

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 146

[FRL-6729-2]

RIN 2040-AD40

Revision to the Federal Underground Injection Control (UIC) Requirements for Class I—Municipal Wells in Florida

AGENCY: Environmental Protection Agency (EPA).

ACTION: Proposed rule.

SUMMARY: EPA is proposing changes to the Underground Injection Control (UIC) regulations that would affect specific Class I municipal wells in Florida. Groundwater monitoring has revealed that injected or native formation fluids have migrated into underground sources of drinking water (USDW) as a result of Class I municipal well injection activity in areas of Florida with unique geological conditions. Such fluid migration is not allowed under current Federal UIC regulations. The proposed changes would allow for continued injection by existing Class I municipal wells that have caused or may cause such fluid movement into USDWs in specific areas of Florida if certain requirements are met which provide adequate protection for underground sources of drinking water. This proposed rule would only affect wells in certain parts of Florida that dispose of treated domestic wastewater through Class I injection wells.

DATES: Comments must be submitted on or before September 5, 2000.

Public hearings will be held:

August 22, 2000, 1:00 p.m. to 4:00 p.m., Tampa, Florida

August 22, 2000, 6:00 p.m. to 9:00 p.m., Tampa, Florida

August 24, 2000, 1:00 p.m. to 4:00 p.m., West Palm Beach, Florida

August 24, 2000, 6:00 p.m. to 9:00 p.m., West Palm Beach, Florida

ADDRESSES: Send written comments to Nancy H. Marsh: U.S. Environmental Protection Agency, Region 4; 61 Forsyth St., SW, Atlanta, GA, 30303. Comments may be submitted electronically to marsh.nancy@epa.gov. For additional information see Additional Docket information in the **SUPPLEMENTARY INFORMATION** section of this **Federal Register**.

Public hearing locations are:

Travelodge, 820 East Busch Boulevard, Tampa, Florida 33612

The Sheraton West Palm Beach Hotel, 630 Clearwater Park Road, West Palm Beach, Florida 33401

FOR FURTHER INFORMATION CONTACT: For technical inquiries, contact Nancy H. Marsh, Ground Water & UIC Section, EPA Region 4, 61 Forsyth Street, SW, Atlanta, GA 30303 (phone: 404-562-9450; E-mail: marsh.nancy@epa.gov) or Howard Beard, Office of Ground Water and Drinking Water, U.S. Environmental Protection Agency, Ariel Rios Building, 1200 Pennsylvania Avenue, N.W., Washington, DC 20460 (phone: 202-260-8796; E-mail: beard.howard@epa.gov). For general information, contact the Safe Drinking Water Hotline, phone 800-426-4791. The Safe Drinking Water Hotline is open Monday through Friday, excluding Federal holidays, from 9:00 a.m. to 5:30 p.m. Eastern daylight-saving time.

SUPPLEMENTARY INFORMATION:

Additional Docket Information

When submitting written comments (see **ADDRESSES** section above) please submit an original and three copies of your comments and enclosures (including any references). For an acknowledgment that we have received your information, please include a self-addressed, stamped envelope. EPA will not accept facsimiles (faxes).

The record is available for inspection from 8 a.m. to 3:30 p.m. Eastern daylight-saving time, Monday through Friday, excluding legal holidays at the Environmental Protection Agency, Region 4 Library (9th Floor), Sam Nunn Atlanta Federal Center, 61 Forsyth St., S.W., Atlanta, GA 30303-8960. For information on how to access Docket materials, please call (404) 562-8190 and refer to the Florida UIC docket.

Regulated entities. This proposed regulation is limited in application to the owners and/or operators of existing Class I underground injection wells that inject domestic wastewater effluent in certain parts of Florida. Regulated categories and entities include:

Category	Examples of regulated entities
Municipalities and Local Government.	Class I municipal injection wells disposing of domestic wastewater effluent in certain parts of Florida.
Private	Class I municipal injection wells disposing of domestic wastewater effluent in certain parts of Florida.

This table is not intended to be exhaustive, but rather provides a guide for readers regarding entities likely to be regulated by this action. This table lists the types of entities that EPA is now aware could potentially be regulated by this action. Other types of entities not listed in the table could also be

regulated. To determine whether your facility is regulated by this action, you should carefully examine the applicability criteria in § 146.15 of the proposed rule. If you have questions regarding the applicability of this action to a particular entity, consult one of the persons listed in the preceding **FOR FURTHER INFORMATION CONTACT** section.

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I. Background

A. Statutory and Regulatory Framework

Class I underground injection wells are regulated under the authority of Part C of the Safe Drinking Water Act ("SDWA" or "the Act") (42 U.S.C. 300h *et seq.*). The SDWA is designed to protect the quality of drinking water sources in the United States and prescribes that:

Underground injection endangers drinking water sources if such injection may result in the presence in underground water which supplies or can reasonably be expected to supply any public water system of any contaminant, and if the presence of such contaminant may result in such system's not complying with any national primary drinking water regulation or may otherwise adversely affect the health of persons. (Section 1421(d)(2) of the SDWA, 42 U.S.C. 300h(d)(2).)

Part C of the Act specifically mandates the regulation of underground injection. The Agency has promulgated a series of UIC regulations under this authority at 40 CFR Parts 144-147. The

chief goal of any Federally-approved UIC Program (whether administered by the State or EPA) is the protection of underground sources of drinking water (USDWs). This includes not only those aquifers which are presently being used for drinking water, but also those which may potentially be used in the future. EPA has established through its UIC regulations that underground aquifers with less than 10,000 mg/l total dissolved solids (TDS) which contain a sufficient quantity of ground water to supply a public water system are USDWs. (40 CFR 144.3)

Section 1421 of the Act requires EPA to propose and promulgate regulations specifying minimum requirements for effective State programs to prevent underground injection that endangers drinking water sources. EPA promulgated administrative and permitting regulations, now codified in 40 CFR Parts 144 and 146, on May 19, 1980 (45 FR 33290), and technical requirements, in 40 CFR Part 146, on June 24, 1980 (45 FR 42472). The regulations were subsequently amended on August 27, 1981 (46 FR 43156), February 3, 1982 (47 FR 4992), January 21, 1983 (48 FR 2938), April 1, 1983 (48 FR 14146), July 26, 1988 (53 FR 28118), December 3, 1993 (58 FR 63890), June 10, 1994 (59 FR 29958), December 14, 1994 (59 FR 64339), June 29, 1995 (60 FR 33926) and December 7, 1999 (64 FR 68546). Section 1421(b)(3)(A) of the Act also provides that EPA's UIC regulations shall "permit or provide for consideration of varying geologic, hydrological, or historical conditions in different States and in different areas within a State."

When EPA promulgated its UIC regulations, it defined five classes of injection wells in § 144.6. Class I wells are defined as wells which inject fluids beneath the lowermost formation containing, within one quarter mile of the well bore, a USDW. Class I wells can be hazardous, industrial or municipal waste disposal wells. EPA is only discussing existing Class I municipal wells in this proposed rule. Class I municipal wells can be owned by public and private entities.

Section 1422 of the Act provides that States may apply to EPA for national primary enforcement responsibility to administer the UIC program. Those States receiving such authority are referred to as "Primacy States." Florida received national primary enforcement responsibility for the UIC program for Class I, III, IV and V wells on March 9, 1983. UIC regulations specific to Florida's primacy program are established in Part 147, Subpart K. For the remainder of this preamble,

references to the UIC Program "Director" means the Secretary of the Florida Department of Environmental Protection (FDEP). Currently, all UIC Programs in Indian Country for Florida are directly implemented by EPA. There are no known Class I municipal wells in Florida in Indian Country.

