pressure on the annulus between tubing and long-string casing, and annulus fluid volume. Reports of the data and other pertinent information must be submitted to ADEQ in accordance with the regulations and the authorizing permit. UIC Permit conditions may require additional internal and/or external MITs if routine well monitoring indicates significant fluid movement within the well annulus or into the surrounding formation.

ADEQ will require MIT at all Class I, and II wells at least once every five years. MIT for Class III wells is dependent on the type of solution mining, casing, and site-specific criteria. Per A.A.C. R18-9-G647(B)(3), MIT at Class III wells is required at least once every five years for salt solution mining. External MIT frequencies for Class III wells used for other types of solution mining and casing are typically required once but will be prescribed in the UIC Permit to address site-specific criteria.

Per A.A.C. R18-9-B613(C)(3) and (4), cementing records with a monitoring program prescribed by A.A.C. R18-9-G647(B) designed to verify the absence of significant fluid movement adjacent to the well bore can be used for satisfying external MIT requirements. Consideration of site-specific criteria per A.A.C. R18-9-G646 and A.A.C. R18-9-G647(B) is used in specifying monitoring requirements in the permit. Upon a confirmed detection of mining fluids from a monitoring program, the permit may require additional testing to

confirm a leak. External MITs may include tracer surveys, and/or temperature or noise logs, as required.

Class VI MIT occurs more frequently and includes annual external MIT. Tracer surveys, temperature or noise logs will also be performed annually for Class VI wells to determine the absence of significant fluid movement.

Acceptable methods for determining mechanical integrity are specified in A.A.C. R18-9-B613 or as specified in the UIC Permit. The Permittee must provide a 30-day advance notice of the intent to conduct a MIT, and it is the intent of ADEQ to routinely witness testing at the majority of the facilities. For large Area facilities such as the Florence Copper and Gunnison Copper in situ mines, ADEQ will conduct routine monthly inspections that include witnessing well workovers, aquifer tests, well abandonment, review of reports (well completion and operations), investigating complaints, and observing MIT. ADEQ does not propose to require MIT on Class V wells such as dry wells and aquifer storage and recovery wells.

XII. NEW PERMIT COMMUNICATION REQUIREMENTS (40 CFR 145.23 (f)(4))

As part of primacy, EPA will transfer the five Federal UIC permits for the facilities located within the state of Arizona under state jurisdiction whereupon ADEQ will make administrative modifications to them as soon as possible. At primacy, ADEQ will send an email to an established and appropriate contact from the three existing UIC permittees within the state's jurisdiction, notifying them of the permit transition process described in Section X above.

ADEQ is not aware of any UIC facilities located within the state of Arizona under state jurisdiction other than the five permitted facilities identified in Section X. Permits for the five facilities identified above will be transferred to ADEQ, as described in Section X. All other injection wells within the state of Arizona under state jurisdiction are either authorized by rule (Class V wells) or are unauthorized. No owners or operators of injection wells will need to apply for and obtain a permit upon primacy.

ADEQ's former drywell registration program was repealed in September 2022. In preparation for the repeal of that program, a communication campaign was executed notifying the state drywell registrants of the repeal of the state-based program, the ongoing requirement to inventory as Class V wells with EPA and to watch for the upcoming primacy where ADEQ will take primary enforcement authority over the UIC program, including the Class V inventory. In addition to these communications, ADEQ will notify the Class V authorized by rule regulated community in Arizona at primacy of the inventory requirements. This will be executed through the bulk emailing of existing Class V contacts, an announcement posting on ADEQ's website and a webinar.

**XIII. STATE UIC RULE
(40 CFR 145.23 (f)(5))**

ADEQ adopted UIC regulations on September 6, 2022 (*See* A.A.C. R18-9-A601 et seq.). The final rule can be found in the Appendix, Document A-3.

