



Information Collection Request for the Underground Injection Control Program

**OMB Control No. 2040-0042
EPA ICR Tracking No. 0370.25**

Office of Water (4606M)
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1. Identification of the Information Collection

1(a) Title and Number of the Information Collection

Underground Injection Control Program Information

OMB Control Number: 2040-0042

EPA Tracking Number: 0370.25

1(b) Short Characterization

The U.S. Environmental Protection Agency (EPA) will use the information collected upon extension of the approval of this Information Collection Request (ICR) for the monitoring and enforcement of the Underground Injection Control (UIC) Program as authorized by the Safe Drinking Water Act (SDWA). The agency developed the UIC Program to establish a federal-state regulatory system to protect actual or potential underground sources of drinking water (USDWs) by ensuring that they are not endangered by the underground injection of fluids. The purpose of this collection is to help EPA effectively manage the UIC program and ensure protection of USDWs.

Monitoring and enforcement are primarily achieved through initial, quarterly, semi-annual, and annual reporting requirements. Information is gathered both at the state¹ program level and at the EPA regional level. Each EPA Region has the role of implementing UIC programs for states that do not have UIC programs.² In addition, each Region must compile and submit information to EPA Headquarters from all respective state UIC programs. This information is submitted in summary paper reports to EPA Headquarters or, for programs that have transitioned to electronic reporting, via electronic data transfer. Additional details on the process by which primacy programs are transitioning from paper-based to electronic reporting (e-reporting) is presented in Appendix B of this ICR.

Section 144.6 of Title 40 of the *Code of Federal Regulations* (CFR) describes the six injection well types (see Exhibit 2-1). EPA collects monitoring data and test results from operators of Class I, II, III, and VI injection wells and a small percentage of Class V wells. Class IV wells are banned—except for wells used to re-inject treated contaminated ground water into the same formation from which it was drawn as part of a clean-up authorized by the Resource Conservation and Recovery Act (RCRA) or Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA); operators of these wells must submit plugging and abandonment reports as they are closed. Class II owners or operators must submit permit

¹ Throughout this ICR, reference to “States” includes Tribes and Territories pursuant to 40 CFR 144.3.

² Primary enforcement responsibility (primacy) is vested in states that have UIC programs approved by EPA’s Administrator. “Direct Implementation” (DI) refers to programs in states that are administered directly by EPA regional offices. In some states, more than one agency may oversee injection wells of various classes.

applications, monitor their wells and report the results, and submit plugging and abandonment reports when they close their wells. EPA requires operators of existing Class V motor vehicle waste disposal wells (MVWDWs) in ground water protection areas or other state-defined sensitive ground water areas to close these wells or apply for a permit to continue injecting. In general, Class V operators submit only a small subset of the information required of Class I, II, III, and VI well operators.

Primacy agencies are also respondents in this information collection. EPA collects summary information on permits, compliance and enforcement, inspections, mechanical integrity testing, and inventory for all well classes from permitting authorities in primacy states. Programs that have transitioned to e-reporting provide well-specific data related to the same information that is in the summary paper reports through a streamlined electronic data flow. (Details on e-reporting are included in Appendix B.)

EPA estimates that, over the three years covered by this request, the total burden on underground injection well operators and primacy agencies associated with UIC requirements will be 5,142,137 hours (an average of 1,714,046 hours per year), and the present value cost will be \$750,997,193 (an average of \$250,332,398 per year). The public reporting and recordkeeping burden for this collection of information is estimated to average 2.56 hours, or \$373.93 per response annually. The annual burden per respondent is 37.42 hours; the cost per respondent is \$5,464.47. During the course of the ICR clearance period, the EPA evaluates all reporting information and data collections for burden reduction wherever possible to ensure that all information collections are necessary and that they have practical utility for carrying out the mandate to protect USDWs.

Overall, there is a net increase in burden of 410,019 hours between the approved and requested amounts. This increase is due to the expected increase in the injection well inventory, primarily the number of Class II permit applications expected to be prepared, reviewed and approved, increases in the Class I and Class III inventories and the deployment of Class VI (geologic sequestration) activities. These increases are partially offset by burden reductions associated with decreases in the number Class V well operators submitting inventory information, continued implementation of electronic reporting by states and EPA's reductions in state reporting frequencies.

2. Need For and Use of the Collection

This Section describes EPA's need for the information collected pursuant to this ICR and the EPA Regions' and Headquarters' use of the collected data. Section 2(a) demonstrates both the need and legal authority for information collection. Need is demonstrated by describing the potential for contamination of USDWs and the statutory requirements that justify information collection to prevent contamination. Legal authority is demonstrated by identifying laws and regulations related to waste disposal, injection wells, and the UIC Program. Section 2(b) describes the practical utility and the users of the information; it focuses on how data are used to accomplish program objectives and manage programs at each level of implementation.

2(a) Need/Authority for the Collection

Potential for Contamination

The fundamental purpose of the UIC Program is to prevent the contamination of current and potential USDWs by keeping injected fluids within the well and the intended injection zone. There are five major pathways by which injected fluids can migrate into USDWs. The following discussion describes each pathway and summarizes information collection requirements to monitor for or prevent migration through the pathway.

Pathway 1: Faulty Well Construction. Contamination through this pathway is caused by leaks in the well casing or fluid forced upward between the well's outer casing and the well bore. For this reason, the absence of significant leaks and fluid movement in the well bore must be demonstrated in the initial permit application, and periodically thereafter.

Pathway 2: Nearby Wells. Fluids from the pressurized area in the injection zone may be forced upward through wells in the area of injection. Wells that penetrate the injection area in the zone affected by this pressure must be properly constructed or plugged. For this reason, plans for plugging deficient wells in the area of an injection well are submitted with the permit application. In addition, plugging and abandonment reports must be submitted if the operator abandons any well.

Pathway 3: Faults or Fractures in Confining Strata. Fluids may be forced upward out of the pressurized area through faults or fractures in the confining beds. Activities to address this contamination pathway are tracked using two information collection requirements. First, geologic information submitted with the permit application is reviewed to ensure that wells are sited such that they inject below a confining bed that is free of known open faults or fractures. Second, injection pressures are monitored so that fractures are not propagated in the injection zone or initiated in the confining bed zone.

Pathway 4: Direct Injection. Class IV wells, which inject into or above USDWs and have a high potential to endanger human health, are banned. The exception is wells that are used in a RCRA/CERCLA-authorized ground water remediation project. Most Class V wells inject nonhazardous fluids into or above formations that contain USDWs. These include motor vehicle waste disposal wells (MVWDWs), cesspools, agricultural drainage wells, storm water drainage wells, industrial drainage wells, and untreated sewage waste disposal wells. EPA has banned the construction of new large-capacity cesspools and requires operators of existing large-capacity cesspools to close their wells, in a regulatory effort to address the Class V wells that pose the greatest threat to USDWs. EPA also banned new MVWDWs and is requiring operators of existing MVWDWs in defined ground water protection areas or other sensitive ground water areas to close these wells or apply for a permit to continue injecting.

Pathway 5: Lateral Displacement. Fluid may be displaced from the injection zone into hydraulically connected USDWs. Permit information regarding the proximity of injection wells to USDWs is considered by the permitting authority in making a determination of whether the wells are properly sited. Well operators are required to control injection pressure and conduct monitoring and testing to track any lateral migration of fluids.

Legal Authority

Injection wells are regulated by EPA's Office of Ground Water and Drinking Water (OGWDW), as mandated by Sections 1421, 1422, 1423, 1425, 1431, 1445, and 1450 of the SDWA of 1974, as amended. The regulation of hazardous waste injection is jointly authorized by the SDWA and RCRA. The Hazardous and Solid Waste Amendments (HSWA) of 1984 amended RCRA to prohibit the land disposal of hazardous waste unless it can be demonstrated that there will be no migration from the disposal unit for as long as the waste remains hazardous. Underground injection of hazardous wastes is included in Section 3004(k) of HSWA as a land disposal technique.

Under Section 1445 of the SDWA, persons subject to federal or state UIC programs must “establish and maintain such records, make such reports, conduct such monitoring, and provide such information as the Administrator may reasonably require by regulation to assist the Administrator in establishing regulations under this title”

The specific requirements for the UIC Program are established in Title 40, Sections 144 through 148 of the CFR as follows:

Section 144 - Underground Injection Control Program. This section describes the general requirements of the Program, authorizes certain types of wells, defines permitting procedures, and establishes procedures for ensuring financial responsibility for proper closure of wells.

Section 145 - State UIC Program Requirements. This section describes the requirements that state programs must meet to gain primacy and the method for obtaining program approval.

Section 146 - UIC Program: Criteria and Standards. This section contains the technical criteria and standards that various classes of underground injection wells must meet. Monitoring and reporting criteria are outlined for each well class.

Section 147- State UIC Programs. This section describes the provisions of the UIC programs of individual states', territories', and tribes' primacy programs.

Section 148 - Hazardous Waste Injection Restrictions. This section identifies hazardous wastes that are restricted from disposal into Class I hazardous waste injection wells. It outlines the standards and procedures by which Class I hazardous waste facility operators may petition to dispose of restricted hazardous wastes.

These CFR Sections contain information collection requirements that are applicable to operators of underground injection wells and to administrators of primacy and direct implementation (DI) programs. Exhibit 2-1 describes the six classes of injection wells. A summary of the specific requirements for operators is given in Exhibit 4-2, Operator Paperwork Requirements; the paperwork requirements for states as respondents are presented in Exhibit 4-3, State Reporting Forms.

**Exhibit 2-1
Classification of Underground Injection Control Program Wells**

Class I	Wells that inject industrial and municipal waste, including hazardous waste, beneath the lowermost formation containing a USDW.
Class II	Wells used to dispose of fluids which are brought to the surface in connection with oil or natural gas production; to inject fluids for enhanced recovery of oil or natural gas; or to store hydrocarbons.
Class III	Wells that inject fluids for the extraction of minerals including: mining of sulfur by the Frasch process; in situ production of uranium or other metals such as ore bodies that are not conventionally mined; and solution mining of salts or potash.
Class IV	Wells used by generators of hazardous waste or of radioactive waste, or by owners or operators of hazardous waste management facilities, to inject into or above strata that contain a USDW. These wells are banned, unless they are used to re-inject treated contaminated ground water into the formation from which it was drawn in a RCRA/CERCLA authorized cleanup.
Class V	Injection wells not included in Classes I, II, III, IV, or VI. Typical examples include, but are not limited to: agricultural drainage wells, storm water drainage wells, industrial drainage wells, untreated sewage waste disposal wells, motor vehicle waste disposal wells, and cesspools.
Class VI	Wells that inject carbon dioxide (CO ₂) for long term storage, also known as geologic sequestration (GS) wells, and are not experimental in nature.

Statutory Requirements

Section 1421(b) of the SDWA specifies that regulations for state UIC programs must contain minimum requirements for effective programs to prevent underground injection that endangers USDWs. Therefore, EPA must:

- Publish minimum national requirements for effective state UIC programs;

- List states that need UIC programs;
- Review proposed state programs and approve or disapprove them;
- Promulgate and enforce UIC programs in those states that choose not to participate in or do not develop and operate approved programs; and
- Evaluate state/regional UIC programs for effectiveness in meeting statutory and regulatory requirements.

In addition to these regulations, other rules provide EPA with the information it needs to administer its program and to determine what new measures, if any, are necessary to achieve its statutory mandate.