B. Domestic Wastewater Disposal in Florida Through Class I Wells

Beginning more than 20 years ago, municipalities in Florida began to pursue the use of underground injection as an alternative to surface disposal of treated wastewater from domestic wastewater treatment facilities. Underground injection technology was employed to relieve stress to surface water environments because it was technologically feasible to inject large volumes of wastewater into deep cavernous formations. Through technical and monetary assistance, EPA supported construction of many of these facilities in an effort to safeguard surface waters. Through injection technology, domestic wastewater facilities have been able to dispose of large quantities of domestic effluent, with the resulting benefit of reducing impacts to surface ecosystems. Facilities that inject domestic wastewater into wells below the lowermost USDW, are considered to have a Class I municipal injection well and in Florida inject into zones ranging from 650 to 3,500 feet below land surface.

The volumes of domestic wastewater permitted for injection at Class I municipal well facilities presently range from less than one million gallons per day (MGD) at the Gasparilla Island Water Utilities to about 110 MGD at Miami-Dade Water & Sewer Department, South District Wastewater Treatment Plant. Florida requires that domestic wastewater must be treated to secondary wastewater treatment (See 40 CFR Part 133) standards at a minimum prior to injection.

At the time Florida permitted the currently operating Class I municipal wells, characterization of the geology indicated that there was adequate confinement to separate the injection fluids from the USDW. Because it was thought there was adequate confinement, it was believed that injection fluids would never migrate upwards into the shallower geologic formations containing USDWs. However, monitoring of injection operations over the past several years has indicated some deep geologic zones provide less confinement between formations than originally thought. In a few cases, fluid movement has occurred into the base of the lowermost USDW.

1. Fluid Migration Requirements

In addition to municipal wells, Class I wells also include hazardous or nonhazardous industrial wells which inject into geologic formations below the lowermost USDW. (Hazardous waste injection must meet additional Resource Conservation and Recovery Act (RCRA) requirements. See 40 CFR Part 148.)

When EPA promulgated its regulations for the UIC program, it established different requirements for each class of wells, based upon the uses and risks of various types of wells. All classes of wells are required to comply with § 144.12(a) which states:

No owner and/or operator shall construct, operate, maintain, convert, plug, abandon, or conduct any other injection activity in a manner that allows the movement of fluid containing any contaminant into underground sources of drinking water, if the presence of that contaminant may cause a violation of any primary drinking water regulation under 40 CFR Part 142 or may otherwise adversely affect the health of persons.

Then, for Class I, II and III wells, § 144.12(b) more specifically provides that:

if any water quality monitoring of an underground source of drinking water indicates the movement of any contaminant into the underground source of drinking water, except as authorized under Part 146, the Director shall prescribe such additional requirements for construction, corrective action, operation, monitoring, or reporting (including closure of the injection well) as are necessary to prevent such movement.

In contrast to subsection (a), which, for all classes of wells, prohibits fluid movement that endangers USDWs, Section 144.12(b) requires for Class I, II and III wells, that a State or Federal UIC program director, upon detection of contaminant movement into a USDW, prescribe requirements to prevent any such movement, regardless of whether the movement may endanger the USDW.

In addition to § 144.12(b), EPA established technical and other requirements for specific classes of wells in Parts 144 and 146 regulations. The Parts 144 and 146 regulations address siting, construction, operation, and closure of wells. Section 144.12(b) and the specific technical requirements of Parts 144 and 146 regulate the activities through which fluid movement may result and impose requirements designed to ensure that Class I, II and III wells will not endanger USDWs by prohibiting movement of any fluid into the USDW.

Today's proposed change to the technical requirements in Part 146 for Class I municipal wells in certain parts of Florida will be implemented through

the addition of § 146.15 pursuant to the authority of Section 1421(b)(3)(A) of the SDWA. Section 1421(b) of the SDWA requires that EPA promulgate regulations which provide the minimum requirements for an effective UIC program: such regulations "shall contain minimum requirements for effective programs to prevent underground injection which endangers drinking water sources." (Section 1421(b)(1), 42 U.S.C. § 300h(b)(1).) Section 1421(b)(3)(A) also provides that EPA regulations "shall permit or provide for consideration of varying geologic, hydrologic, or historical conditions in different States and in different areas within a State." (Section 1421(b)(3)(A), 42 U.S.C. § 300h(b)(3)(A).) The proposed change in the technical requirements for Class I municipal wells in certain parts of Florida is being undertaken pursuant to Section 1421(b)(3)(A) in recognition of the appropriateness of a different standard of USDW protection in light of Florida's unique geology, hydrogeology and historical (as well as present and future) wastewater disposal needs.

2. Florida Geology

In Florida, as in most areas of the country, sedimentary rocks are the predominant rock type, although the specific types of sedimentary rocks are different. In other areas, the underlying rock consists of clastic rock (sandstone, siltstone, and shale) and carbonate rock (limestone and dolomite). Limestone and dolomite are often classified as carbonate rock because of their mineral composition. Limestone is often formed by accumulation of organic remains such as corals or shells, and consists mainly of calcium carbonate. Dolomite is composed of the mineral calcium magnesium carbonate and is generally formed by alteration of limestone. Clastic rocks are formed from weathering and erosion and are made up of fragments of sand, silt, and clay. This eroded clastic material is transported and deposited at locations where it becomes the subsurface rock after burial and compression.

Where sedimentary rocks exist, clastic rocks (sandstones, siltstones, shales) and carbonate rocks (limestones and dolomites) comprise the geologic formations that serve as the injection zones and confining zones for underground injection activity. Whether a rock layer can serve as an injection zone or a confining zone depends on its porosity (the amount of pore space between grains of sand) and its permeability (the interconnectivity of this pore space). In general, rocks with higher porosity and permeability

usually serve as injection zones because these characteristics readily allow for the fluids that naturally exist in the pore spaces (known as native, formation, or connate fluids) to be displaced by injection fluids. Rock layers with lower permeability or porosity do not allow such movement, and typically serve as confining zones. Sandstones usually serve as injection zones because their porosity and permeability allows for native formation fluids to move freely and be displaced by injection fluids. Siltstones generally are not good injection zones because they have less permeability than needed for injection operations. However, they also generally have too much permeability to serve as a confining unit. Shales often serve as confining zones for underground injection purposes because they have high porosity but low permeability (fluids do not move freely through the zone).

Limestone and dolomite sequences can be lithologically complex because, within a carbonate rock layer, the porosity and permeability may be greatly affected by geologic processes that occur after the rocks are formed. These include tectonic fracturing and chemical interactions between carbonate rock and fluids traveling through these fractures. The porosity and permeability of carbonate rock has been enhanced, reduced, and, in places, eliminated. The porosity and permeability variations of the carbonate rocks of peninsular Florida, which define their confining ability, may be quite local in nature.

That is, even within the same geological horizon or geological deposit of a particular time, there may be areas of high porosity and permeability close to low-porosity areas of porosity and permeability. This can complicate or compromise the use of carbonate rocks as injection or confining zones.

Sedimentary rock types in a given location vary based on changes in the environment at the time they were deposited. Carbonate sediments may develop in many environmental settings, but the most prolific accumulations occur in warmer climates which are conducive to the development of corals and other skeletal marine organisms with shells composed of calcium carbonate minerals. A lack of clastic deposition also favors carbonate deposition. If clastic sediments start to be deposited on a coral formation, the sediments would bury and kill the organisms, thereby preventing further growth of the coral formation.

In many areas of the country, sequences of sediment deposition alternate between clastic and carbonate

rocks, reflecting changes in the depositional environment. Clastic sediments usually accumulate near the medium that transported the sediments, such as the mouth of a river. Carbonate sediments, on the other hand, generally accumulate near where they are formed, such as a coral formation. The thickest deposits of carbonate rocks occur where there are warm climates and limited media (rivers for example) to transport clastic sediment.

