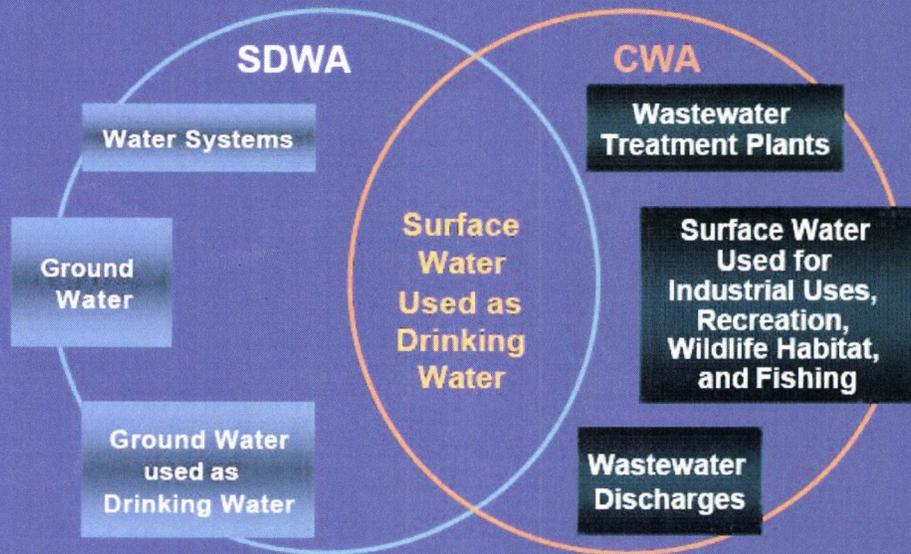


Federal Ground Water Quality Laws

Presented to Montana Water Policy Interim
Committee
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Two Major Water Statutes



Clean Water Act

- Goal to restore and maintain the chemical, physical and biological integrity of the nation's waters.
- Establishes Water Quality Standards
- Requires Assessment of Waters meeting Beneficial Uses
- List of Impaired Waters
- Establishment of Total Maximum Daily Loads (TMDLS)
- Regulates Direct discharges into Surface Water
- Voluntary Means to Control Non-point Sources of Pollution

REGULATION OF POINT SOURCES NPDES Permits – Section 402

- Permit required for all point sources to “waters of the US.”
- Usually surface waters, but can be for hydrologically connected GW.
- States administer if delegated, else EPA administers and enforces.



FEDERAL "319" GRANTS

Section 319

- o To states, territories, and tribes
 - 40% match required
- o Allowed uses of funds
 - Development and implementation of statewide NPS program plans, including ground water protection
 - Grants for on-the-ground controls (BMPs, etc.)
 - Development and implementation of TMDLs and holistic watershed plans
 - Development of state regulatory programs



CWA Ground Water Program Funding

- State Ground Water Programs Receive 15% of the Clean Water Act §106 Grant Funds
 - Used in Montana by Remediation Division for Contaminated Ground Water Studies and State Clean Ups
- State Clean Water Act 319 (h) Nonpoint Source Management Program Ground Water Projects
 - Currently Limited Funding going to Ground Water Projects in Montana. Typically tied to development of water shed restoration plans

→ MT puts into remediation

] \$ now going to TMDLs.

SAFE DRINKING WATER ACT

EPA to promulgate National Primary Drinking Water Regulations

Public water system supervision (PWSS), underground injection control (UIC), and sole source aquifer (SSA) programs

STATE IMPLEMENTATION (Primacy)

SOURCE WATER PROTECTION (Non-Regulatory)

- Well Head Protection Program for GW
- Watershed Protection for Surface Water
 - ▶ Source Water Protection Plans (SWAPs)

DRINKING WATER STATE REVOLVING FUND

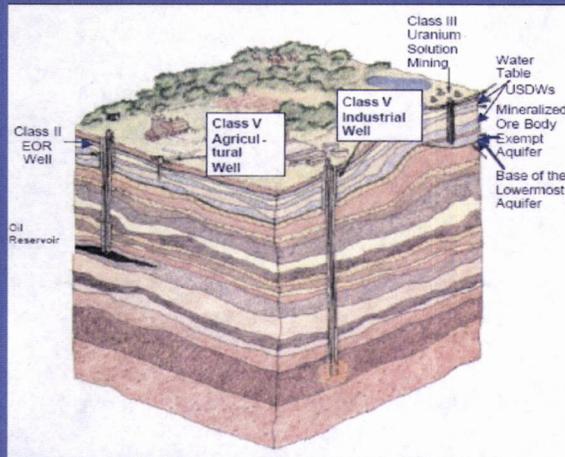
CONSUMER INFORMATION – RIGHT TO KNOW

GROUND WATER RULE

Primacy for GW protection

*proposed in 2000
Not adopted now* *looks @ disinfection + treatment as drinking water source.*