2(b) Practical Utility/Users of the Data

EPA information users include regional and Headquarters staff/managers who make decisions regarding UIC regulations, compliance and enforcement actions, funding for state, tribal, and regional UIC programs, and strategic and policy issues related to the mission of OGWDW and EPA. Primacy agencies in states use the summary information reported on the 7520 forms³ or an equivalent form to target inspection and enforcement activity, to establish permit terms and conditions, to track performance against demands, and to identify violations and assess their significance. In addition, the primacy agency can use the summary reports it supplies to EPA Headquarters to evaluate its own program activities, such as the number of mechanical integrity tests (MITs) witnessed, the number of inspections conducted, and the number of permits reviewed. The electronically submitted well-level data are used in a similar manner, but allows for a more effective analysis and better understanding by all users.

Exhibit 2-2 charts the flow of information from operators, states, and regions to EPA Headquarters. Operators submit data to states (in primacy states), or to EPA regional offices (in DI states). Each primacy state, in turn, submits the data to its respective EPA regional office, which reviews the information and forwards it, along with data from its own DI states, to EPA Headquarters. All information in the quarterly, semi-annual, and annual reports received at EPA Headquarters is analyzed and stored. These reports are the only data available to EPA Headquarters to fulfill the UIC Program's needs and responsibilities. The following sections give a more detailed analysis of the uses of the collected information.

Headquarters' Management of the National Program

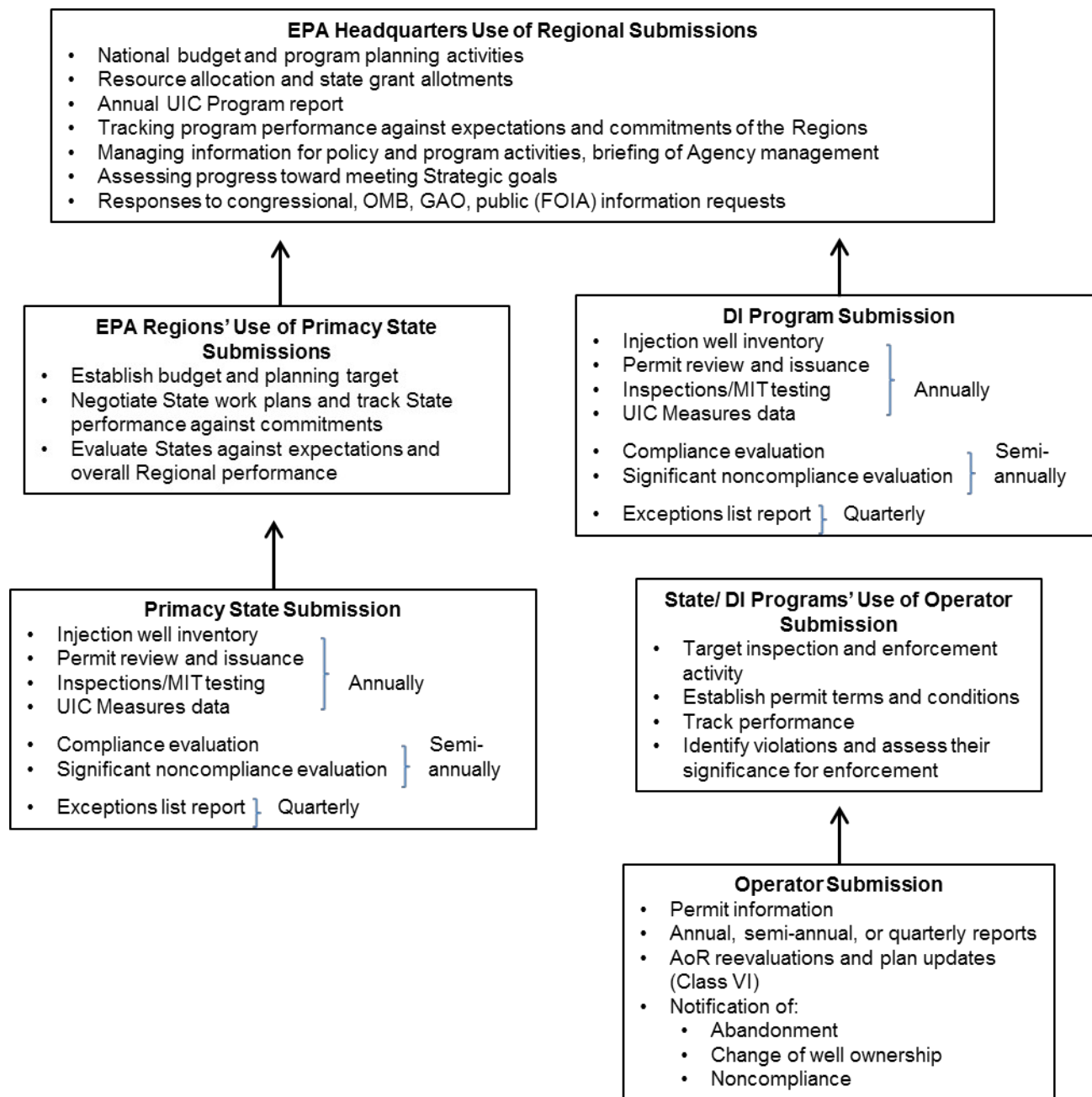
EPA Headquarters uses reported information to respond to information requests and perform analyses for EPA management, the Office of Management and Budget (OMB), the General Accounting Office (GAO), Congress, and the public. Headquarters oversees primacy agencies by using the reports to track, evaluate, and report on program performance.

³ The 7520 forms are described in Exhibit 4-3.

Performance targets and measures for EPA regional programs are established by EPA and tracked against Government Performance and Results Act (GPRA) goals. EPA tracks high priority activities that guide the Regions in carrying out UIC Program objectives. EPA Headquarters coordinates with its Regions to obtain commitments for performance based on these guidelines.

Exhibit 2-2 Flow of Information in the UIC Program⁴

⁴ Primacy programs utilizing e-reporting submit all data semi-annually.



Additionally, EPA’s 2011-2015 Strategic Plan contains a key Strategic Target that, “By 2015, 90 percent of community water systems will provide drinking water that meets all applicable health-based drinking water standards through approaches including effective treatment and source water protection.” EPA developed associated Program Activity Measures (PAMs) to assess progress toward the strategic goal, including four related to UIC:

- Percent of Class I, II, and III salt solution wells that lose mechanical integrity and are returned to compliance within 180 days thereby reducing the potential to endanger underground sources of drinking water.

- Number of Class V MVWDW wells and large capacity cesspools (LCC) that are closed or permitted (cumulative).
- Volume of CO₂ sequestered through injection as defined by the UIC final rule.
- Number of permit decisions during the reporting period that result in CO₂ sequestered through injection as defined by the UIC Final Rule.

In addition to its use for regional oversight purposes, state and regional information is also used to justify future program modifications. For example, the information collected may be used to determine if the requirements that pertain to rule-authorized wells or mechanical integrity testing are effective. State and regional data are used to support or inform these types of decisions. The PAMs also help demonstrate results from environmental grants.

Additionally, the Class VI rule follows an adaptive approach to data collection. This approach allows EPA to evaluate ongoing research and demonstration projects and gather other relevant information, as needed, to make refinements to the requirements for Class VI wells. If new information gathered during implementation suggests the requirements need to be revised, EPA will initiate the appropriate procedure, including public notice and comment. Alternatively, if less information is required, adjustments will be made and reflected in subsequent ICRs.

Regional Oversight of Primacy Programs

The primary use of quarterly, semi-annual, and annual reports submitted to the Regions is to help the Regions oversee the performance of the primacy agencies. The information is used to track individual state progress against commitments and to ensure that state programs have the ability to take timely and appropriate action in response to direct threats to the public health due to contamination of USDWs.

Regions also have enforcement responsibilities and must use well-specific information to track state enforcement response actions for all significant non-compliers (SNCs), i.e., operators of those injection wells that are most likely to contaminate USDWs. The statutory responsibility to initiate federal enforcement actions may be delegated to a Region if a primacy state does not fulfill its responsibilities.

Like EPA Headquarters, the Regions use UIC data to develop regional operating budgets and program plans, allocate resources, track state-by-state performance, and respond to inquiries. The Regions are responsible for reviewing and verifying the information on the quarterly reports before sending them to EPA Headquarters.

Direct Implementation of State Programs

In addition to their oversight responsibilities, EPA regional offices must directly implement the UIC Program in states without primacy. As administrators of UIC programs in direct implementation (DI) states, EPA regional offices use information from operators in several ways.

First, materials submitted with an initial permit application provide the information regional offices need to determine if proposed injection wells will be properly designed, sited, and operated to minimize the possibility of USDW contamination. The primary responsibility of a regional office is to use well information submitted prior to construction and during completion to ensure that injected fluids will remain in the selected injection zone and will not leak into areas that could result in contaminated USDWs.

Following permit approval and well completion, the permitting authority uses monitoring and testing reports submitted by operators to determine if (1) there is a leak in the casing, tubing, or packer, or (2) there is significant fluid movement into a USDW through vertical channels adjacent to the well bore. Environmental monitoring data required of certain classes of operators can provide early warning of USDW endangerment.

Regional offices with DI authority also use information required of operators to focus efforts on injection wells in need of enforcement attention. Operators who have been out of compliance for at least two consecutive quarters are identified on the exceptions list.

3. Nonduplication, Consultations, and Other Collection Criteria

This Section describes how EPA has no other means available to gather the requested information. It also describes EPA's solicitation of public comments in the *Federal Register* and agency consultations in developing the burden and cost estimates; describes how less frequent reporting may endanger USDWs; and discusses the Paperwork Reduction Act (PRA) general guidelines and provisions for confidentiality.

3(a) Nonduplication

Well-specific data obtained from injection well operators and the state reports that rely on such data comprise virtually all of the information covered by this ICR. To the best of the EPA's knowledge, this information is not required or collected by any other agency or regulation. The Department of Energy does collect information relating to production for enhanced oil and gas recovery wells in its "Annual Report for Enhanced Oil Recovery (EOR) Incentive" (OMB Clearance No. 19054135). This information pertains only to oil production, and is related to, but different from, the information EPA uses to evaluate injection well operators. However, on a case-by-case basis, permitting authorities may use this information to supplement existing information on enhanced recovery wells.

Since both Class I hazardous and Class IV wells (now banned) involve the injection of hazardous wastes, there is potential overlap between UIC programs under the SDWA and hazardous waste regulations promulgated under RCRA. Historically, the regulations established provisions for RCRA interim status (Part A permit) [40 CFR 270.64] for Class I hazardous wells in states in which no UIC program had been approved or promulgated. The regulations allow the UIC permit to be issued in lieu of a Part B RCRA permit if the Class I hazardous waste well meets certain conditions specified in 40 CFR 270.64(c). Thus, although Class I hazardous waste wells are co-regulated under RCRA and the SDWA, there is no duplication of information collection between RCRA and the UIC Program.

Data requirements for Class VI wells under the Class VI Rule have some overlap with those associated with the Mandatory Reporting of Greenhouse Gases [GHG]: Injection and Geologic Sequestration of CO₂ Rule (Subpart RR), 40 CFR part 98. In developing the two rules, staff of the Office of Air and Radiation and the UIC program coordinated to consider and minimize the potential overlap in reporting and recordkeeping requirements on operators of wells that may be subject to both rules. Burden and costs associated with air monitoring are accounted for under Subpart RR and therefore are not incorporated into this Programmatic ICR. EPA plans to build an electronic database that will house all data related to GS projects, including data reported under the GHG and UIC programs; this effort will reduce the potential for overlap in the reporting and recordkeeping requirements under the two rules. Additionally, some Class VI owners or operators may inject CO₂ that is subject to the Conditional Exemption from RCRA Definition of Hazardous Waste for Carbon Dioxide Streams Injected into Class VI UIC Wells at

40 CFR 261.4(h). Owners or operators who claim that a CO₂ stream is exempt under 40 CFR 261.4(h) would have to sign a certification statement that the CO₂ is being injected and stored pursuant to the requirements of the Class VI rule. None of the information in the certification statement duplicates information required by the UIC regulations.