The current injection and confining zones in peninsular Florida exist in what is known as the Floridan Aquifer System. The Floridan Aquifer System is made up of carbonate rocks. Parts of the Floridan Aquifer System also are USDWs. The rocks were formed on a broad, marine shelf with a warm climate, which was distant from sources of clastic sediment such as rivers. This setting allowed for the development of thick deposits of limestone and dolomite (carbonate rock) without significant amounts of sandstones, siltstones, and shales (clastic rock) found in other areas of the country. Because of the absence of shales in peninsular Florida, which are frequently the confining zones in other areas of the country, the carbonate rocks themselves must serve as both the confining and injection zone. This is unusual and unique, but possible because of the variability in the porosity and permeability of carbonate rocks as discussed previously as well as the existence of numerous vertical and horizontal faults within the formations.

The porosity and permeability variations of the carbonate rocks of peninsular Florida and the existence of fractures within the formation determine their confining ability. The porosity varies greatly, even within the same horizon or geological deposit of a particular time. While the confining ability within the rock sequences that comprise the Floridan Aquifer appears adequate for most injection facilities, there are some injection well locations where the carbonate formation does not appear to provide adequate confinement. This is substantiated by water quality analysis of monitoring wells at selected injection facilities. While most of the country can depend on clastic shales for confinement, Florida's geology has very different characteristics which were not considered during original promulgation of the Class I regulations.

It now appears, from recent well monitoring data, that upward fluid movement from some Class I municipal operations occurs in Florida because the injection fluid from Class I municipal wells has a lower density (lower total

dissolved solids) than the native formation fluids. This tends to cause the less dense injection fluids to rise to the top of the injection zone preferentially through fractures that may exist within the formations. Because of its buoyancy, the injectate may also rise above the injection zone if these migration pathways exist. This monitoring data also indicates that injection fluid has migrated vertically into USDWs.

The application of the proposed rule is limited to both certain geologic conditions and certain geographic areas in Florida. It is limited geographically to the following counties: Brevard, Broward, Charlotte, Collier, Dade, Flagler, Glades, Hendry, Highlands, Hillsborough, Indian River, Lee, Manatee, Martin, Monroe, Okeechobee, Orange, Osceola, Palm Beach, Pinellas, St. Johns, St. Lucie, Sarasota, and Volusia. These counties are included in this proposed rule because they have the unique geologic conditions that are predominated by carbonate rocks discussed previously. The counties were selected using a map adapted from Florida Geological Survey map series 94 "Potential Subsurface Zones for Liquid-Waste Storage in Florida," created by James A. Miller of the United States Geological Survey in 1979. The geological conditions considered are those where the injection and confining zones are both in the Floridan Aquifer, and no clastic confining unit separates the injection zone from the lowermost USDW. EPA requests comment on whether these are the appropriate counties to target in this proposal or whether additional (or fewer) counties in Florida should be included. See United States Geological Survey's website for specific information on Florida's geology at <http://www.usgs.gov>.

C. 1999 Stakeholder Meeting

To assist in developing an approach to deal with the Class I municipal wells in Florida, EPA held a stakeholder meeting on July 7, 1999, in West Palm Beach, Florida to solicit stakeholder input. Over 100 people attended the meeting in person or via conference call with 30 people giving oral comments. Additional written statements have been received since the meeting. Municipalities, industry, environmental groups and private citizens participated. At that meeting, EPA presented four general options then being considered: (1) Make no regulatory change, (2) reclassify the wells from Class I municipal to Class V municipal, (3) convert the wells directly to Class V by allowing injection directly into the USDW, and (4) make some regulatory

change. The following is a discussion of each of these options.

Option 1: Make no regulatory change. This option would require those facilities where it has been shown that fluids are migrating into a USDW to either cease Class I injection and find another disposal alternative or obtain an aquifer exemption to allow continued injection. Some facilities indicated that, because of other state laws and rules, there is no surface water disposal option available to them. Other facilities said they would have to treat the effluent to a much higher standard than is currently required in order to use surface waters as a disposal option. If a facility would choose to obtain an aquifer exemption, they would need to show that the aquifer is not reasonably expected to supply a public water system, which would be very difficult to show.

Option 2: Reclassify the wells from Class I municipal wells to Class V wells. This option would have involved the determination that the facility no longer meets the regulatory definition of a Class I well, *i.e.*, a well injecting below the lowermost formation containing a USDW (40 CFR 144.6). Under this option, EPA and stakeholders discussed whether facilities with fluid movement could seek reclassification in a permit action from Class I to Class V on the basis that injection is taking place into (rather than below) the formation that contains the USDW. Under current Florida requirements, if a Class V well is discharging into a USDW, the facility must meet the national primary drinking water standards at the point of discharge. Compliance at the point of discharge could make this option more costly to the discharger than Option 1. The Agency is not planning to allow reclassification unless the well was misclassified in the first instance. Misclassification might have occurred if the well did not originally meet the definition of a Class I well. The facility could demonstrate this if new information has become available that proves that the well originally was injecting into a USDW and therefore would meet the definition of a Class V well.

Option 3: Convert the wells to Class V by allowing injection directly into the USDW. Under this option, wells would inject municipal wastewater directly into or above the formation containing the lowermost USDW. This option is different from the reclassification option (Option 2) because the well would have to be physically altered to inject into the USDW. Similar to the previous option, under current Florida rules, a facility would have to meet national primary

drinking water standards at the point of discharge under this option. Several stakeholders commented that the formations within the USDW do not have sufficient capacity to accept the quantities of fluid currently injected into the deeper formations which, because of their unique hydrogeologic characteristics, can accept large quantities of fluid. This option has always been available to the facilities but has not been used because of these limitations and the extensive treatment that would be required for the discharge to meet the State's standards.

Option 4: Make some regulatory change. This is the option that is being proposed today and will be discussed in Section D.

Participants in the stakeholder meeting suggested that protecting ground water was a high priority. Some municipalities advocated reclassification to Class V wells while others said a regulatory change would be more beneficial. Municipalities advocated the reclassification of the wells to Class V. Environmental groups generally wanted to require the facilities to apply higher levels of treatment prior to injection. Many felt that injection was still a viable option but attention should be paid to protect the future use of the ground water resource.

D. Proposed Regulations

1. Flexibility Provided in SDWA Section 1421

The SDWA requires EPA to promulgate regulations that contain minimum requirements for effective programs to prevent underground injection which endangers drinking water sources. The Act further states that:

Underground injection endangers drinking water sources if such injection may result in the presence in underground water which supplies or can reasonably be expected to supply any public water system of any contaminant, and if the presence of such contaminant may result in such system's not complying with any national primary drinking water regulation or may otherwise adversely affect the health of persons. (42 U.S.C. 300h (d)(2))

EPA responded to the SDWA mandate (1421(b)(5)) that underground injection not endanger USDWs by requiring that Class I wells prevent the movement of *any* fluids into a USDW. However, EPA prescribed no limits on the quality or quantity of the fluids being injected. EPA established a "no fluid movement" requirement for all Class I wells even though such wells are different with respect to their design, construction, and operation. EPA believed a uniform standard would be easier to interpret,

comply with, and enforce, and such a standard was generally accepted among the regulated community. This acceptance was based upon the assumption that specific strata existed around the country that could generally serve as a barrier to fluid movement and that, therefore, there was no need for additional limits on effluent quantity or quality. This was also thought to be true in Florida, even though Florida's geology does not fit the "classic" model.

Since the original UIC regulations were passed, information from several deep monitoring wells placed at the base of the lowermost USDW near certain municipal injection wells in Florida have shown evidence that there has been fluid migration out of the designated injection zone. Through evaluation of this information, it is suspected that sufficient geologic strata separating the injection zones and the USDW do not exist in certain parts of Florida. Therefore, considering the State's unique geology, the assumption underlying the development of the fluid movement prohibition for Class I municipal wells needs (i.e., availability of adequate confinement) to be reviewed for Florida. Since current Federal UIC regulations do not provide Class I municipal wells with the flexibility to demonstrate that injection and any subsequent fluid movement would not endanger underground drinking water sources, EPA has decided that such flexibility should now be built into the Florida-specific UIC regulations for existing municipal Class I wells.