**XIV. HYDROCARBON STORAGE COMPLIANCE PROGRAM
(40 CFR 145.23 (f)(6))**

Enhanced recovery and hydrocarbon storage (into underground formations such as salt caverns) wells refer to Class II wells that are utilized for the disposal of fluids associated with the production of oil and natural gas; or utilized for the injection of fluids (including brine, freshwater, steam, polymers, and carbon dioxide) into petroleum bearing formations for the purpose of enhanced recovery operations. Diesel fuels are also utilized as a component of hydraulic fracturing fluid or for injection for the storage of hydrocarbons that are liquid at standard temperature and pressure. There are currently no Class II wells permitted in Arizona's state jurisdiction; however, if any such wells are permitted in the future, they will be covered under the UIC program and regulated by ADEQ. Natural gas storage wells do not fall under the jurisdiction of the UIC Program and are exempt per A.A.C. R18-9-A601(68) and A.A.C. R18-9-A602(G)(2). The underground storage of natural gas is regulated and authorized by the Arizona Oil and Gas Conservation Commission under A.A.C. R12-7-175(2)(b).

All Class II enhanced recovery and hydrocarbon storage wells shall be constructed per the requirements specified in A.A.C. R18-9-F643. The operator is required to monitor the injection pressure, flow rate, and cumulative volume monthly for enhanced recovery wells in accordance with A.A.C. R18-9-F644(B)(2)(b). For hydrocarbon storage wells, the operator is required to monitor the injection pressure, flow rate, and cumulative volume daily in accordance with A.A.C. R18-9-F644(B)(2)(c). Monitoring results for both enhanced recovery and hydrocarbon storage wells shall be reported annually to ADEQ.

Hydrocarbon storage and enhanced recovery may also be monitored on a field or project basis rather than on an individual well basis by manifold monitoring. Manifold monitoring may be used in cases where facilities, consisting of more than one injection well, operate with a common manifold. Separate monitoring systems for each well are not required provided the owner/operator demonstrates that manifold monitoring is comparable to individual well monitoring.

As required in A.A.C. R18-9-D636, the operator shall assume full financial responsibility to close, plug, and abandon all enhanced recovery and hydrocarbon storage wells. The permittee shall demonstrate financial assurance to ADEQ by the submission of a surety bond, or other adequate assurances, such as a financial statement.

**XV. STATE INJECTION WELL INVENTORY
(40 CFR 145.23 (F)(7))**

The table below represents the current number of UIC facilities, the injection well classes, the number of federally issued permits and authorized by rule wells.

ADEQ will have electronic databases established in order to manage permitted injection wells and inventory wells that are authorized by rule in the state. Please reference Section VII – Subsection H – Data Management, above.

Injection Well Class	UIC Regulated Facilities	Number of Federally issued Permits	Number of Wells	ABR'd Wells
I	0	0	0	n/a
II	0	0	0	n/a
III	3	5	52 (Active) 3,259 (Proposed)	n/a
IV	0	0	0	n/a
V	Approx. 16,000	0	Approx. 65,000	Approx. 65,000
VI	0	0	0	n/a

XVI. USDW DESIGNATION, AQUIFER EXEMPTIONS AND INJECTION DEPTH WAIVERS (40 CFR 145.23 (f)(8) & (9))

ADEQ will make USDW determinations for each UIC application. Applications will require a written narrative describing the hydrogeology of each aquifer such as the lithology and the geologic structure (joints, faults, folds, strike, and dip). The description should include the hydrology of the aquifer such as hydraulic conductivity, saturated thickness, observed yields, and groundwater flow directions. A generalized discussion of hydrocarbon, mineral or geothermal potential in the state should also be included in the narrative. Groundwater quality of each aquifer including tabulation of average range of major ion, Total Dissolved Solids (TDS), and trace metal concentrations, all supporting materials (including references) should be provided in the description.

Pursuant to A.A.C. R18-9-A606, a USDW or portion thereof may become an AE for Class VI well purposes if the following criteria are met:

1. The areal extent of an aquifer exemption for a Class II enhanced oil recovery or enhanced gas recovery well may be expanded for the exclusive purpose of Class VI injection for geologic sequestration under R18-9-A605(D) if it meets the following criteria:
 - a. It does not currently serve as a source of drinking water; and
 - b. The total dissolved solids content of the ground water is more than 3,000 mg/l and less than 10,000 mg/l; and
 - c. It is not reasonably expected to supply a public water system.