3(b) Public Notice

EPA published a notice requesting comment on the burden and cost associated with the UIC Program reporting requirements in the *Federal Register* on August 8, 2014 (79 FR 46437). EPA received one comment, which was out of the scope of the ICR burden and cost estimates. A copy of the *Federal Register* notice of this information collection is attached to this ICR as Appendix C.

3(c) Consultations

Over the course of the ICR development, EPA solicited input from state UIC Directors, operators, and other interested parties on revising the UIC Program ICR on assumptions used, which impact the burden calculation, and suggestions for burden reduction, among other topics. EPA received responses from: Kansas Corporation Commission, Kansas Department of Health and Environment, Oklahoma Department of Environmental Quality, Oklahoma Corporation Commission, Illinois Department of Environmental Protection, Ohio EPA, Ohio Department of Natural Resources, and EPA Region 7. Respondents indicated that the assumptions in this ICR are appropriate. State officials suggested combining, simplifying, or eliminating some of the 7520 forms or reducing the frequency at which primacy agencies report this information to EPA. EPA evaluates the effects of less frequent collections each time the Agency renews the ICR. This information is described below in 3(d).

3(d) Effects of Less Frequent Collection

There are two types of respondents for whom efforts could be made to minimize burden: (1) operators of injection wells; and (2) primacy agencies. The paragraphs below describe why it is necessary to collect the information at the required frequency to ensure the protection of USDWs, as well as ways that EPA has identified to reduce the burden on states while ensuring the continued protection of USDWs.

Operators

All Class I, II, III, and VI operators are required to observe pressure, flow, and cumulative volume of injected fluids and demonstrate mechanical integrity. Some operators must sample and analyze their injectate and conduct ambient monitoring. These requirements provide DI and state primacy programs with crucial information to assess whether injection wells pose a potential endangerment to USDWs. In developing the required monitoring and testing frequencies, EPA attempted to strike a balance between ensuring protection of USDWs and placing an excessive burden on operators.

The frequency at which operators must conduct various monitoring and testing activities varies with the potential for a particular well class to endanger USDWs. Less frequent monitoring and testing might allow injection wells to operate in a manner that could threaten or cause considerable damage to USDWs if evidence of such a situation were undiscovered for a long time. EPA determined that the specified monitoring frequencies for each well class are at the minimum protective frequency.

Injection well operating permits are renewed or reviewed at varying intervals (typically every five to 10 years, depending on the well class). This is necessary to provide permitting authorities an opportunity to review facility operations to ensure that injection operations will not endanger USDWs.

Primacy Agencies

In 2006, EPA began a Burden Reduction Initiative to address state concerns over escalating reporting requirements, accompanied by decreases in federal funding. UIC reporting was identified as one of the agency's 16 priority areas for burden reduction. States asked EPA to eliminate duplicative UIC reporting, reduce the frequency of reporting, and reduce the data elements requested. In evaluating the state and operator input, EPA determined that very little, if any data elements could be removed from the 7520 forms and still maintain a robust UIC program that tracks information crucial to the protection of USDWs. However, in 2013, EPA was able to reduce reporting frequency in response to the states' requests.

3(e) General Guidelines

Two provisions of the UIC regulations exceed the PRA guideline for response time. Pursuant to 40 CFR 144.51(l), 144.28(b) and 146.94(b), operators are required to report within 24 hours "any noncompliance which may endanger health or the environment." This is an emergency provision necessary to enable permitting authorities to take timely and appropriate steps to reduce or eliminate any potential threat to public health.

3(f) Confidentiality

Operators of injection wells may claim confidentiality, as provided in 40 CFR 144.5 *Confidentiality of Information*. If confidentiality is requested, the information is treated in accordance with the provisions of 40 CFR Part 2, *Public Information*. Any confidentiality claim must be made at the time of submission in the manner prescribed by the application form or its instructions. In the case of other submissions, respondents may claim confidentiality by stamping the words "confidential business information" on each page containing such information. Claims of confidentiality for the following information will be denied: the name

and address of any permit applicant or permittee; and information regarding the existence, absence, or level of contaminants in drinking water.

If no claim of confidentiality is made at the time of submission, EPA may make the information available to the public without further notice. However, the information is collected for the agency's internal use and there are no plans to routinely release or publish any of the data.

3(g) Sensitive Questions

There are no sensitive questions pertaining to this ICR.

4. Respondents and Information Requested

This Section identifies respondents affected by this information collection and describes the data items and activities required of operators, states, and DI programs.

4(a) Respondents/NAICS Codes

Operators of injection wells are identified by Standard Industrial Classification (SIC) and North American Industry Classification System (NAICS) codes. Operator respondents for underground injection wells are categorized by the industries that produce fluid wastes and the type of fluid injected into each well class. The SIC and NAICS codes for the operator respondents associated with each well class are listed in Exhibit 4-1.

The NAICS code for State agencies that include drinking water programs is 92411 (Administration of Air and Water Resources and Solid Waste Management Programs) or 92312 (Administration of Public Health Programs).

4(b) Information Requested

4(b)(1) Data Items, Including Recordkeeping, Required from Operators

Required data items vary according to well class and authorization category (i.e., permitted well vs. rule-authorized well). The information required of operators is listed in Exhibit 4-2.

Initial Reporting Requirements

Two methods are available for obtaining approval for underground injection: rule authorization and permitting. Class II enhanced recovery (II-R) and hydrocarbon storage wells (II-H) in existence before the promulgation of specific permitting regulations are authorized by rule for life and do not require permits. All new Class I, II, III, and VI wells require permits. New Class V wells may be rule-authorized, although operators of some Class V wells may be required to obtain permits. Operators of Class V MVWDWs in state-designated ground water protection areas or other sensitive areas that wish to continue operating must obtain a permit.

**Exhibit 4-1
Respondents' SIC/NAICS Codes***

UIC Class	SIC Code	NAICS Code (2002)	Description
I	<ul style="list-style-type: none"> • Major Group 13 • Major Group 28 • Major Group 26 • Major Group 29 • Major Group 32 • Major Group 33 • Major Group 36 • Major Group 37 • Major Group 45 • Major Group 49 • Major Group 89 • Major Group 99 	<ul style="list-style-type: none"> • 211 • 325 • 322 • 324 • 327 • 331 • 335 • 336 • 481 • 221 • 54162 • 54169 	<ul style="list-style-type: none"> • Oil and Gas Extraction • Chemical Manufacturing • Paper Manufacturing • Petroleum and Coal Products Manufacturing • Nonmetallic Mineral Product Manufacturing • Primary Metal Manufacturing • Electrical Equipment, Appliance, & Component Mfg. • Transportation Equipment Manufacturing • Air Transportation • Utilities • Environmental Consulting Services • Other Scientific and Technical Consulting Services
II	<ul style="list-style-type: none"> • 1311 • 1321 • 1381 	<ul style="list-style-type: none"> • 211111 • 211112 • 213111 	<ul style="list-style-type: none"> • Crude Petroleum and Natural Gas Extraction • Natural Gas Liquid Extraction • Drilling Oil and Gas Wells
III	<ul style="list-style-type: none"> • Major Group 10 • Major Group 14 	<ul style="list-style-type: none"> • 212 	<ul style="list-style-type: none"> • Mining (except Oil and Gas)
IV	<ul style="list-style-type: none"> • 4953 	<ul style="list-style-type: none"> • 562 	<ul style="list-style-type: none"> • Waste Management and Remediation Services
V	<ul style="list-style-type: none"> • 01, 02, 074, 075 • 4789, 4953, 9511 • 7542 • 7033, 9111 • 4142, 4212, 4213, 4581, 5015, 5511, 5521, 5531, 5541, 7514, 7515, 7532, 7533, 7537, 7538, 7539, 7549, 9111 	<ul style="list-style-type: none"> • 111, 112, 54194, 11521 • 488999, 562213, 562219, 92411 • 811192 • 7212, 92111 • 441, 484, 485, 488, 562, 811, 44711, 44719, 45299, 48841, 92111, 532111, 532112 	<ul style="list-style-type: none"> • Agricultural or storm drainage wells • Domestic wastewater disposal wells • Car washes • Recreational vehicle parks and campsites, executive offices (e.g., state parks and campgrounds) • Bus charter services, trucking, airports, flying fields, and airport terminal services; motor vehicle parts; motor vehicle dealers; auto and home supply stores; gasoline service stations; passenger car rental or leasing; automotive repair and services; executive offices (e.g., town garages)
VI	<ul style="list-style-type: none"> • 4911 • 4911 • 2911 	<ul style="list-style-type: none"> • 221112 • 211111 • 324110 	<ul style="list-style-type: none"> • Fossil fuel electric power generation • Crude petroleum and natural gas extraction • Petroleum refining

* Note: this list is not totally inclusive, but represents a large portion of the industries that operate injection wells.

Rule-Authorized Wells

Wells in existence before the promulgation of specific permitting regulations are authorized by rule until regulations require them to be permitted. To meet initial reporting requirements, operators of rule-authorized wells are required to submit inventory information (i.e., facility name; name and address of the facility's legal contact; ownership status; and operating status of the injection well) to the permitting authority using Form 7520-16 (or a state-developed equivalent form). Operators must also submit a plugging and abandonment plan and information regarding financial responsibility (this requirement does not apply to rule-authorized

Class V wells). Authorization terminates if the operator fails to supply any required information or if the well loses mechanical integrity or contaminates a USDW. EPA is working to develop a Web-based system that will allow owners or operators in DI program states to submit this information over the Internet.

*Permitted Wells*⁵

Operators of permitted wells must follow a two-step permit application procedure. The operator must submit a permit application prior to construction, and a completion report before commencing injection. (Instead of submitting a completion report, owners or operators of Class VI wells must submit final site characterization information before commencing injection.)

Operators must include the following information with their permit applications:

- ***Inventory Information:*** name of the facility, name and address of legal contact, ownership of facility, NAICS/SIC code(s), and a description of the activities requiring a permit [all well Classes];
- ***List of Landowners:*** a list of landowners within one-quarter mile of the facility (in DI programs) [all well Classes];⁶
- ***Area of Review Methods:*** methods and calculations used to determine the area of review (AoR) [Classes I, II, III, and VI];
- ***Maps of Wells/Area of Review:*** a tabulation of all wells within the AoR (within 1/4 mile of the well, or within 2 miles of a Class I hazardous well, or as defined by computational modeling for a Class VI well) that penetrate the injection zone or the confining zone [Classes I, II, III, and VI];
- ***Corrective Action Plan:*** a plan for corrective action for wells within the AoR that are not properly plugged [Classes I, II, III, and VI];
- ***Geological and Hydrogeological Data:*** maps and cross sections of USDWs, and data (including maps and cross sections) on the local and regional geology of the confining zone [Classes I, III, and VI] or names and depths of USDWs [Class II];

⁵ Permits may be issued on an area basis as well as on an individual basis, except for hazardous waste injection wells and Class VI wells. Refer to Section 5(b) for a description of how the permitting process minimizes the information burden on owners and operators.

⁶ This requirement may be waived if the Regional Administrator determines that it is too burdensome (e.g., if the well is located in a populated area). Some regions may also require operators to notify all landowners of their intent to construct the well.