The Act permits EPA, under Section 1421(b)(3)(A), to consider specific State geologic, hydrological and historical conditions when passing regulations to prevent endangerment. Section 1421(b)(3)(A) states, "The regulations of the Administrator under this section shall permit or provide for consideration of varying geologic, hydrological, or historical conditions in different States and in different areas within a State." The proposed rule is being developed based on South Florida's unique carbonate—rock geology, discussed previously, the vast hydrological capacity that characterize the formations where wastewater is injected and the extent to which municipalities in South Florida have turned to Class I wells as a very important method for wastewater disposal. Florida is currently also the only State in the country that disposes of treated domestic waste through Class I municipal injection wells. EPA believes that all these conditions support the regulatory approach being proposed here for existing Class I

municipal wells in certain parts of Florida.

2. What the Proposal Will Allow

EPA is now considering a regulatory approach for existing Class I municipal wells in certain counties in Florida that addresses the lack of sufficient confinement of Class I municipal injection while continuing to meet the requirement of the Act to prevent underground injection that endangers underground drinking water sources. These counties are: Brevard, Broward, Charlotte, Collier, Dade, Flagler, Glades, Hendry, Highlands, Hillsborough, Indian River, Lee, Manatee, Martin, Monroe, Okeechobee, Orange, Osceola, Palm Beach, Pinellas, St. Johns, St. Lucie, Sarasota, and Volusia. The proposed rule provides an option for qualified operators of domestic wastewater facilities in these counties to continue disposal underground rather than relying on surface and/or ocean disposal of effluent. Further, the proposed rule would compel facilities to provide more advanced wastewater treatment that will raise the economic value of the treated effluent and in turn promote greater wastewater reuse.

The proposed rule creates, for certain Florida Class I wells that inject domestic wastewater, an authorization to inject, regardless of fluid movement into the USDW, so long as the facility can demonstrate that it will meet certain protective criteria relating to the quality of the injected fluid, and that the injected fluids will not cause any USDWs to exceed primary drinking water regulations in Part 141 of this chapter and other health based standards. The proposed rule is consistent with the mandate of the SDWA, as it establishes requirements which prevent endangerment of USDWs. The conditions placed upon wells receiving this authorization to inject are designed to prevent endangerment of USDWs, while providing for the possibility of continued injection operations. In order to further ensure that the authorization to inject is consistent with the goals of the SDWA, the proposal specifies that EPA participate in the review and approval of the facility's application for this authorization, even though the State of Florida has primacy for the Class I UIC program. EPA will have 90 days to disapprove the State's approval of any authorization under this proposed rule. If EPA does not respond within 90 days, the demonstration is approved.

EPA is co-proposing for public comment two approaches for regulating Class I municipal wells in specific areas of Florida where injection has caused or

may cause fluid movement into a USDW. The two options are: Option 1—Facilities must provide advanced wastewater treatment with a demonstration that the injectate will not cause a USDW to exceed any primary drinking water regulations in Part 141 of this chapter and other health based standards (e.g., Federal or State health advisories); and Option 2—Facilities must conduct an in-depth hydrogeologic demonstration and must provide advanced treatment, as necessary, to ensure that injectate will not cause a USDW to exceed any primary drinking water regulations in Part 141 of this chapter and other health based standards. The requirements of these options are in paragraph (d).

The difference between these two options is that Option 2 would require a much more extensive demonstration than in Option 1 because a high level of treatment before injection provides a safety net of contaminant removal. Both of these proposals apply to existing municipal wells which inject domestic wastewater effluent. An existing well is defined as a well for which a complete UIC construction permit application has been received by the Director on or before the date of publication of this proposed rule in the **Federal Register**. This rule is proposed for existing wells only because, given current knowledge of the existing fluid migration problems, future well applications will be reviewed with more scrutiny than wells that have already been permitted and such review will ensure that adequate confinement exists so that fluid movement should not occur. The Agency is requesting comments on whether this proposed rule should apply to existing wells only, or if this proposed rule should also apply to new wells.

Although the municipal wells that are covered by this proposed rule receive primarily domestic wastewater, they also receive some wastewater from industrial sources. This rulemaking does not specifically require that these industrial facilities have a pretreatment program in place that would require them to pretreat the wastewater that enters the facility's treatment system. Such a program may be necessary to address contaminants that enter a facility's wastewater treatment system and are not sufficiently removed by the treatment system to prevent concentrations of the contaminant from entering a USDW and causing the USDW to exceed drinking water regulations or other health based standards. Although Florida requires that publicly owned treatment works (POTWs) greater than 5 million gallons

per day (MGD) meet certain pretreatment requirements, this may not sufficiently address contaminants in fluids that move into a USDW as a result of underground injection from smaller POTWs or others that could be exempt from existing pretreatment requirements. EPA therefore solicits public comment on the need by the Agency to require pretreatment as an additional condition of authorization under today's proposal and, whether to extend the pretreatment standards presently required by the State to injection facilities with less than 5 MGD.

3. Rule Applicability

This proposed rule applies only to existing Class I municipal wells which inject treated domestic wastewater effluent that have caused or may cause fluid movement into USDWs in specific counties in Florida. These counties are: Brevard, Broward, Charlotte, Collier, Dade, Flagler, Glades, Hendry, Highlands, Hillsborough, Indian River, Lee, Manatee, Martin, Monroe, Okeechobee, Orange, Osceola, Palm Beach, Pinellas, St. Johns, St. Lucie, Sarasota, and Volusia. This rule applies to both publically and privately owned facilities. The definition of domestic wastewater can be found in paragraph (c) of this proposed rule.

4. Monitoring

EPA is considering adding more specific monitoring requirements for the effluent and the ground water than specified in § 146.13. The effluent will be characterized initially to determine the level of contaminants in the wastewater and then at least annually to ensure that the treatment process is meeting its objectives. This monitoring, at a minimum, would be for all contaminants regulated under the national primary drinking water regulations and other health based standards. The Director shall also require that the owner and/or operator develop and implement an ambient/ground water monitoring program. The ground water monitoring program will, at a minimum, analyze the ground water to determine if any primary drinking water regulations in Part 141 of the chapter or other health based standards have been violated. The monitoring is to verify that the injection operation shall not endanger the USDW through movement of the injectate or formation fluids. These requirements would be incorporated as permit conditions of an operation permit under the Florida UIC program. Additional requirements, such as the construction of additional monitoring wells may be needed on a

case-by-case basis. EPA is requesting comments on any additional monitoring requirements for the final rule.

5. Operating Conditions

Operating conditions determined necessary to prevent endangerment of the USDW by the demonstration will be incorporated by the Director as permit conditions to either a permit modification or permit issuance. Conditions may include, but are not limited to, treatment requirements including pretreatment (if any), monitoring criteria and frequency, and reporting frequency.

The options which are being co-proposed for paragraph (d) are as follows:

Option 1—Advanced wastewater treatment with a non-endangerment demonstration. The authorization to inject under Option 1 requires that the owner and/or operator of a Class I municipal well injecting domestic wastewater effluent treat their wastewater by advanced treatment methods and high-level disinfection and demonstrate that the injection of the wastewater effluent would not cause fluids that exceed the national primary drinking water regulations or other health based standards to enter the USDW. The non-endangerment demonstration would focus on any contaminants that still exceed national drinking water regulations or other health based standards after advanced wastewater treatment. The demonstration would identify any such contaminants and demonstrate that they would not cause similar exceedances in the USDW.

EPA solicits public comment on four alternatives for the appropriate level of advanced wastewater treatment, nutrient removal, and high-level disinfection that should be required of these facilities. The final rule will specify only one alternative.