When a request for an AE is made by an applicant or a permittee, ADEQ will consult with EPA as soon as is reasonably possible. These early discussions will serve to identify potential technical or legal issues that may require additional consideration prior to submitting an ADEQ-proposed AE to EPA. In addition to procedures for AEs in A.A.C. R18-9-A605 and A.A.C. R18-9-A606, ADEQ will use the Aquifer Exemption Checklist in compiling necessary information to determine the eligibility of an aquifer for exemption (*see* Appendix, Document A-4)

As described in A.A.C. R18-9-A608(A), all USDWs which have not been exempted, are protected as such. Issuances, modifications, or revocations and reissuances of permits that necessitate new AEs or enlargements of a previously approved AE are not effective until the AE has been approved by EPA.

As is stated above, AE requests proposed by ADEQ are not final until approved by EPA, except those that meet the criteria in R18-9-A605(B)(4)(b), which become final if EPA has not disapproved the proposed designation within 45 days. The state will utilize an AE checklist in Appendix, Document A-4, as a guide for reviewing AE requests and will submit the checklist for EPA's review when seeking approval of the proposed AE. For approval of an AE, the EPA must determine that the state has demonstrated the aquifer or the portion of the aquifer identified as exempt does not serve as a source of drinking water per the regulatory criteria in 40 CFR 146.4. EPA shall document all reasons and factors considered in a Statement of Basis or decision memorandum regarding the final AE decision. The Statement of Basis should include explanations of the factual, technical, and legal bases for the determination.

The issuance of a UIC permit and the approval or denial of an AE are separate regulatory actions. If the operation of a UIC facility in a UIC permit is dependent on EPA's approval of an AE or AE expansion, ADEQ may issue the permit under the condition that injection is not authorized until the AE is approved by EPA.

C. EPA Approved Aquifer Exemptions

EPA has issued three AEs for in situ copper mining projects in Arizona. Each AE is related to the following Area, and Class III UIC permits:

- EPA issued an AE on October 13, 1999 for the In-Situ Production of Copper Permit # AZ397000001 known as the “Santa Cruz Project” in Casa Grande, Arizona. The Permit was withdrawn. The AE is still effective, and the documents are included in the Appendix, Document A-5.
- EPA issued an AE on May 1, 1997, for the In-Situ Production of Copper Permit # AZ396000001 known as the “Florence Copper Project” in Florence, Arizona. This Permit was revoked and replaced with the UIC Permit # R9UIC-AZ3-FY11-1, for the Florence Copper Production Test Facility at the same site in Florence, Arizona. EPA made a correction to the AE boundary on August 10, 2022 and issued a Draft Class III In-Situ Production of Copper Permit # R9UIC-AZ3-FY19-1 in August 2022 for the commercial scale Florence Copper Project. If a final Permit is issued, it will use the 1997 AE that continues to be effective. The AE documents are included in the Appendix, Document A-5.
- EPA issued an AE on June 6, 2018 for the In-Situ Production of Copper Permit #R9UIC-AZ23-FY16-1 known as the “Gunnison Copper Project” in Cochise County, Arizona. The AE documents are included in the Appendix, Document A-5.

Currently, there are no pending AE requests in Arizona.

D. Class VI Injection Depth Waivers

Class VI Carbon Sequestration wells are typically required to inject at a specific depth. A.A.C. R18-9-J670 allows an applicant to request a waiver of the injection depth requirement upon concurrence from EPA. The issuance of a Class VI UIC permit and the written concurrence or non-concurrence of an injection depth waiver (IDW) are separate regulatory actions. If the operation of a Class VI UIC facility in a UIC permit is dependent on EPA’s written concurrence with a proposed IDW, ADEQ may issue the permit under the condition that injection is not authorized until written concurrence has been made by EPA.

XVII. PROGRAMMATIC BAN ON CLASS IV WELLS (40 CFR 145.23 (f)(10))

A. Class IV Wells

Class IV wells are prohibited by the State UIC regulations at A.A.C. R18-9-B609(B), except for Class IV wells that meet the criteria under A.A.C. R18-9-B609(B)(3) – (remediation wells). Also, the State Hazardous Waste regulations prohibit the underground injection of hazardous waste at A.A.C. R18-8-270(B)(2)(b). A.A.C. R18-9-B609(B) prohibits the injection of hazardous or radioactive wastes into or above a formation with a USDW located within one-quarter mile of a well bore.