Exhibit 4-2 Operator Paperwork Requirements

Information Submitted	Class					
	I-H	I-N	II	III	V *	VI
Inventory Information					X	
Permit Application						
List of Landowners	X	X	X	X	X	X
Area of Review Methods	X	X	X	X		X
Maps of Wells/Area of Review	X	X	X	X		X
Corrective Action Plan	X	X	X	X		X
Maps and Cross Sections of USDWs	X	X		X		X
Names and Depths of USDWs			X			
Maps and Cross Sections of Local and Regional Geology	X	X		X		X
Geological Data on Injection and Confining Zones			X			X
Operating Data	X	X	X	X		X
Formation Testing Program	X	X		X		X
Stimulation Program	X	X		X		X
Injection Procedures	X	X		X		X
Construction Details	X	X	X			X
Changes in Injected Fluid				X		X
Plans for Well Failures/Emergency and Remedial Response Plan	X	X		X		X
Ambient Monitoring Program	X	X		X		X
Plugging and Abandonment Plan	X	X	X	X		X
Financial Assurance	X	X	X	X		X
Post Injection Site Care Plan						X
Aquifer Exemption Request	X	X	X	X		X
Injection Depth Waiver Application						X
Completion Report						
Results of Logs and Tests Performed During Construction	X	X	X	X		X
MIT Results	X	X	X	X		X
Anticipated Maximum Injection Pressure & Flow Rate	X	X	X	X		X
Formation Testing Results	X	X	X	X		X
Actual Injection Procedure	X	X	X	X		X
Hydrogeological Compatibility/ Compatibility of Well Materials	X	X		X		X
Status of Corrective Action	X	X	X	X		X
Monitoring and Reporting						
Chemical Composition of Injectate	X	X	X	X	X	X
Injection Pressure, Volume, & Flow Rate	X	X	X	X		X
MIT	X	X	X	X		X
Ambient Monitoring	X	X		X		X
Pressure Fall-Off Test	X	X				X
Recordkeeping						
Retain Monitoring, Testing, Permitting Records	X	X	X	X	X	X
Closure						
Closure Report	X	X	X	X		X

* Operators of rule-authorized Class V wells will submit inventory information only; Class V wells that are issued permits will be subject to the other paperwork requirements listed.

- **Operating Data:** a description of the proposed operation, including rates and volumes of fluids to be injected, injection pressures, and sources and constituent analyses of injection fluids [Classes I, II, III, and VI];
- **Formation Testing Program:** a description of the proposed formation testing program [Classes I, III, and VI, optional for Class II];
- **Stimulation Program:** a description of the proposed stimulation program [Classes I, III, and VI, optional for Class II];
- **Injection Procedures:** a description of the proposed injection procedure [Classes I, III, and VI, optional for Class II];
- **Construction Details:** construction plans, including schematic drawings of the surface and subsurface details of the system [Classes I, II, and VI];
- **Changes in Injected Fluid:** expected changes in pressure, native fluid displacement, and direction of movement of injected fluid [Classes I, III, and VI];
- **Plans for Well Failures:** plans for contingency action in the case of shut-ins or well failures [Classes I and III, optional for Class II]. Owners or operators of Class VI wells must submit an emergency and remedial response plan;
- **Ambient Monitoring Program:** planned ambient monitoring program, including the location of monitoring wells and monitoring devices, and the proposed sampling frequency. Class VI operators must also describe how they will monitor the position of the CO₂ plume and pressure front [Classes I, III, and VI, optional for Class II];
- **Plugging and Abandonment Plan:** plans for closing the well, including type and placement of plugs to be used [Classes I, II, III, and VI] and a post injection site care plan (PISC) for Class VI; and
- **Financial Assurance:** evidence of financial responsibility for closing the well, such as surety bonds or financial statements [Classes I, II, III, and VI]. Class VI financial responsibility demonstrations must also address corrective action, PISC, and emergency and remedial response.

Upon approval of the permit application, the operator may begin to construct the well. Following construction, the operator of a new well must submit a completion report prior to being authorized to inject. Completion reports must include the following information:

- The results of deviation checks, other logs and tests [Classes I, II, III, and VI];
- Demonstration of mechanical integrity (i.e., the results of a casing pressure test; radioactive tracer survey of the bottom-hole cement; and/or temperature, noise, or other logs to check for movement along the borehole) [Classes I, II, III, and VI];
- Anticipated maximum injection pressure and flow rate [Classes I, II, III, and VI];
- The results of formation fluid sampling, and testing of the injection and confining zones [Classes I, II, III, VI];
- Actual injection procedures [Classes I, II, III, and VI];
- Report on hydrogeological compatibility and the compatibility of well materials [Classes I, and III, and VI];
- The status of corrective action at improperly abandoned wells within the AoR [Classes I, II, III, and VI]; and
- The final delineated area of review and any updates to the required project plans based on computational modeling of the AoR [Class VI].

Operators of Class I hazardous waste wells must adhere to more stringent permit application requirements than those required of Class II, III, or V wells. Operators seeking an exemption from the prohibition from injecting any of the Class I listed hazardous wastes must submit the following information in addition to the information described above:

- ***No Migration Petition.*** Operators of Class I hazardous waste injection wells must demonstrate, usually by computer modeling, that their wastes will not endanger USDWs. The operator must provide sufficient information to demonstrate that the hazardous constituents of wastes will not migrate from the disposal site. In particular, the petition must prove that the waste will not reach the roof of the injection zone or a conduit within the injection zone within 10,000 years. This is known as the Fluid Flow Petition.
- ***Hydrogeological Compatibility/Compatibility of Well Material Report.*** Operators of Class I hazardous waste wells must demonstrate hydrogeological compatibility (i.e., that the waste stream and its anticipated reaction products will be compatible with both the geologic material of the injection zone and any previously injected fluids), and compatibility of well materials (i.e., that the waste stream will be compatible with the well materials that come in contact with the waste).

- **Waste Analysis Plan.** Class I hazardous waste well operators must develop and follow an approved written waste analysis plan that describes procedures for a detailed chemical and physical analysis of a representative sample of their waste. The waste analysis plan must specify (1) the parameters within which the waste will be analyzed and the rationale for selecting these parameters; (2) the test methods that will be used to test for these parameters; and (3) the sampling method that will be used to obtain a representative sample of the waste to be analyzed.
- **Other Information.** Operators of Class I hazardous waste wells must also submit a description of the hydrogeological and geochemical conditions at the site; the physicochemical nature of the waste stream; and proof of conformance with AoR requirements.

Class V facilities generally are rule-authorized. However, under the 1999 Class V rule, operators of Class V MVWDWs in ground water protection areas or other sensitive ground water areas must apply for a permit to continue injecting. Permitting authorities may also require other Class V operators to apply for a permit to commence or to continue injecting. Typically, the permit application process for Class V operators is less complex than for other well classes—operators are typically required to submit a description of the activities requiring a permit, inventory information, topographic maps, and a plugging and abandonment plan, which includes a demonstration of financial responsibility for closure.

Operators of Class VI wells must submit and gain approval for a series of project-specific plans, including: an Area of Review and Corrective Action Plan, a Testing and Monitoring Plan, an Injection Well Plugging Plan, a PISC and Site Closure Plan, and an Emergency and Remedial Response Plan.

Operators of Class I, Class II, or Class III wells seeking to inject into an aquifer that meets the definition of a USDW and is not exempted must request and receive an aquifer exemption. This request includes a delineation of the exempted area and a demonstration that the request meets the criteria at 40 CFR 146.4. (Owners or operators of Class VI wells transitioning from Class II EOR wells may apply to expand the areal extent of existing Class II aquifer exemptions; new aquifer exemptions for Class VI wells are prohibited, however.)

Monitoring and Testing Requirements

All Class I, II, III, and VI operators must observe injection pressure, rate, and cumulative volume and demonstrate mechanical integrity. Requirements for other monitoring and testing activities vary by class. The specific monitoring and testing activities for each well class include:

- Monitor injection pressure, flow rate, and cumulative volume of injected fluids [continuously for Class I hazardous and Class VI, weekly for Class II disposal]

wells (II-D), monthly for Class II-R, and semi-monthly for Class III]; temperature of injected fluids and annulus pressure between the tubing and the long string casing [Class I];

- Conduct chemical monitoring of injectate as described in a waste analysis plan or as specified by the permitting authority [Classes I, II, VI, and permitted Class V MVWDWs];
- Conduct annual sludge monitoring [permitted Class V MVWDWs];
- Test for internal and external mechanical integrity of the well casing, via:
 - casing pressure test [annually for Class I hazardous and Class VI, every five years for Class I nonhazardous, Class II, and Class III salt solution mining];
 - radioactive tracer survey of the bottom-hole cement [annually for Class I hazardous];
 - temperature, noise, or other logs to test for movement of fluid along the borehole [annually for Class VI, every five years for Class I and Class III (salt solution mining)];⁷
 - continuous monitoring of injection pressure, volume, and rate to demonstrate internal mechanical integrity [Class VI];
- Conduct ambient monitoring, including a pressure fall-off test [annually for Class I and VI];
- Monitor wells completed in the injection zone and in overlying USDWs [semi-monthly for active Class III wells, monthly for Class III facilities in restoration and per the approved testing and monitoring plan for Class VI]; and
- Monitor the movement of the CO₂ plume and pressure front using direct methods and indirect (geophysical) methods, unless the Director determines this is not feasible [Class VI].

Reporting and Recordkeeping Requirements

All permitted and rule-authorized wells must report to state or DI agencies on the results of required monitoring and testing.⁸ In addition, operators must notify the permitting authority of any planned changes to the facility; changes that may result in noncompliance; progress in meeting the milestones of a compliance schedule; any loss of mechanical integrity or other

⁷ Alternative MIT methods (e.g., review of cementing record) may be approved by the Director.

⁸ In accordance with the Paperwork Reduction Act of 1995, the reporting requirements covered by this information collection are consistent with the reporting and recordkeeping activities currently in practice by the respondents. For example, respondents generally may report required information in either electronic or hard-copy format, whichever is compatible with their facility practices.

indication of possible endangerment of a USDW within 24 hours; or any noncompliance with permit conditions.

Scheduled reporting requirements include the following:

- Class I hazardous well operators report quarterly on monitoring results; and annually on MITs and to update their plugging and abandonment cost estimates.
- Class I nonhazardous well operators are required to report quarterly on injectate monitoring, annually on ambient monitoring, and on MITs every five years.
- Class II operators must report monitoring data annually, and on MITs every five years.
- Class III operators report quarterly on monitoring and on MITs every five years.
- Class V MVWDW operators that obtain a permit must report annually on injectate and sludge monitoring.
- Class VI well operators must submit semi-annual reports.

Owners or operators of Class VI wells must also reevaluate the Area of Review (AoR) at least every five years and submit a report to the permitting authority. Following the reevaluation, operators must update the AoR and Corrective Action Plan, Testing and Monitoring Plan, and Emergency and Remedial Response Plan based on the results of the revised AoR or submit information that no updates to the plans are necessary.

For rule-authorized wells in DI states, the Regional Administrator may require operators to submit additional information, as needed, to determine if a well poses a hazard to USDWs. Such information may include evidence of ground-water monitoring, including periodic reports of such monitoring; periodic reports on analysis of injected fluids; and a description of the geologic strata through and into which injection is taking place.

Operators must maintain monitoring information, calibration and maintenance records, required reports, application data, and monitoring results for three years; and keep their most recent plugging and abandonment cost estimate for one year.

Closure Requirements

When closing their wells, operators must submit to the permitting authority a plugging and abandonment report demonstrating that the well was plugged in accordance with the plugging and abandonment plan (this requirement does not apply to rule-authorized Class V wells). Operators who choose to plug in a manner different from the one specified in their

plugging and abandonment plan must first submit and obtain approval for a revised plugging and abandonment plan.

Class I hazardous waste well operators must also conduct a pressure fall-off test and demonstrate mechanical integrity before plugging the well and report the results of these tests with their closure reports.