Advanced treatment options reflect a wide range of biochemical oxygen demand (BOD) removal and nutrient removal capabilities. In designing the Clean Water Needs Survey, States and EPA identified four advanced treatment options that represent a range of treatment scenarios commonly used by municipalities for advanced wastewater treatment. These include plants designed to meet BOD levels of 10–24 mg/l with and without nutrient removal capability, and plants designed to meet more stringent BOD levels of less than 10 mg/l with and without nutrient removal capability. EPA is considering a range of advanced treatment alternatives, and is seeking comment on which alternative to specify in the final

rule if Option 1 is selected. The alternatives evaluated and proposed are: Treatment to 10–24 mg/l BOD with disinfection;

Treatment to 10–24 mg/l BOD with disinfection and nutrient removal;

Treatment to <10 mg/l BOD with disinfection;

Treatment to <10mg/l BOD with disinfection and nutrient removal.

Advanced treatment is any level of treatment in excess of secondary treatment and may include processes to remove nutrients such as nitrogen and phosphorus and other pollutants found in the wastewater stream entering the municipal treatment plant. To achieve high level disinfection, a process designed to kill most microorganisms in water including pathogenic (disease causing) bacteria, owners and/or operators must allow the wastewater to remain in contact with at least 1.0 mg/l of free chlorine for at least 15 minutes of contact with no fecal coliform. Facilities will also be required to provide dechlorination, if necessary, as part of the advanced wastewater treatment to ensure that USDWs are not endangered from disinfection by-products.

Option 2—In-depth hydrogeologic demonstration and advanced treatment, as necessary. The authorization to inject under Option 2 requires that the owner and/or operator of a Class I municipal well injecting domestic wastewater effluent provide a hydrogeologic demonstration that the injection operation would not cause fluids that will migrate into the USDW to exceed the national primary drinking water regulations or other health based standards. EPA anticipates that this hydrogeologic demonstration would be similar in detail to that required for a RCRA land ban no-migration petition and consist of an evaluation of the results of sampling and analysis for contaminants in wastewater prior to injection and in water samples from deep monitoring wells at the base of the USDW and would also include detailed hydrogeologic modeling of fluid transport from the injection zone to those areas of the subsurface including USDWs to which the fluid and contaminants in the fluid have migrated and may migrate. This demonstration would include at a minimum: ground-water modeling, geochemical analysis and effluent and ground-water monitoring and analysis. The items included in the demonstration are intended to characterize how the effluent is expected to move vertically and horizontally after it is injected into the subsurface and to determine if the

effluent or the formation fluids will enter the USDW. If it is anticipated that the fluids may enter the USDW, the demonstration must show that the fluids will not endanger the USDW and exceed primary drinking water regulations in Part 141 or other health based standards.

If the owner and/or operator cannot successfully demonstrate that the injection operation meets these criteria, the owner and/or operator must treat the injectate to address the contaminants of concern and satisfy the criteria of paragraph (d) that the injectate would not cause a USDW to exceed the national primary drinking water regulations or other health based standards prior to receiving an authorization for permit authorizing continued injection pursuant to this rule. The Agency also solicits comments as to whether this hydrogeologic demonstration, and the determination of what level of advanced wastewater treatment may be necessary, should include a requirement for pretreatment as may be necessary to address contaminants that may move through a treatment system and enter into a USDW at concentrations of concern.

The differences between the two options proposed under paragraph (d) are that the first option gives a higher level of confidence that any fluids that migrate into the USDW will meet the applicable standards. This is because the facilities must design, construct and operate a specific level of advanced wastewater treatment and also demonstrate that, after the effluent is treated, any constituent which exceeds any primary drinking water regulations in Part 141 or other health based standards at the point of injection will not exceed the standards when the fluid enters the base of the USDW.

For Option 1, this demonstration could be as simple as referencing technical literature describing die-off rates for viruses and other pathogens, or how metals bind in soils compared to the results of ground water sampling and analysis pursuant to § 146.13. EPA expects that there would be fewer parameters (contaminants in concentrations of concern) requiring a demonstration in Option 1 since the effluent would be subject to advanced treatment and disinfection and less ground water modeling.

For Option 2 under paragraph (d), the facility is afforded the opportunity to demonstrate the necessity for additional treatment and tailor the level of treatment to the quality of fluid that has migrated or may migrate into the base of the USDW. The level of treatment needed to make a successful

demonstration under Option 2 could vary from facility to facility. Constituents in the effluent that exceed primary drinking water regulations in Part 141 or other health based standards would need to be sampled at the base of the USDW, analyzed and evaluated to ensure that the requirements of this proposed rule are met. EPA solicits comments on each of these options for ensuring that any fluid that does migrate into the base of a USDW will meet applicable standards. In particular, EPA solicits comments on the ability of owners and operators to provide the kind of hydrogeologic and other information necessary for a successful hydrogeologic demonstration.

If it adopts Option 2, EPA also proposes to require that all facilities qualifying for authorization to inject under this section must have advanced wastewater treatment and high level disinfection in place by the year 2015. This requirement is to address water shortages in Florida and encourage water reuse. The year 2015 is being proposed in order to provide the wastewater treatment facilities with adequate time to evaluate all of their municipal wastewater reuse and disposal options and to plan for any construction of treatment facilities needed. Prior to the year 2015, under Option 2, the owner/operator of the wastewater treatment facility would still have to demonstrate that they will not endanger USDWs. EPA is soliciting comment on the appropriate level of advanced wastewater treatment and nutrient removal to be required by the facilities by 2015. The levels of treatment being considered are the same as those listed in Option 1 above.

6. Demonstration Review

The demonstration under paragraph (d) must be submitted to both the State and EPA for review. The authorization to continue to inject under a permit shall become final 90 days after the State Director approves the demonstration and submits the approval in writing to the Regional Administrator if he or she does not disapprove the authorization within the 90 days. Any disapproval by the Regional Administrator shall state the reasons and shall constitute final Agency action. The owner and/or operator must update the required demonstration with each subsequent Class I operation permit application, every five (5) years, as required in paragraph (f). The update shall include an analysis of all monitoring results since the original demonstration and verification that the original demonstration is still valid for the disposal operation.

EPA is soliciting comments on all aspects of this proposal, and in particular on whether to select either Option 1 or 2 or, if it would be more appropriate, to select a combination of both options. In addition the Agency requests comments on EPA's regulatory approach to continue to allow facilities with fluid movement to inject by improving the quality of the injected fluid. In particular, the Agency invites comment and data on any commenters' preference among the various means of domestic wastewater disposal in Florida, the effects that those methods have on Florida's fragile environment, and the extent to which this proposal may result in the increased or decreased use of reuse or other disposal practices such as ocean or other surface water disposal.

E. The Cost of Compliance

The proposed rule does not impose any new requirements on Class I municipal wells in Florida, but merely provides an alternative authorization to inject for which a well owner and/or operator may apply if the well falls within the narrow criteria of the proposed rule. Because continued operation of Class I municipal injection wells which result in movement of fluids into or between USDWs is contrary to existing Federal UIC regulations, the proposed rule offers such facilities an ability to continue to operate legally provided they meet the new requirements.

The proposed rule presents owners and/or operators of such Class I wells with options for continued authorization to inject should fluid movement occur. In the absence of the proposed regulatory changes, facilities that exhibit fluid movement would need to close their wells and adopt alternative disposal practices. The economic analysis for this proposed rule compares the costs of compliance under this proposed rule with the costs of compliance under the current regulations. Small private and governmental entities are the likely owners and/or operators of Class I wells in Florida disposing of domestic wastewater effluent.

The factors taken into account in estimating these costs include the number of existing facilities that are potentially affected by the proposed rule, the current regulatory requirements for Florida Class I municipal facilities, and the current extent of treatment at each facility. Many of the cost estimates are presented as a range, with the lower figures representing an assumption that 25% of the existing facilities will experience

fluid movement and the upper figures representing an assumption that 100% of the facilities will experience fluid movement. Specific to Option 2, of the facilities that do not currently provide advanced wastewater treatment and high level disinfection, 25% are assumed to be able to make the hydrogeologic demonstration with the addition of high-level disinfection only and 75% will have to provide both high-level disinfection and advanced wastewater treatment. The baseline assumes the costs associated with complying with the current UIC regulations. These costs include closing the wells and adopting alternative disposal practices, which could consist of surface water disposal, ocean outfall, and/or reuse.