A.A.C. R18-9-B609(B)(3) provides that wells used to inject contaminated groundwater that has been treated and is being reinjected into the same formation that it was drawn are not prohibited if such injection is approved by EPA or ADEQ pursuant to one of the following: provisions for cleanup of releases under CERCLA, the requirements and

provisions under RCRA, or the requirements and provisions under other applicable state laws for corrective and remedial action.

B. Definition of Hazardous Waste

The federal UIC program definitions at 40 C.F.R. 144.3 state “[h]azardous waste means a hazardous waste as defined in 40 CFR 261.3.” The ADEQ UIC program defines hazardous waste in A.A.C. R18-9-A601(37) as “a hazardous waste as defined in A.R.S. § 49-921.” The hazardous waste definition in A.R.S. § 49-921(5) incorporates A.R.S. § 49-922. A.R.S. § 49-922(A) requires ADEQ to adopt a hazardous waste program consistent with the federal hazardous waste regulations, including the hazardous waste definition in 40 C.F.R. 261.3.

XVIII. INVENTORY PLAN FOR EXISTING CLASS V WELLS (40 CFR 145.23 (f)(11))

Before primacy, the owners or operators of all Class V injection wells within state jurisdiction were required to provide inventory information to EPA. Upon primacy, ADEQ will administer the Class V inventory in accordance with A.A.C. R18-9-I652.

Prior to obtaining primacy, ADEQ plans to notify the Class V authorized by rule regulated community in Arizona of the inventory requirements. This will be executed through the bulk emailing of existing Class V contacts, an announcement posting on ADEQ’s website and a webinar aimed at the Class V authorized by rule regulated community.

Upon primacy, Arizona Class V owners or operators will be required to submit inventory information via MyDEQ, ADEQs online e-Permitting portal, (<https://azdeq.gov/node/331>) (please reference Section VII(H) - Data Management for more information). MyDEQ will correspond with the ADEQ internal database, AZURITE (Arizona Unified Repository for Informational Tracking of the Environment) for administrative and record-keeping purposes. A one-time registration fee of \$200 will be required for all new Class V wells and a \$100 transfer fee will be required for existing wells requesting transfer of ownership (see A.A.C. R18-14-111).

Additionally, upon primacy, EPA plans to transfer all information from the existing Class V inventory to ADEQ, where ADEQ will incorporate the inventory into its databases. All inventories made before primacy will be maintained by ADEQ when ADEQ takes primary enforcement authority of the program.

ADEQ understands the vast majority of Class V wells in Arizona to be drywells. Other types of Class V wells include aquifer storage recharge (ASR) wells, certain large septic systems under A.A.C. R18-9-A604(E)(2), and geothermal wells. Arizona’s drywells far outnumber other types of Class V wells.

**XIX. MOTOR VEHICLE WASTE DISPOSAL WELLS
(40 CFR (145.23 (f)(12))**

40 CFR 144.88 delineates specific requirements for Motor Vehicle Waste Disposal Wells (MVWDWs). ADEQ has banned MVWDWs statewide per rule A.A.C. R18-9-I654. Therefore, Arizona’s rule is at least as stringent as the Federal analog.

**XX. NOTIFYING ADJACENT GOVERNMENTS – CLASS VI
(40 CFR 145.23 (f)(13))**

After an application for a Class VI well is submitted to ADEQ and EPA via the Geologic Sequestration Data Tool (GSDT) and is administratively complete per A.A.C. R18-1-503, ADEQ staff will begin the substantive review of the application. If ADEQ staff determine during the substantive review that the area of review (AoR) crosses State, Tribal, or International boundaries, ADEQ will notify in writing an appropriate representative of the affected entity.

XXI. APPENDIX

A-1	-	Application Forms	-	Appendix A-1.pdf
A-2	-	Permit Templates	-	Appendix A-2.pdf
A-3	-	Injection Rules	-	18 AAC 1 Art 5.pdf; 18 AAC 9 Art 6.pdf; 18 AAC 14 Art 1.pdf
A-4	-	AE Checklist	-	Aquifer Exemption Checklist.pdf
A-5	-	Aquifer Exemptions	-	Florence Copper Project AE May 1997.pdf Florence Copper Project AE Correction Aug 2022.pdf Gunnison Copper Project AE June 2018.pdf Santa Cruz Project AE Oct 1999.pdf
A-6	-	2023 C&E Handbook	-	Aquifer Exemption Checklist.pdf