Additionally, Class VI well operators must revise their PISC and Site Closure Plans or demonstrate that no revision is needed; conduct and report the results of post-injection ground water quality monitoring and the position of the carbon dioxide plume and pressure front throughout the PISC period; complete a non-endangerment demonstration that the carbon dioxide plume has stabilized and there is no threat to USDWs following the PISC period; and submit a site closure report including a copy of the recording notation on the deed to the property regarding the fact that injection occurred to complete well closure.

4(b)(2) Data Items Including Recordkeeping, Required from States

Primacy and DI agencies submit information on wells within their jurisdiction to Headquarters via the 7520 forms. (Primacy agencies are not required to use the 7520 forms, but many states opt to use the 7520 forms as a way to provide the required information.) The National UIC database allows states to report the information electronically, if they prefer. Each of the forms that agencies must submit as respondents, the reporting frequency, and the data items reported are listed in Exhibit 4-3. Copies of the forms are provided in Appendix E.

**Exhibit 4-3
State Reporting Forms**

Form	Frequency	Information Collected
Permit Review and Issuance (7520-1)	Annual	Information on permit determinations (i.e., the number of permits issued and not issued, and permit modifications), permit file reviews, the number of rule-authorized wells reviewed, AoR reviews, and corrective action performed.
Compliance Evaluation (7520-2A)	Semi-annual	Enforcement actions, including administrative actions and civil and criminal actions.
Compliance Evaluation - Significant Noncompliance (7520-2B)	Semi-annual	Operators of injection wells identified as being in significant noncompliance (SNC) with statutory requirements and enforcement actions against SNCs and returns of wells to compliance; contamination of USDWs; and closures.
Mechanical Integrity Test/Remedial Actions (7520-3)	Annual	Results of inspections and MITs and remedial actions conducted for any test failures.
Quarterly Exceptions List (7520-4)	Quarterly	Wells that have remained in SNC for two or more consecutive quarters and have not been returned to compliance or been subject to a formal enforcement action.

States have three options for reporting, 7520 Federal Reporting forms (paper submission), the National UIC database (electronic data flow), or another method for providing the required information. States and Regional DI programs that have chosen to transition to electronic reporting must report the agreed upon UIC data elements semi-annually to the database. As part of the data flow process, the primacy program and EPA agree to specific timelines and data elements to be submitted in a Trading Partner Agreement (TPA). The TPA also documents the primacy program's agreement to submit data electronically through the National UIC database rather than in an alternate format. The frequency of data submission to the database (as well as via paper 7520s) is now established as semi-annually.

5. Information Collected: EPA Activities, Collection Methodology, and Information Management

Section 5(a) describes state oversight of operators and EPA activities with respect to program management. Section 5(b) describes how EPA will manage the information collected; Section 5(c) discusses how this information collection addresses the needs of small businesses; and Section 5(d) presents EPA's justification for the information collection schedule.

5(a) State and Agency Activities

5(a)(1) State Activities

Under Section 1422 of the SDWA, states that adopt UIC regulations that are at least as stringent as the federal requirements may be granted primacy for the UIC Program. Under SDWA Section 1425, state programs that regulate oil and gas-related injection must demonstrate that their program "represents an effective program to prevent underground injection which endangers drinking water sources" in order to be granted primacy.

In addition to the reporting activities described in Section 4(b)(2), state primacy agencies are responsible for permitting the wells within their states. Primacy agencies receive and review permit applications from operators, solicit and respond to public comments, and issue final decisions on permit applications. States also review completion reports and associated testing results to verify that new wells have been constructed in accordance with construction standards.

State agencies review injectate and ambient monitoring data submitted by operators; they also review MITs and pressure fall-off tests. Many states witness some or all MITs and well plugging. State primacy agencies also respond to occasional reporting submitted by operators, conduct periodic permit reviews, and respond to operators' requests for permit modifications.

State agencies also report to EPA on the status of their programs. The mechanisms by which states report are the paper-based 7520 forms (or equivalent reporting), Web-based reporting on UIC program measures and inventory, and the National UIC database.

5(a)(2) Agency Activities

EPA Regions oversee injection wells in those states that do not have approved primacy programs. The Regions perform the same activities as state primacy agencies. In addition, regional offices review no-migration petitions submitted by Class I hazardous facility operators in both primacy and DI states. Regional staff review reports on MITs and pressure fall-off tests performed in DI states, and in some cases, tests on wells in primacy states; they also review requests for aquifer exemptions. DI program staff also review closure reports required of operators when they abandon their wells.

EPA Headquarters activities consist of compiling the regional summary information on permit reviews and issuance, compliance evaluation, enforcement and inspections information, and inventory and measures data.

EPA Regions and Headquarters complete data quality and assurance reviews of the data submitted to the National UIC database.

5(b) Collection Methodology and Management

Current reporting from operators to states/DI programs and from states and DI programs to Headquarters is primarily accomplished by completing the UIC Program's 7520 reporting forms. The complete set of PDF-format 7520 reporting forms is available to be downloaded on OGWDW's website (<http://www2.epa.gov/uic/compliance-reporting-requirements-injection-well-owners-and-operators-and-state-regulatory#reporting>), as well as on GSA's website. (Appendix E of this ICR contains copies of all the UIC reporting forms.)

State and DI programs maintain detailed data about each well regulated under the UIC Program. Collection of data from individual operators and quality assurance is the responsibility of the individual state and DI programs. These data are the source of summary information submitted to the Regions and EPA Headquarters for oversight and program management. Most use some type of electronic data management system to maintain this data. States manage their own databases independently to meet their specific programmatic needs. However, EPA is working with a number of states to map their UIC data to the UIC National database with the expectation they will eventually transition to regular electronic reporting. EPA is also participating in an effort with the Ground Water Protection Council and the US Department of Energy to collect data from state oil and gas agencies nationally (production as well as disposal data) and consolidate it into a regularly updated "National Gateway". In many states, these agencies also house the Class II primacy programs and EPA anticipates that we will be able to use this data flow to gather a substantial amount of the required information on class II wells at no extra burden to the states.

Electronic reporting involves transmitting UIC data in a standard electronic format that can be readily incorporated into Headquarters' UIC database without manual data entry. Electronic reporting supports the agency's effort to streamline the UIC Program by reducing the reporting burden on the states and improving EPA's data collection methods.

EPA initiated deployment of the UIC database to collect and store data to support UIC programmatic data needs in 2007. The National UIC database provides a mechanism to electronically transfer data between existing state and DI databases and Headquarters' database, eventually eliminating the need for states to complete paper reporting forms. Transitioning to EPA's database is voluntary.

To date, 15 programs have transitioned to electronic reporting (e-reporting). EPA estimates that more programs will transition to electronic reporting between 2015 and 2017. The time needed for a program to move from initial discussion to e-reporting depends on many variables, including available funding and full time employees. As states complete the transition, EPA expects a reduced reporting burden for some well classes as a result of electronic data flow.

Initially, states will incur a “start-up” cost to initiate the transfer of their data to the National UIC database. Once the data flow is in place, states will incur minimal cost to transfer data to Headquarters quarterly; this cost will be lower than the current annual reporting costs to states associated with gathering data and completing the reporting forms. Along with the reduced cost, e-reporting has resulted in data quality improvement.

Taking into account the costs of the initial phase-in, EPA estimates that the cumulative costs to states for data development and data management via the database are lower than they would have been to report by paper during the same time frame. To support states’ start-up efforts, EPA has made grant funds available through the Exchange Network Grant. These funds can be used to upgrade current systems, to establish electronic data flow from operators, or to establish the data flow to EPA.

Until the transition to e-reporting is complete, programs report to Headquarters via paper forms and the inventory and measures website. Headquarters continues to support collection of UIC Program Activity Measures and inventory data through a secure website.

EPA is also developing a data system to collect and manage data on Class VI wells. All data, including permit applications, operating data, and testing and monitoring data, will be submitted directly to the GS Data System by owners or operators, as required at 40 CFR 146.91(e). Permitting authorities will provide compliance and enforcement related data to the GS data system. The GS data system will inter-link with the National UIC database.

Appendix B describes the data transfer activities in detail, the schedule by which states are expected to begin the data transfer, and the eventual burden and cost savings to states associated with the National UIC database.

5(c) Small Entity Flexibility

Few, if any, small businesses are operators of Class I, Class III, or Class VI injection wells. In contrast, many Class II and Class V operators affected by this collection are small entities. The EPA reduces, to the extent practicable and appropriate, the burden of this collection on persons that provide information to or for the agency, including with respect to small entities, as defined by the Regulatory Flexibility Act [5 USC 601(6)], using techniques such as:

- Establishing differing compliance or reporting requirements or timetables that take into account the resources available to those who are to respond;
- Clarification, consolidation, or simplification of compliance and reporting requirements; or
- An exemption from coverage of the collection of information, or any part thereof.

Class I

The size standard the Small Business Administration uses to define “small business” varies by SIC code. Class I wells typically involve the following SIC codes:

- Major Group 13: Oil and gas extraction
- Major Group 28: Chemicals and allied products
- Major Group 26: Paper and allied products
- Major Group 29: Petroleum and coal products
- Major Group 32: Stone, clay and glass products
- Major Group 33: Primary metal industries
- Major Group 36: Electrical and electronic machinery
- Major Group 37: Transportation equipment
- Major Group 45: Transportation by air
- Major Group 49: Electric, gas, and sanitary services
- Major Group 89: Services not elsewhere classified
- Major Group 99: Non-classifiable establishments

The small business size standards for firms in these SIC code groups vary from 500 to 1,500 employees, except for SIC code 4953, hazardous waste disposal firms that own and operate Class I wells, for which the size standard is \$3.5 million or less in revenues. Most of the firms that own or operate Class I injection wells exceed both the 500-employee and the 1,500-employee standard. Examples include Allied Chemical, Bethlehem Steel, Dow Chemical, DuPont, Exxon, General Electric, Monsanto, and Shell. The hazardous waste disposal firms that own and operate Class I wells are believed to exceed the \$3.5 million revenue standard.

Class II

Oil and gas extraction firms fall into three SIC categories:

- SIC code 1311 (crude petroleum and natural gas);
- SIC code 1321 (natural gas liquids); and
- SIC code 1381 (drilling oil and gas wells).

All of these categories have small business size standards of 500 employees. According to Dun and Bradstreet Market Analysis Profile, more than 90 percent of the firms in these SIC codes are small businesses, using the 500-employee standard. Even though many of the operable Class II injection wells are owned and operated by large businesses, industry observers believe that as many as half of the Class II wells are owned and operated by firms that are below the 500-employee size standard.

Section 1421 of the SDWA states that regulation of Class II wells must be kept to a minimum, while at the same time ensuring that USDWs will not be endangered. Recognizing this intent, EPA has minimized reporting requirements for Class II wells in the following ways: First, while operators of Class I and Class III wells report injection fluid characteristics quarterly, Class II operators report this information annually. Second, Class I monitoring requirements include the installation and use of continuous recording devices to monitor injection pressure, flow rate, volume, and annulus pressure [40 CFR 146.13]. In contrast, Class II operators are only required to observe injection pressure, flow rate, and cumulative volume and to record these measurements at least monthly [40 CFR 146.23].

The UIC regulations [40 CFR 146.14, 146.24, 146.34] define the information the UIC Program Director must consider in authorizing Class I, II, and III wells, respectively. Less information is required on Class II wells than other types of wells. For permitting of Class I and Class III wells, maps and cross sections detailing geologic structure may be required, whereas Class II well operators must provide only a description of geologic conditions. Finally, while the permitting authority may require Class I operators to provide detailed construction procedures, including a cementing program; logging procedures; deviation checks; and a drilling, testing, and coring program, Class II well operators need not submit this information.