Four different treatment scenarios have been evaluated with each of the proposed options. The target contaminant removal levels are based on the pollutant parameter biochemical oxygen demand (BOD) removal:

Treatment to 10–24 mg/l BOD with disinfection

Treatment to 10–24 mg/l BOD with disinfection and nutrient removal

Treatment to <10 mg/l BOD with disinfection

Treatment to <10mg/l BOD with disinfection and nutrient removal

Given these assumptions, the costs to Class I municipal facilities, including monitoring costs, in Florida are estimated to be as follows (in millions of dollars):

Baseline Scenario: Total Capital Costs \$721–2,882

Total Annualized Costs (Capital & Operating) \$203–811

Regulatory Option 1: Total Capital Costs \$254–1,678

Total Annualized Costs (Capital & Operating) \$131–587

Total Annualized Savings from Baseline \$72–224

Regulatory Option 2: Total Capital Costs \$201–1,329

Total Annualized Costs (Capital & Operating) \$101–453

Total Annualized Savings from Baseline \$102–358

EPA is soliciting comments on the assumptions used in the economic analysis that was developed for this proposed rule. The economic analysis is part of the record for this proposed rule (see Additional Docket Information in the **SUPPLEMENTARY INFORMATION** section above).

EPA notes that a facility may choose to cease underground injection and, as permitted under State or Federal law, opt to discharge to surface waters, either to fresh waters, estuaries or through an

outfall to ocean waters. EPA solicits comments regarding whether these are preferred disposal methods. In particular, EPA solicits comments about what disposal actions municipalities may take if there is no regulatory change or in the event either one of the two proposed options is promulgated. EPA also solicits comments on the potential economic or environmental impact of either making no change or choosing either of the proposed options.

II. Regulatory Impact/Administrative Requirements

A. Executive Order 12866: Regulatory Planning and Review

Under Executive Order 12866 (58 FR 51735, October 4, 1993), the Agency must determine whether the regulatory action is “significant” and therefore subject to OMB review and the requirements of the Executive Order. The Order defines “significant regulatory action” as one that is likely to result in a rule that may:

(1) Have an annual effect on the economy of \$100 million or more or adversely affect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety, or State, local, or tribal governments or communities;

(2) Create a serious inconsistency or otherwise interfere with an action taken or planned by another agency;

(3) Materially alter the budgetary impact of entitlements, grants, user fees, or loan programs or the rights and obligations of recipients thereof; or

(4) Raise novel legal or policy issues arising out of legal mandates, the President’s priorities, or the principles set forth in the Executive Order.

It has been determined that this proposed rule is not a “significant regulatory action” under the terms of Executive Order 12866 and is, therefore, not subject to OMB review.

B. Executive Order 13045: Children’s Health Protection

Executive Order 13045, “Protection of Children from Environmental Health Risks and Safety Risks” (62 FR 19885, April 23, 1997), applies to any rule that: (1) Is determined to be “economically significant” as defined under Executive Order 12866, and (2) concerns an environmental health or safety risk that EPA has reason to believe may have a disproportionate effect on children. If the regulatory action meets both criteria, the Agency must evaluate the environmental health or safety effects of the planned rule on children, and explain why the planned regulation is

preferable to other potentially effective and reasonably feasible alternatives considered by the Agency.

This proposed rule is not subject to Executive Order 13045 because it is not economically significant as defined in Executive Order 12866, and because the Agency does not have reason to believe the environmental health or safety risks addressed by this action present a disproportionate risk to children. The proposed rule provides an optional authorization for certain Class I wells in Florida to inject domestic wastewater effluent only if the practice is demonstrated not to endanger underground sources of drinking water. The criteria established in the rule safeguards these resources for all potential users, including but not limited to children.

The public is invited to submit or identify peer-reviewed studies and data, of which the Agency may not be aware, that assessed results of early life exposure to secondarily treated wastewater injected into the subsurface through Class I municipal wells in Florida.

C. Paperwork Reduction Act

The information collection requirements in this proposed rule have been submitted for approval to the Office of Management and Budget (OMB) under the *Paperwork Reduction Act*, 44 U.S.C. 3501 *et seq.* An Information Collection Request (ICR) document has been prepared by EPA (ICR No. 317.17) and a copy may be obtained from Sandy Farmer by mail at Collection Strategies Division; U.S. Environmental Protection Agency (2822); 1200 Pennsylvania Avenue, N.W., Washington, DC 20460; by email at farmer.sandy@epamail.epa.gov, or by calling (202) 260–2740. A copy may also be downloaded off the internet at <http://www.epa.gov/icr>.

The proposed ICR estimates monitoring, demonstration, reporting and recordkeeping burdens and costs for Class I underground injection well operators in Florida under the proposed rule. Information regarding wastewater quality, treatment and migration will be collected as outlined in the rule for review by the State of Florida as primacy agent. Under the proposed rule, the primacy State would be required to revise and resubmit a UIC program application for Class I wells. EPA is also requesting that facility owners and/or operators demonstrate, using a modeling study, that by the time effluent reaches the USDW, it is in compliance with the SDWA national primary drinking water standards. Wells for which it cannot be demonstrated that sufficient water

quality exists at the bottom of the USDW would have to upgrade their wastewater treatment to qualify for the proposed authorization to inject.

Information collected under SDWA and, by extension, this ICR is expected to be used by EPA and the State of Florida to help insure the maintenance of clean, safe public drinking water supplies.

Operators of injection wells may claim confidentiality, as provided in § 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.

Information collected under this ICR is intended for the Agency's and/or State's internal use and there are no plans to routinely release or publish any of the data. However, if no claim of confidentiality is made at the time of submission, the information can be made available to the public without further notice.

EPA estimates that the average annual burden on Class I municipal well operators (which includes public and private entities) and the State of Florida will be 1,556 hours for Option 1 of the proposed rule and 2,265 hours for Option 2. This is based on an estimate that 1 State, Florida, will need to provide 44 responses each year at 10 hours per response for Option 1 and 44 responses at 10.6 hours per response for Option 2. It is also estimated that 9 Class I municipal well operators will need to provide an average of 15.7 responses each year at an average of 7.9 hours per response for Option 1 and an average of 15.7 responses each year at an average of 12.8 hours per response for Option 2. The labor burden is estimated for activities associated with reading and understanding the rule, performing and reviewing monitoring, performing and reviewing engineering demonstrations, and meeting privacy requirements. In addition to the recordkeeping and reporting burden, it is estimated that an average annual cost of \$688,678 will be incurred for capital and operations and maintenance (O&M) costs for Option 1, and \$884,943 annually for Option 2. Capital costs are for installation of monitoring wells and associated equipment needed to collect data under the rule requirements. O&M costs are for acquisition of contracting services to perform analysis and demonstrations required by the proposed rule.

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.

Comments are requested on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including through the use of automated collection techniques. Send comments on the ICR to the Director, Collection Strategies Division; U.S. Environmental Protection Agency (2822); 1200 Pennsylvania Avenue, N.W., Washington, DC 20460; and to the Office of Information and Regulatory Affairs, Office of Management and Budget, 725 17th St., N.W., Washington, DC 20503, marked "Attention: Desk Officer for EPA." Include the ICR number in any correspondence. Since OMB is required to make a decision concerning the ICR between 30 and 60 days after July 7, 2000, a comment to OMB is best assured of having its full effect if OMB receives it by August 7, 2000. The final rule will respond to any OMB or public comments on the information collection requirements contained in this proposal.

D. Regulatory Flexibility Act (RFA), as Amended by the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA), 5 U.S.C. 601 et seq.

The RFA generally requires an agency to prepare a regulatory flexibility analysis of any rule subject to notice and comment rulemaking requirements under the Administrative Procedure Act or any other statute, unless the agency certifies that the rule will not have a significant economic impact on a substantial number of small entities. Small entities include small businesses, small organizations, and small governmental jurisdictions.

For purposes of assessing the impacts of today's rule on small entities, small

entity is defined as: (1) A small business whose annual revenue is less than \$5 million according to SBA size standards; (2) a small governmental jurisdiction that is a government of a city, county, town, school district or special district with a population of less than 50,000; and (3) a small organization that is any not-for-profit enterprise which is independently owned and operated and is not dominant in its field.

After considering the economic impacts of today's proposed rule on small entities, I certify that this action will not have a significant economic impact on a substantial number of small entities. In determining whether a rule has significant economic impact on a substantial number of small entities, the impact of concern is any significant *adverse* economic impact on small entities, since the primary purpose of the regulatory flexibility analyses is to identify and address regulatory alternatives "which minimize any significant economic impact of the proposed rule on small entities." 5 U.S.C. Sections 603 and 604. Thus, an agency may certify that a rule will not have a significant economic impact on a substantial number of small entities if the rule relieves regulatory burden, or otherwise has a positive economic effect on all of the small entities subject to the rule. EPA estimates there are approximately 42 existing Class I municipal wells that at some point during their operating life could cause fluid movement into a USDW and fall within the scope of this proposed rule. Of these 42 facilities, 13 are small governmental entities and one is a small business.

As discussed in section I.E., the economic impact of this proposed rule actually results in a cost savings to the Class I municipal facilities compared to the baseline, *i.e.*, complying with current regulations. Because Class I wells which may seek the authorization to inject provided by the proposed rule are only affected if they cause fluid movement prohibited by present law, EPA has determined that the effect on small entities will be positive to the extent they are impacted. If the entity chooses not to seek the authorization to inject, the legal status of its continued operations is not impacted by the proposed rule. We have therefore concluded that today's proposed rule either will have no effect on or, in the alternative, will provide regulatory relief for small entities.

We continue to be interested in the potential impacts of the proposed rule on small entities and welcome

comments on issues related to such impacts.

E. Executive Order 13132: Federalism

Executive Order 13132, entitled "Federalism" (64 FR 43255, August 10, 1999), requires EPA to develop an accountable process to ensure "meaningful and timely input by State and local officials in the development of regulatory policies that have federalism implications." "Policies that have federalism implications" is defined in the Executive Order to include regulations that have "substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government."

Under Section 6 of Executive Order 13132, EPA may not issue a regulation that has federalism implications, that imposes substantial direct compliance costs, and that is not required by statute, unless the Federal government provides the funds necessary to pay the direct compliance costs incurred by State and local governments, or EPA consults with State and local officials early in the process of developing the proposed regulation. EPA also may not issue a regulation that has federalism implications and that preempts State law, unless the Agency consults with State and local officials early in the process of developing the proposed regulation.

This proposed rule does not have federalism implications. It will not have substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government, as specified in Executive Order 13132. The proposed rule allows for an optional alternate method for the State of Florida to use to ensure that no owner and/or operator would endanger a USDW by injection of domestic wastewater effluent into a Class I municipal well. EPA is not proposing that an owner and/or operator must use this proposed authorization, but rather is proposing options that owners and/or operators of existing Class I municipal wells may wish to explore in order to maintain the use of their injection operations. Thus, the requirements of section 6 of the Executive Order do not apply to this rule. Although Section 6 of Executive Order 13132 does not apply to this rule, EPA did consult with the Florida Department of Environmental Protection in developing this rule and they agree with EPA's strategy.

F. Unfunded Mandates Reform Act

Title II of the Unfunded Mandates Reform Act of 1995 (UMRA), Public Law 104-4, establishes requirements for Federal agencies to assess the effects of their regulatory actions on State, local, and tribal governments and the private sector. Under Section 202 of the UMRA, EPA generally must prepare a written statement, including a cost-benefit analysis, for proposed and final rules with "Federal mandates" that may result in expenditures to State, local, and tribal governments, in the aggregate, or to the private sector, of \$100 million or more in any one year. Before promulgating an EPA rule for which a written statement is needed, Section 205 of the UMRA generally requires EPA to identify and consider a reasonable number of regulatory alternatives and adopt the least costly, most cost-effective or least burdensome alternative that achieves the objectives of the rule. The provisions of Section 205 do not apply when they are inconsistent with applicable law. Moreover, Section 205 allows EPA to adopt an alternative other than the least costly, most cost-effective or least burdensome alternative if the Administrator publishes with the final rule an explanation why that alternative was not adopted. Before EPA establishes any regulatory requirements that may significantly or uniquely affect small governments, including tribal governments, it must have developed under Section 203 of the UMRA a small government agency plan. The plan must provide for notifying potentially affected small governments, enabling officials of affected small governments to have meaningful and timely input in the development of EPA regulatory proposals with significant Federal intergovernmental mandates, and informing, educating, and advising small governments on compliance with the regulatory requirements.

EPA has determined that this proposed rule does not contain a Federal mandate that may result in expenditures of \$100 million or more for State, local, and tribal governments, in the aggregate, or the private sector in any one year. Because the authorization to inject provided for by the proposed rule is optional on applicants, the costs incurred by an entity in conjunction with such authorization to inject under the proposed rule are discretionary, not mandated. The total cost impact, in comparison to other alternatives to provide effective wastewater disposal, is anticipated to be positive for those entities that choose to avail themselves of the option provided by this proposed rule. This rule will reduce the burden

imposed by the current regulations. Thus, today's rule is not subject to the requirements of Section 202 and 205 of the UMRA.

EPA has determined that this rule contains no regulatory requirements that might significantly or uniquely affect small governments. This proposed rule is not targeted at small governments. It offers owners and operators of Class I wells in certain parts of Florida which inject domestic wastewater effluent an alternative method of compliance with the existing UIC rule, which prohibits injection that endangers USDWs, without requiring the facilities to cease injection and abandon their existing Class I municipal injection wells. This rule will provide them with a less burdensome alternative for compliance. Thus, today's rule is not subject to the requirements of Section 203 of UMRA.

G. National Technology Transfer and Advancement Act

Section 12(d) of the National Technology Transfer and Advancement Act of 1995 ("NTTAA"), Pub L. No. 104-113, § 12(d) (15 U.S.C. 272 note) directs EPA to use voluntary consensus standards in its regulatory activities unless to do so would be inconsistent with applicable law or otherwise impractical. Voluntary consensus standards are technical standards (*e.g.*, materials specifications, test methods, sampling procedures, and business practices) that are developed or adopted by voluntary consensus standards bodies. The NTTAA directs EPA to provide Congress, through OMB, explanations when the Agency decides not to use available and applicable voluntary consensus standards. This proposed rulemaking does not involve technical standards. Therefore, EPA is not considering the use of any voluntary consensus standards.

EPA welcomes comments on this aspect of the proposed rulemaking and, specifically, invites the public to identify potentially-applicable voluntary consensus standards and to explain why such standards should be used in this regulation.

H. Executive Order 13084: Consultation and Coordination With Indian Tribal Governments

Under Executive Order 13084, EPA may not issue a regulation that is not required by statute, that significantly or uniquely affects the communities of Indian tribal governments, and that imposes substantial direct compliance costs on those communities, unless the Federal government provides the funds necessary to pay the direct compliance costs incurred by the tribal

governments, or EPA consults with those governments. If EPA complies by consulting, Executive Order 13084 requires EPA to provide to the Office of Management and Budget, in a separately identified section of the preamble to the rule, a description of the extent of EPA's prior consultation with representatives of affected tribal governments, a summary of the nature of their concerns, and a statement supporting the need to issue the regulation. In addition, Executive Order 13084 requires EPA to develop an effective process permitting elected officials and other representatives of Indian tribal governments "to provide meaningful and timely input in the development of regulatory policies on matters that significantly or uniquely affect their communities."

Today's rule does not significantly or uniquely affect the communities of Indian tribal governments nor does it impose substantial direct compliance costs on them. At present, there are no Class I UIC wells used for domestic wastewater effluent disposal in Florida that are owned or operated by an Indian tribal community. Accordingly, the requirements of section 3(b) of Executive Order 13084 do not apply to this rule.