EPA has also recognized the needs of operators of Class II wells in other ways. For example, oil and gas wells are often temporarily abandoned, especially by small businesses that operate at marginal production rates. To accommodate this situation, the regulations specify that cessation of operation does not require plugging (and associated information collection) until two years have elapsed.

Class III

Operators of this class of wells fall into the following categories:

- SIC Major Group 10 (metal mining) and
- SIC Major Group 14 (mining and quarrying of non-metallic minerals).

The size standard for both groups is 500 or fewer employees. According to the preamble to the 1980 UIC regulations (45 FR 42472), the operators of these wells are large, diversified corporations, well above the size standard of 500 employees. There is no reason to believe that there has been any material change in the size of the firms since that analysis was done.

Class V

EPA estimates that the majority of facilities affected by the Class V Rule will be small businesses. To reduce the impact of the rule on small entities, EPA has attempted to keep recordkeeping, reporting, and other administrative requirements for these operators to a minimum in order to provide regulatory relief to small entities while protecting drinking water supplies. Most Class V facilities do not have collection requirements other than to provide inventory information. EPA also convened a Small Business Advocacy Review Panel, as required by the Small Business Regulatory Enforcement Fairness Act (SBREFA), to explore options for minimizing economic impacts on small entities.

The economic analysis prepared for the 1999 final Class V rule includes a complete, final Regulatory Flexibility Analysis addressing all activities, including reporting and recordkeeping activities, required of small entities.

Class VI

EPA expects that Class VI wells will be owned and operated by fossil fuel power generators, oil and gas extraction companies, and oil and gas refineries. Because the resources necessary to construct injection wells that meet the standards of the Class VI Rule are significant, EPA believes that none of the owners or operators of Class VI wells will be small entities. Therefore, EPA assumes that the reporting requirements for Class VI well owners or operators will cause no significant impact on small entities.

5(d) Collection Schedule

EPA developed the schedule for information collection and reporting to minimize the amount of information collected while ensuring that sufficient information is available for appropriate and timely oversight, evaluation, and enforcement. The rationale for operator and state reporting frequencies is described below. Section 4 presents a complete description of the collection requirements.

5(d)(1) Operator Reporting

In determining the reporting schedule for each class of wells, EPA considered the potential for each class to contaminate USDWs. Operators of Class I, III, and some Class V wells must report monitoring results quarterly; Class II operators report annually; Class VI operators report semi-annually. The regular reporting of these data is essential to protecting USDWs. Specific operator reporting schedules for each well class are presented in Tables A-1 through A-6 of Appendix A.

5(d)(2) State Reporting

Exhibit 5-1 summarizes the frequencies at which state primacy agencies must report UIC data, including the 7520 forms and Program Activity Measures (PAMs). The paragraphs following the Exhibit present the justification for the reporting frequencies.

In response to President Clinton's April 24, 1995, directive to reduce regularly scheduled reporting frequencies by one-half, except in cases where such action would not adequately protect the environment, in FY 1996 EPA reduced the frequency of certain state UIC reporting. EPA has also discontinued the requirement that states submit the grant utilization form (7520-5); in 2013, EPA reduced the reporting frequency for PAMs data. As Section 5(b) discusses, upon implementation of the National UIC database, states UIC flowing data to Headquarters will no longer be required to submit the 7520 forms and inventory and PAM data.

Exhibit 5-1 State Reporting Frequencies

Reporting Activity	Frequency
Form 7520-1: Permit Review and Issuance	Annual
Form 7520-2A: Compliance Evaluation	Semi-annual
Form 7520-2B: Compliance Evaluation for Significant Noncompliance	Semi-annual
Form 7520-3: Mechanical Integrity Test/Remedial Actions	Annual
Form 7520-4: Quarterly Exceptions List	Quarterly
Inventory Reporting	Annual
Program Activity Measures	Annual

7520-1: Permit Review and Issuance. Permits are the core of the UIC Program, and annual permit information is used for program management purposes. The Program uses permit information to evaluate events that delay or accelerate the permitting process. Delays in the permitting process may result in the states' inability to meet program objectives and prevent states from meeting schedules. A permitting process that is too lengthy could have a detrimental impact on industry. Conversely, favorable developments may occur that enable the states to meet time schedules and goals sooner than anticipated. Both occurrences have a potential for shifts in workload and resource distribution.

7520-2A: Compliance Evaluation; 7520-2B: Significant Non-compliance. The justification for semi-annual reporting of compliance information is based on EPA efforts to be routinely and frequently informed of violations of regulations in effect under Section 1421 of the SDWA. EPA must remain informed in order to (a) oversee and encourage states' actions on resolving violations or enforcing against violators, and (b) to take direct federal action where appropriate state actions have not occurred in a timely manner or have not been successful.

EPA would be unable to effectively carry out the Congressional direction for federal enforcement on violators if it only had access to data annually. Prior to 1987, states provided EPA with the above information on an annual basis. States then agreed to voluntarily supply the data on a quarterly basis when it became obvious that EPA Headquarters could not direct an effective federal enforcement program using data received only once a year. EPA later determined that semi-annual reporting of this information is sufficiently frequent to track compliance information.

7520-3: Inspections/Mechanical Integrity Testing. Inspections are the principal method of identifying instances of noncompliance. Annual inspection information is used to monitor states' performance on inspections. Inspections have resulted in criminal indictment and imprisonment of well owners. Annual inspection information **ensures** that inspections are being performed on a continual basis throughout the year. The MIT is the principal method used to determine whether a well is operating in a protective manner. Annual MIT information is used to evaluate the MIT program.

7520-4: Quarterly Exceptions List. EPA needs quarterly information on SNCs that have been out of compliance for two or more consecutive quarters. The agency uses this information to determine whether timely and appropriate actions have been taken by primacy authorities and to track enforcement activities, as these wells pose the greatest threat to USDWs.

Inventory Reporting. Annual reporting on inventory data, as required by 40 CFR 144.8, is necessary for effective oversight of the UIC Program. Primacy states, Regions, and EPA Headquarters need to be routinely and frequently informed of changes in the number and operating characteristics of injection wells to monitor and regulate underground injection effectively and to continue protecting USDWs from contamination.

PAMs Data. EPA Headquarters needs to collect PAM data annually to meet the Office of Water’s reporting schedules to assess progress toward meeting Agency Strategic Targets for achieving minimized risk to public health. This reporting supports national assessments of Water Program performance and recommendations for management actions to strengthen performance.

National UIC Database. Data submissions by those states using the National UIC database occur semi-annually; this frequency allows EPA to ensure public health protection and to meet all above mentioned obligations. Transferring data to EPA via the National UIC database will eliminate the need for the paper-based reporting described above. Note that reporting via the National UIC database is voluntary. See Appendix B for more information on reporting via the National UIC database.

6. Estimating the Burden and Cost of the Collection

This section presents EPA's estimates of the burden and costs to respondents (i.e., injection well operators and state primacy agencies) associated with UIC paperwork requirements, and federal burden hours and costs for reviewing respondent submissions. Section 6(a) provides estimates of burden hours for all respondent types. Section 6(b) contains estimates of respondent costs for the information collection. Section 6(c) summarizes federal burden and costs as users of respondent data. Section 6(d) describes the respondent universe and the total burden and cost of this collection to respondents. Section 6(e) covers aggregate burden hours and costs for all respondents, and Section 6(f) explains the reasons for the change in estimated respondent burden hours and costs from the approved ICR burden. Section 6(g) presents the burden statement for this information collection.

6(a) Respondent Burden

6(a)(i) Burden to Owners and Operators of Injection Wells

Operators of injection wells incur reporting burden associated with the following types of activities: permitting and startup of operations, ground water and injectate monitoring and well testing during well operation, reporting of monitoring results and other events, recordkeeping, and well closure. Non-labor costs include capital and operation and maintenance costs; for example, to purchase well components or analyze samples to meet the UIC requirements. These are primarily operators' costs; states and EPA regulators would typically not incur such costs.

EPA estimates that the annual burden on the 45,753 owners or operators of injection wells will be 1,434,967 hours over the three years covered by this ICR. This is summarized in Exhibits 6-1A through F. See Appendix A for detail on the assumptions used to calculate the owner/operator burden and detailed burden and cost calculations.

1) Class I Well Operators

The total annual burden on the 445 operators of Class I wells nation-wide is estimated to be 128,945 hours. See Exhibit 6-1A. Of this total, EPA estimates the annual burden for the 74 operators of Class I hazardous wells to be 27,723 hours, and the burden for 371 operators of Class I non-hazardous wells to be 101,222 hours annually.

The requirements for Class I operators are among the most stringent in the UIC Program. Operator activities associated with Class I facilities include permitting and start-up related reporting, permit renewals and modifications, monitoring, reporting and recordkeeping, and closure-related paperwork. Operators of Class I hazardous wells must also perform an extensive no-migration demonstration to ensure that their wastes will not endanger USDWs.

Appendix A summarizes the assumptions used to calculate the owner/operator burden and provides detailed burden and cost calculations. Table A-1 of Appendix A presents cost and burden estimates specific to Class I wells.

**Exhibit 6-1A
Annual Burden and Cost Associated with Class I Wells
2015-2017**

Respondent Type	Burden (hours)	Labor Cost	Non-Labor Cost	Total Cost	Responses	Burden/Response	Cost/Response
Operators	128,945	\$6,168,089	\$35,263,853	\$41,431,942	6,693.4	19.26	\$6,189.94
Primacy States	5,056	\$209,419	\$0	\$209,419	1,793.2	2.82	\$116.79
DI Programs	6,856	\$283,995	\$0	\$283,995	963.4	7.12	\$294.78
TOTAL	140,856	\$6,661,503	\$35,263,853	\$41,925,356	9,450.1	14.91	\$4,436.52

Note: numbers may not appear to add due to rounding.

2) *Class II Well Operators*

As shown in Exhibit 6-1B, EPA estimates the total annual burden on the 17,682 operators of Class II wells (associated with the oil and natural gas industry) to be 1,195,002 hours. Class II well operators perform many of the same types of activities as Class I well owners or operators, including submitting permit applications and completion reports, monitoring and testing, reporting and recordkeeping, and closure-related paperwork, although with significantly less information and paperwork required for each of these activities.

Hydraulic fracturing operations using diesel fuels are subject to the Class II UIC requirements at Subpart C of 40 CFR 146. In February 2014 EPA issued its Permitting Guidance for Oil and Gas Hydraulic Fracturing Activities Using Diesel Fuels: UIC Program Guidance #84 (EPA 816-R-14-001), which recommends that operators of production wells in DI states performing HF using diesel fuels obtain a UIC permit for the HF activity and submit the same types of information required of Class II well operators, along with additional information to afford an evaluation of the proposed HF operation. This ICR includes the burden on owners or operators in DI states to apply for Class II permits and perform the monitoring and other activities recommended in the Guidance. See Section 6(f) for additional information on how these additional permits affect the UIC Program ICR estimates.

See Appendix A (particularly Table A-2) for details on the assumptions used to calculate the owner/operator burden and cost associated with the requirements for Class II wells.

**Exhibit 6-1B
Annual Burden and Cost Associated with Class II Wells
2015-2017**

Respondent Type	Burden (hours)	Labor Cost	Non-Labor Cost	Total Cost	Responses	Burden/Response	Cost/Response
Operators	1,195,002	\$54,561,313	\$111,993,437	\$166,554,749	485,966.7	2.46	\$342.73
Primacy States	191,778	\$7,944,220	\$0	\$7,944,220	114,709.7	1.67	\$69.25
DI Programs	12,566	\$520,515	\$0	\$520,515	7,118.7	1.77	\$73.12
TOTAL	1,399,346	\$63,026,047	\$111,993,437	\$175,019,484	607,795.2	2.30	\$287.96

Note: numbers may not appear to add due to rounding.