I. Plain Language

Executive Order 12866 and the President's memorandum of June 1, 1998, require each agency to write all rules in plain language. We invite your comments on how to make this proposed rule easier to understand. For example:

- Have we organized the material to suit your needs?
- Are the requirements in the rule clearly stated?
- Does the rule contain technical language or jargon that is not clear?
- Would a different format (grouping and order of sections, use of headings, paragraphing) make the rule easier to understand?
- Would more (but shorter) sections be better?
- Could we improve clarity by adding tables, lists, or diagrams?
- What else could we do to make the rule easier to understand?

List of Subjects in 40 CFR Part 146

Environmental protection, Indians-lands, Intergovernmental relations, Reporting and Recordkeeping requirements, Water Supply.

Dated: June 27, 2000.

Carol M. Browner,
Administrator.

For the reasons set out in the preamble, title 40, chapter I of the Code

of Regulations is proposed to be amended as follows:

PART 146—UNDERGROUND INJECTION CONTROL PROGRAM

1. The authority citation for Part 146 continues to read as follows:

Authority: Safe Drinking Water Act, 42 U.S.C. 300f *et seq.*; Resource Conservation and Recovery Act, 42 U.S.C. 6901 *et seq.*

2. Section 146.15 is added to read as follows:

§ 146.15 Class I municipal well alternate authorization in Florida.

(a) Authorization to inject pursuant to this section is limited to existing Class I municipal wells in specific geographic regions as defined in paragraph (h) of this section that inject domestic wastewater effluent as defined in paragraph (c) of this section and that have caused or may cause fluid movement into USDWs. Pursuant to this section, an existing Class I well does not violate the regulatory prohibitions in Parts 144 and 146 of this chapter against the movement of injection or formation fluids into a USDW, provided that such well operates consistently with the requirements of this section.

(b) For purposes of this section, an existing Class I well is defined as a well for which a complete UIC construction permit application has been received by the Director on or before the date of publication of this proposed rule in the **Federal Register**.

(c) For purposes of this section, injected fluids shall be considered domestic wastewater effluent if they are injected by a facility that:

(1) Is a publicly or privately owned and operated domestic wastewater treatment facility;

(2) Receives wastewater derived principally from dwellings, business buildings, institutions, and the like, commonly referred to as sanitary wastewater or sewage, and

(3) Provides at least secondary treatment, as described in § 133.102 of this chapter, of the waste prior to injection.

Option 1 for Paragraph (d)

(d) In order for a Class I municipal well to qualify for authorization pursuant to paragraph (a) of this section, the owner and/or operator shall treat the well's injectate prior to injection using advanced wastewater treatment and high-level disinfection and shall also provide a non-endangerment demonstration that the injected fluids will not cause any USDWs to exceed primary drinking water regulations in Part 141 of this chapter and other health

based standards (e.g., Federal and State health advisories). This demonstration would focus on any contaminants that are expected to exceed primary drinking water regulations in Part 141 of this chapter and other health based standards (e.g., Federal and State health advisories) after treatment and would include, at a minimum, effluent monitoring and an analysis of any such contaminants following injection. To achieve high level disinfection, a process designed to kill most microorganisms in water including pathogenic (disease causing) bacteria, owners and/or operators must allow the wastewater to remain in contact with at least 1.0 mg/l of free chlorine for at least 15 minutes of contact with no fecal coliform. The minimum level of advanced wastewater treatment that must be provided is:

Option a: 10–24 mg/l BOD with disinfection.

Option b: 10–24 mg/l BOD with disinfection and nutrient removal.

Option c: <10 mg/l BOD with disinfection.

Option d: <10 mg/l BOD with disinfection and nutrient removal.

Option 2 for Paragraph (d)

(d) In order for a Class I municipal well to qualify for authorization pursuant to paragraph (a) of this section, the owner and/or operator must provide a hydrogeologic demonstration to the satisfaction of the Director and EPA that the injected fluids will not cause any USDWs to exceed primary drinking water regulations in Part 141 of this chapter and other health based standards (e.g., Federal and State health advisories). This demonstration would include at a minimum: ground-water modeling, geochemical analysis and effluent and ground-water monitoring and analysis. If they cannot make this demonstration, the owner and/or operator must provide sufficient advanced wastewater treatment, nutrient removal and high-level disinfection to enable them to demonstrate that the injected fluids will not cause any USDWs to exceed primary drinking water regulations in Part 141 of this chapter and other health based standards (e.g., Federal and State health advisories).

(e) The demonstration pursuant to paragraph (d) of this section must be submitted to both the State and EPA for review. The demonstration shall be reviewed and either approved or disapproved in writing by the Director. If the Director disapproves the demonstration, the applicant shall not have met the requirements of paragraph (d) of this section. If the Director

approves the demonstration, he or she shall promptly mail a copy of the approval to the Regional Administrator. The authorization shall become final if the State Director submits the approval in writing to the Regional Administrator and the Regional Administrator has not disapproved the authorization within 90 days. Any disapproval by the Regional Administrator shall state the reasons for disapproval and shall constitute final Agency action. In the event the Regional Administrator exercises this authority to disapprove the demonstration, the applicant shall not have met the requirements of paragraph (d) of this section. The Director's approval and any conditions of the authorization shall be included as part of the permit decision.

(f) *Monitoring and reporting.* In addition to meeting the requirements of § 146.13, the owner/operator must perform such monitoring, analysis, and reporting as specified by the Director in the permit authorization. The monitoring required under this section will include, at a minimum, initial characterization and annual analysis of the injectate for contaminants covered by the primary drinking water regulations in Part 141 of this chapter or other health based standards. The Director shall also require that the owner/operator develop and implement an ambient/ground water monitoring program.

The ground water monitoring program will, at a minimum, analyze the ground

water to determine if any primary drinking water regulations in Part 141 of the chapter or other health based standards have been violated. The monitoring is to verify that the injection operation shall not endanger the USDW through movement of the injectate or formation fluids. These requirements would be incorporated as permit conditions of an operation permit under the Florida UIC program. Additional requirements, such as the construction of additional monitoring wells may be needed on a case-by-case basis.

(g) Owners and/or operators of Class I injection wells which are operating under the authority of paragraph (d) of this section shall update and resubmit their demonstration under paragraph (d) of this section with each subsequent Class I operation permit application, every five (5) years. The owner and/or operator shall submit, as part of such subsequent demonstrations, all monitoring results not available at the time of the prior permit review and verification that the original demonstration is still valid for the disposal operation.

(h) Authorization to inject domestic wastewater through existing Class I wells pursuant to this section is limited to municipal wells in Florida in the following counties: Brevard, Broward, Charlotte, Collier, Dade, Flagler, Glades, Hendry, Highlands, Hillsborough, Indian River, Lee, Manatee, Martin, Monroe, Okeechobee, Orange, Osceola,

Palm Beach, Pinellas, St. Johns, St. Lucie, Sarasota, and Volusia.

Proposed only if Option 2 for paragraph (d) of this section is selected:

(i) Beginning on January 1, 2015, owners and/or operators of Class I injection wells operating under the authority of this section may not qualify for authorization pursuant to this section unless the injectate has been subject to advanced wastewater treatment and high-level disinfection.

The minimum level of advanced wastewater treatment that must be provided is:

Option a: 10–24 mg/l BOD with disinfection, or

Option b: 10–24 mg/l BOD with disinfection and nutrient removal, or

Option c: <10 mg/l BOD with disinfection, or

Option d: <10 mg/l BOD with disinfection and nutrient removal.

(2) The owners and/or operators would still have to demonstrate that the injected fluids will not cause any USDWs to exceed primary drinking water regulations in Part 141 of this chapter and other health based standards (*e.g.*, Federal and State health advisories).

[FR Doc. 00–16753 Filed 7–6–00; 8:45 am]

BILLING CODE 6560–50–P