3) *Class III Well Operators*

The estimated total annual burden on the 171 operators of Class III facilities is 57,184 hours. See Exhibit 6-1C. Operators of these wells associated with mining operations incur burden associated with permit applications and completion reports, monitoring, reporting and recordkeeping, and closure-related paperwork.

Appendix A (particularly Table A-3) presents details on the assumptions used to calculate the owner/operator burden and cost associated with the requirements for Class III wells.

**Exhibit 6-1C
Annual Burden and Cost Associated with Class III Wells
2015-2017**

Respondent Type	Burden (hours)	Labor Cost	Non-Labor Cost	Total Cost	Responses	Burden/Response	Cost/Response
Operators	57,184	\$2,400,410	\$842,432	\$3,242,842	6,176.4	9.26	\$525.04
Primacy States	3,402	\$140,934	\$0	\$140,934	674.3	5.05	\$209.01
DI Programs	271	\$11,243	\$0	\$11,243	379.1	0.72	\$29.66
TOTAL	60,858	\$2,552,586	\$842,432	\$3,395,019	7,229.8	8.42	\$469.58

Note: numbers may not appear to add due to rounding.

4) *Class IV/Endangering Class V Well Operators*

Class IV wells and Class V wells that are found to be endangering USDWs are banned from injection, and owners of these wells are required to close them and submit plugging and abandonment reports to states or DI programs. The exception to the ban is for those Class IV wells used to inject contaminated ground water that has been treated and re-injected into the same formation from which it was drawn. These wells are authorized by rule for the life of the well if such subsurface emplacement of fluid is approved by EPA or a state pursuant to the provisions for the cleanup of releases under CERCLA or RCRA.

EPA estimates that the burden on the 990 operators of these wells that are subject to this information collection will be 9,900 hours annually. See Exhibit 6-1D and Appendix A.

Exhibit 6-1D							
Annual Burden and Cost Associated with Class IV Wells							
2015-2017							
Respondent Type	Burden (hours)	Labor Cost	Non-Labor Cost	Total Cost	Responses	Burden/Response	Cost/Response
Operators	9,900	\$235,165	\$0	\$235,165	990.0	10.00	\$237.54
Primacy States	758	\$31,399	\$0	\$31,399	758.0	1.00	\$41.42
DI Programs	232	\$9,610	\$0	\$9,610	232.0	1.00	\$41.42
TOTAL	10,890	\$276,174	\$0	\$276,174	1,980.0	5.50	\$139.48

Note: numbers may not appear to add due to rounding.

5) *Class V Well Operators*

The total annual burden on the 26,459 operators of Class V wells with reporting requirements under this information collection is estimated to be 29,789 hours. See Exhibit 6-1E and Appendix A.

All operators of Class V wells must submit inventory information before they may begin operating their wells. In addition, the 1999 Class V Rule requires owners or operators that wish to continue operating MVWDWs to apply for permits and operators of MVWDWs and large-capacity cesspools that close, to submit pre-closure notifications. While most of these activities are complete, EPA assumes that a handful of these facilities will be identified via inspections and either close or apply for a permit.

Exhibit 6-1E							
Annual Burden and Cost Associated with Class V Wells							
2015-2017							
Respondent Type	Burden (hours)	Labor Cost	Non-Labor Cost	Total Cost	Responses	Burden/Response	Cost/Response
Operators	29,789	\$645,361	\$6,932,543	\$7,577,905	33,880.6	0.88	\$223.67
Primacy States	9,044	\$374,637	\$0	\$374,637	17,270.5	0.52	\$21.69
DI Programs	4,874	\$201,919	\$0	\$201,919	9,318.4	0.52	\$21.67
TOTAL	43,708	\$1,221,917	\$6,932,543	\$8,154,461	60,469.5	0.72	\$134.85

Note: numbers may not appear to add due to rounding.

6) *Class VI Well Operators*

EPA estimates that the burden on the Class VI well operators subject to this information collection during the clearance period will be 14,146 hours annually for activities associated with a permit application and the early years of injection operations.

EPA finalized requirements for owners or operators of Class VI wells (for GS) in 2010 (75 FR 77230). Concurrent with publishing the Class VI Rule, EPA obtained OMB clearance for paperwork burden associated with the requirements for Class VI wells (ICR No. 2309.01, OMB control number 2040-0278). The clearance period of that ICR ended in 2013. This UIC Programmatic ICR estimates the burden and cost to owners or operators and primacy agencies associated with implementing the Class VI Rule over all three years of this proposed information collection. See Exhibit 6-1F and Appendix A.

Exhibit 6-1F Annual Burden and Cost Associated with Class VI Wells 2015-2017							
Respondent Type	Burden (hours)	Labor Cost	Non-Labor Cost	Total Cost	Responses	Burden/Response	Cost/Response
Operators	14,146	\$1,531,257	\$18,133,892	\$19,665,149	112.3	125.93	\$175,060.67
Primacy States	2,840	\$117,644	\$0	\$117,644	4.0	710.00	\$29,411.04
DI Programs	3,775	\$156,376	\$0	\$156,376	25.0	151.00	\$6,255.02
TOTAL	20,761	\$1,805,277	\$18,133,892	\$19,939,168	141.3	146.90	\$141,079.02

Note: numbers may not appear to add due to rounding.

Exhibit 6-1G summarizes the operator burden and costs, by well type (from Exhibits 6-1A through F). Exhibit 6-2, in the next section, provides a similar summary for primacy agencies.

Exhibit 6-1G Summary of Annual Operator Burden and Cost (based on above exhibits) 2015-2017							
Respondent Type	Burden (hours)	Labor Cost	Non-Labor Cost	Total Cost	Responses	Burden/Response	Cost/Response
Class I Operators	128,945	\$6,168,089	\$35,263,853	\$41,431,942	6,693.4	19.26	\$6,189.94
Class II Operators	1,195,002	\$54,561,313	\$111,993,437	\$166,554,749	485,966.7	2.46	\$342.73
Class III Operators	57,184	\$2,400,410	\$842,432	\$3,242,842	6,176.4	9.26	\$525.04
Class IV Operators	9,900	\$235,165	\$0	\$235,165	990.0	10.00	\$237.54
Class V Operators	29,789	\$645,361	\$6,932,543	\$7,577,905	33,880.6	0.88	\$223.67
Class VI Operators	14,146	\$1,531,257	\$18,133,892	\$19,665,149	112.3	125.93	\$175,060.67
TOTAL	1,434,967	\$65,541,594	\$173,166,157	\$238,707,751	533,819.5	2.69	\$447.17

Note: numbers may not appear to add due to rounding.

6(a)(ii) Burden to Primacy Agencies

EPA estimates that the annual **oversight burden** on the 58 state primacy agencies that oversee the various classes of injection wells is 212,878 hours. This burden is for processing permit applications and completion reports, reviewing monitoring and testing data, and responding to closure reports submitted by operators in their states.

The burden to **states as respondents** associated with compiling and reporting data using the 7520 forms and the UIC measures reporting process or submission to the National UIC database totals 66,201 hours annually.

Exhibit 6-2 shows the annual Primacy agency burden hours associated with oversight of each class of injection well and providing data. Appendix A describes the basis for the burden estimates.

Exhibit 6-2 Annual Primacy Agency Burden and Cost 2015-2017							
Respondent Type	Burden (hours)	Labor Cost	Non-Labor Cost	Total Cost	Responses	Burden/Response	Cost/Response
Class I Programs	5,056	\$209,419	\$0	\$209,419	1,793.2	2.82	\$116.79
Class II Programs	191,778	\$7,944,220	\$0	\$7,944,220	114,709.7	1.67	\$69.25
Class III Programs	3,402	\$140,934	\$0	\$140,934	674.3	5.05	\$209.01
Class IV Programs	758	\$31,399	\$0	\$31,399	758.0	1.00	\$41.42
Class V Programs	9,044	\$374,637	\$0	\$374,637	17,270.5	0.52	\$21.69
Class VI Programs	2,840	\$117,644	\$0	\$117,644	4.0	710.00	\$29,411.04
Subtotal-Operator Oversight	212,878	\$8,818,254	\$0	\$8,818,254	135,209.8	1.57	\$65.22
States as Respondents	66,201	\$2,742,291	\$64,101	\$2,806,393	435.0	152.19	\$6,451.48
TOTAL	279,078	\$11,560,545	\$64,101	\$11,624,646	135,644.8	2.06	\$85.70

Note: numbers may not appear to add due to rounding.

6(b) Respondent Costs

6(b)(i) Cost to Operators

Exhibits 6-1A through F and 6-1G show the total costs for owners and operators of various classes of injection wells over the three-year ICR clearance period. Annual costs to injection well operators are estimated at approximately \$238.7 million, which consists of \$173.2 million in non-labor costs and \$65.5 million in labor costs.

EPA determined operator labor cost by estimating the mix of legal, managerial, technical, and clerical time needed to perform each collection activity. For Classes I, II, and III, the labor

cost estimate is based on average hourly estimates for salary and overhead of \$91 for legal staff, \$84 for managerial staff, \$49 for technical staff, and \$28 for clerical staff. For Classes IV and V, hourly salary and overhead rates are estimated to be slightly less: \$59 for managerial staff, \$25 for technical staff, and \$19 for clerical staff (no legal staff labor is assumed for these operators). For Class VI, the labor cost estimate is based on average hourly estimates for salary and overhead of \$111 for mining and geological engineers and \$106 for geoscientists.

EPA estimated non-labor costs from data provided by staff in EPA Regions and state primacy agencies, and from operators and other sources. This ICR assumes there are no capital costs to operators—large capital expenditures associated with underground injection (e.g., construction costs and monitoring equipment) are considered to be customary business practice. All non-labor costs to operators associated with this collection are operating and maintenance (O&M) costs, such as the cost of contractor services or laboratory fees associated with injectate, sludge, or ground water monitoring. Contractor time was estimated to be approximately \$80 per hour.

6(b)(ii) Cost to Primacy Agencies

Exhibit 6-2 shows that the annual cost to primacy agencies is estimated at approximately \$11.62 million, of which most (\$11.56 million) is labor cost. For this ICR, EPA assumed that the average hourly labor rate for a state employee is \$41.42. This estimate is based on a federal GS-9, Step 10 salary on the 2013 federal pay scale, increased by 60 percent to account for overhead costs. (This is the inflation factor recommended in EPA's *ICR Handbook*.)

The non-labor costs (capital and O&M) to states in this ICR are estimated to be \$64,101. These include capital/start-up costs associated with purchasing computer hardware to allow data transfer to Headquarters to populate the National UIC database. The remaining non-labor costs to states are the cost of contractor support for database development.

6(c) Agency Burden and Costs

EPA's regional offices implement the UIC Program for all well classes in 10 states and have oversight responsibility for a subset of well classes in six states. Additionally, EPA assumes that, at the beginning of the clearance period, the agency will directly implement the Class VI program in all states. EPA estimates that only a handful of Class VI permits will be issued during the clearance period, and the Agency will review these permit applications for states that have not yet been granted primacy. The paperwork requirements for DI programs are roughly the same as those for the state primacy programs. In addition, EPA regions review all no-migration petitions submitted by Class I hazardous facility operators and Class VI injection depth waivers in both primacy and DI states in their Region.

EPA Headquarters' activities associated with oversight of the national UIC Program include gathering and reviewing 7520 forms, analyzing inventory and measures data, and developing the National UIC database.

The total annual burden for federal DI programs associated with the above activities is 32,734 hours. See Exhibit 6-3.

EPA assumes the average hourly labor rate for salary and overhead and benefits for agency staff to be \$41.42. This estimate is based on a federal GS-9, Step 10 salary on the 2013 federal pay scale, increased by 60 percent to account for overhead costs. The annual federal cost associated with this collection is \$1,355,981. The breakdown of agency cost associated with each well class is presented in Exhibit 6-3.

Exhibit 6-3 Annual Agency Burden and Cost 2015-2017							
Respondent Type	Burden (hours)	Labor Cost	Non-Labor Cost	Total Cost	Responses	Burden/Response	Cost/Response
Class I DI Programs	6,856	\$283,995	\$0	\$283,995	963.4	7.12	\$294.78
Class II DI Programs	12,566	\$520,515	\$0	\$520,515	7,118.7	1.77	\$73.12
Class III DI Programs	271	\$11,243	\$0	\$11,243	379.1	0.72	\$29.66
Class IV DI Programs	232	\$9,610	\$0	\$9,610	232.0	1.00	\$41.42
Class V DI Programs	4,874	\$201,919	\$0	\$201,919	9,318.4	0.52	\$21.67
Class VI DI Programs	3,775	\$156,376	\$0	\$156,376	25.0	151.00	\$6,255.02
Headquarters Management	4,160	\$ 172,323.84	\$0	\$172,324	1.0	4,160.00	\$172,323.84
TOTAL	32,734	\$1,355,981	\$0	\$1,355,981	18,037.6	1.81	\$75.18

Note: numbers may not appear to add due to rounding.

6(d) Estimating Respondent Universe and Total Burden and Costs

EPA estimates that 45,753 owners or operators of injection wells and 58 primacy agencies are subject to the UIC Program’s information collection requirements outlined in Section 6(a). The number of responses for each well class and activity are shown in Exhibits 6-1A through 6-1F, and summarized in Exhibit 6-1G. The estimates of the number of state responses are shown in Exhibit 6-2. This number, known as the respondent universe, is based on EPA’s assumptions of the number of permittees subject to each paperwork requirement, e.g., the number of permit applications or well closures expected, or the percent of permittees subject to monitoring or reporting requirements and the frequency with which they must comply with those requirements. Part 2 of Appendix A provides more detail on EPA’s assumptions about the number of respondents that perform each collection activity.

EPA estimates that the total non-federal respondent burden over the three years covered by this ICR is 5.1 million hours (or 1.71 million hours per year). The total cost to respondents is \$750.99 million (or \$250.3 million per year).

6(e) Bottom Line Burden Hours and Costs

The bottom line burden hours and costs appear in Exhibit 6-4.

Exhibit 6-4 Bottom Line Annual Burden and Cost 2015-2017			
Number of Respondents	45,811 =	45,753	Operators (from EPA inventory) + 58 Primacy agencies
Total Annual Responses	669,464 =	533,819 135,645	Operator responses (from Exhibit 6-1G) + Primacy agency responses (from Exhibit 6-2)
Number of Responses per Respondent	14.6 =	669,464 45,811	Total annual responses from above ÷ Total respondents from above
Total Respondent Hours	1,714,046 =	1,434,967 279,078	Operator burden hours (from Exhibit 6-1G) + Primacy agency burden hours (from Exhibit 6-2)
Hours per Response	2.6 =	1,714,046 669,464	Total annual hours from above/ Total responses from above
Annual O&M + Capital Cost	\$173,230,258 =	\$173,166,157 \$64,101	Operator non-labor cost (from Exhibit 6-1G) + Primacy agency non-labor cost (from Exhibit 6-2)
Total Respondent Cost	\$250,332,398 =	\$238,707,751 \$11,624,646	Operator cost (from Exhibit 6-1G) + Primacy agency cost (from Exhibit 6-2)
Total Hours (Respondents)	1,746,780 =	1,714,046 32,734	Total respondent hours from above + Total EPA hours (from Exhibit 6-3)
Total Cost (Respondents plus Agency)	\$251,688,379 =	\$250,332,398 \$1,355,981	Total respondent cost from above + Total EPA cost (from Exhibit 6-3)

Note: Detail may not add exactly to total due to independent rounding.

6(f) Reason for Change in Burden

The current total annual approved burden on operators and states associated with the UIC Program is 1,013,399 hours. This ICR renewal request estimates a total annual respondent burden of 1,714,046 hours. Thus, there is a net increase in burden of 700,646 hours between the approved and requested amounts. Of this, 592,472 hours is increased operator burden and 108,174 is increased primacy agency burden.

This increase is due to adjustments associated with an increase in the injection well inventory, primarily the number of Class II permit applications expected to be approved, as well as increases in the Class I and Class III inventories and the deployment of Class VI (geologic sequestration) activities. These increases are offset by burden reductions associated with decreases in the number Class V well operators submitting inventory information, continued implementation of electronic reporting by states and reduced state reporting frequencies.

This section discusses the change in burden to operators of injection wells and primacy states between the burden requested in this ICR and the approved burden. The burden changes are the result of program and inventory changes that affect well operators and the agencies that oversee them.

Program Changes

This section describes the program changes that affect the UIC reporting burden in this ICR. (EPA assumes that ongoing activities associated with implementation of the Florida Class I rule the Class V and the Class VI rule—previously considered to be program changes—are now “ongoing” activities. Therefore, any burden changes associated with these rules are associated with the number of operators performing these activities and are included under “adjustments,” below).

- *Diesel Fuels Hydraulic Fracturing (DFHF) Guidance.* EPA published a guidance recommending that owners or operators of production wells in DI states performing HF using diesel fuels obtain a UIC permit for the HF activity. EPA estimates that only a small number of owners or operators (30) will be subject to the recommendations in the DFHF Guidance (based on the fact that most Class II wells are in primacy states and most HF operations do not involve the use of diesel fuels), and that this change will add 2,400 hours to the total owner or operator burden. See Table A-2 in Appendix A.
- *PAMs reporting.* EPA reduced the frequency at which states must submit PAMs data from semi-annually to annually. This results in a modest burden reduction of 1,040 hours annually.
- *National UIC database.* EPA has reduced the frequency at which e-reporters must upload information to the National UIC database from quarterly to semi-annually, resulting in a reduction of 3,600 state burden hours annually. Appendix B describes the development and implementation of the National UIC database, and compares the reporting costs for states with and without a national database.

Adjustments

Adjustments that affect the UIC reporting burden in this ICR include the following:

- *Class VI Rule.* Activities associated with obtaining Class VI permits and operating GS facilities are now fully accounted for in this clearance period. Many unit burdens associated with permit applications were adjusted upward based on EPA's experiences during early implementation activities; this ICR also assumes that by the end of the clearance period, three owners or operators will be operating Class VI wells. As a result, EPA estimates that the burden on owners or operators will increase by 8,413 hours. Also, while EPA assumed that all states would have received Class VI primacy during the clearance period for the Class VI rule ICR, this was not the case; EPA currently assumes that states will continue to apply for Class VI primacy under this clearance period. As a result, EPA estimates a net decrease of 3,506 hours for Class VI primacy agencies.
- *Inventory changes.* Between 2011 and 2013, the national injection well inventory decreased by approximately 4,100 wells. In particular, a decrease in the Class V inventory (of 31,346 wells) was offset by an increase in the Class II inventory (of 25,665 wells); other well inventories also changed. In general, the burden on Class II owners or operators is higher than on Class V owners or operators, who only submit inventory data; therefore the Class II inventory changes have a larger impact on the total ICR burden. Changes in the Class II inventory add 623,159 hours to the ICR burden; much of this increase is associated with an increase in the number of permit applications expected to be processed over the next three years. The Class V inventory decrease had a much more modest impact on the ICR burden, reducing the owner or operator burden by 1,425 hours. Inventory changes affected the total burden on all well classes, increasing the ICR burden by 658,749 hours.
- *Other adjustments* relate to assumptions about the number of Class I, Class II, and Class III aquifer exemptions and the associated burden and other adjustments to unit burdens based on UIC Program experience. These adjustments collectively reduced the ICR estimate by 259,257 hours.

UIC Program Burden Reduction Efforts

EPA continues to explore options to reduce the reporting burden and cost to respondents, while maintaining the protective components of the UIC Program. This is primarily being accomplished by increasing the use of electronic reporting methods. EPA's efforts are briefly described below and discussed in further detail in Appendix D.

- EPA's National UIC database allows electronic transfer of data between existing state and DI databases and Headquarters' database. When fully populated, the National UIC database will eliminate the need for state UIC Program Directors to complete paper reporting forms because Headquarters would be able to collect data for and prepare national annual reports using the information in the database. As part of this effort, EPA

encourages primacy programs to develop electronic reporting from operators to primacy programs. Also, as noted above, EPA has reduced the frequency at which e-reporters must upload information to the national data base from quarterly to semi-annually. See additional discussion of the National UIC database in Section 5(b) of this ICR and in Appendix B.

- As noted above, EPA reduced the frequency at which states must submit PAMs data from semi-annually to annually. This results in a modest burden reduction of 1,040 hours annually.

6(g) Burden Statement

EPA estimates that, over the three years covered by this request, the total annual burden on injection well owners or operators and primacy agencies associated with UIC requirements will be 1,714,046 hours and the present value cost will be \$250.3 million per year. See Exhibit 6-5.

Exhibit 6-5 Annual Burden and Cost Associated with All Well Classes 2015-2017							
Respondent Type	Burden (hours)	Labor Cost	Non-Labor Cost	Total Cost	Responses	Burden/Response	Cost/Response
Operators	1,434,967	\$65,541,594	173,166,157	238,707,751	533,819.5	2.69	\$447.17
Primacy States	279,078	\$11,560,545	\$64,101	\$11,624,646	135,644.8	2.06	\$85.70
Respondent total	1,714,046	\$77,102,139	\$173,230,258	\$250,332,398	669,464.3	2.56	\$373.93
EPA	32,734	\$1,355,981	\$0	\$1,355,981	18,037.6	1.81	\$75.18
TOTAL	1,746,780	\$78,458,121	\$173,230,258	\$251,688,379	687,501.9	2.54	\$366.09

Note: numbers may not appear to add due to rounding.

The annual public reporting and recordkeeping burden for this collection of information is estimated to average 2.56 hours per response. Burden means the total time, effort, or financial resources expended by persons to generate, maintain, retain, or disclose or provide information to or for a federal agency. This includes the time needed to review instructions; develop, acquire, install, and utilize technology and systems for the purposes of collecting, validating, and verifying information, processing and maintaining information, and disclosing and providing information; adjust the existing ways to comply with any previously applicable instructions and requirements; train personnel to be able to respond to a collection of information; search data sources; complete and review the collection of information; and transmit or otherwise disclose the information. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. The OMB control numbers for EPA's regulations are listed in 40 CFR part 9 and 48 CFR chapter 15.

To comment on the agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including the use of automated collection techniques, EPA has established a public docket for this ICR under Docket ID No. EPA-HQ-OW-2014-0359, which is available for public viewing at the Water Docket in the EPA Docket Center (EPA/DC), EPA West, Room 3334, 1301 Constitution Ave., NW, Washington, DC. The EPA Docket Center Public Reading Room is open from 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding legal holidays. The telephone number for the Reading Room is (202) 566-1744, and the telephone number for the Water Docket is (202) 566-2426. An electronic version of the public docket is available through <http://www.regulations.gov>. Use www.regulations.gov to submit or view public comments, access the index listing of the contents of the public docket, and to access those documents in the public docket that are available electronically. Once in the system, select "search," then key in the docket ID number identified above. Also, you can send comments to the Office of Information and Regulatory Affairs, Office of Management and Budget, 725 17th Street, NW, Washington, DC 20503, Attention: Desk Officer for EPA. Please include the EPA Docket ID No. EPA-HQ-OW-2014-0359 and OMB control number 2040-0042 in any correspondence.