UNDERGROUND INJECTION WELLS



The UIC program regulates underground injection

*① Type of waste
② construction of well - where in*

Mission of the UIC Program

- The UIC program's mission is to protect underground sources of drinking water from contamination by regulating the construction and operation of injection wells

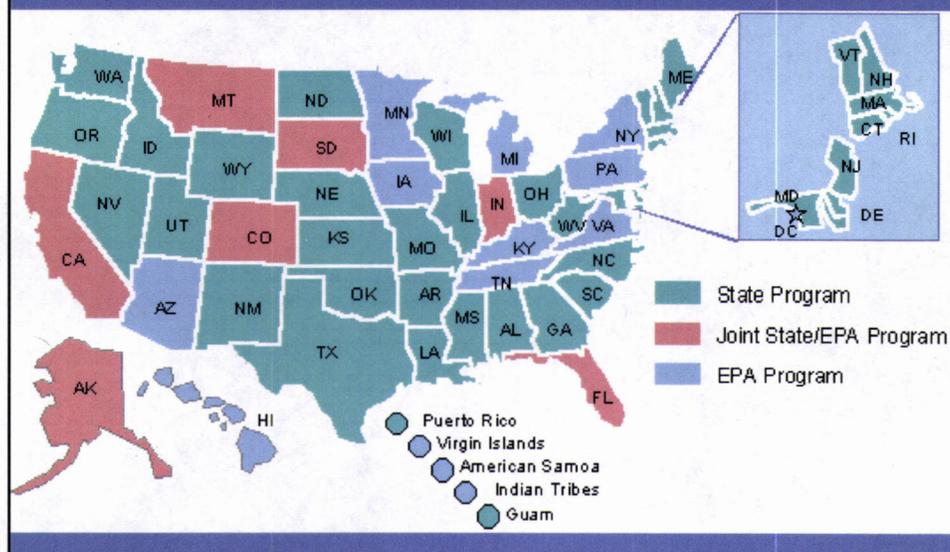
Structure of the Program: Delegation

- Deep Injection Wells Class I, II and III
- Class I and III EPA retains primacy in Montana
- Class II has been delegation to Montana Board of Oil and Gas
- EPA retains primacy for Class I, II and III in Indian Country

Structure of the Program: Delegation

- Class V – Shallow Wells
- EPA retains primacy for the Class V program in Montana and Indian Country
- **Wendy Cheung**
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Structure of the Program: UIC Primacy Delegation



Aquifer Exemption

- 40 CFR 144.16 allows EPA to exempt certain USDWs from SDWA protection
- Criteria:
 - Contain oil or minerals
 - Recovery is impracticable
 - Contaminated
 - Contain TDS greater than 3,000 mg/L

Classes of Wells

- Five classes of wells are addressed in UIC regulations
- Greater or lesser potential for endangerment depending on their depth, injectate, and geologic setting
- Categorized based on common design and operating characteristics

Class I Wells

- Extensive permitting requirements
- No-migration demonstration for hazardous wells
- Continuous annulus monitoring (except municipal)
- Internal MIT every year (every five years for most Class I-non-hazardous)
- Frequent reporting

Class II Wells

- Dispose of salt water produced with oil or natural gas (II-D)
- Inject fluids for enhanced recovery (II-R)
- Store liquid hydrocarbons (II-H)

Class II Wells

- May have multi-well area permits
- Existing enhanced recovery wells (i.e., drilled before State program approved) may be authorized by rule for the life of the well
- Must demonstrate mechanical integrity at least every 5 years
- Monthly monitoring of injection pressure, flow rate, and volume

Class III wells

- Used for solution mining minerals, such as salt, sulphur, uranium and copper
- Inject chemical solutions, super-hot steam, or water into mineral formations
- Hot injectate dissolves and mixes with minerals underground; mineral-saturated solution pumped to surface for mineral extraction
- Injected fluids are frequently reused after some treatment
- Approximately 19,000 Class III wells

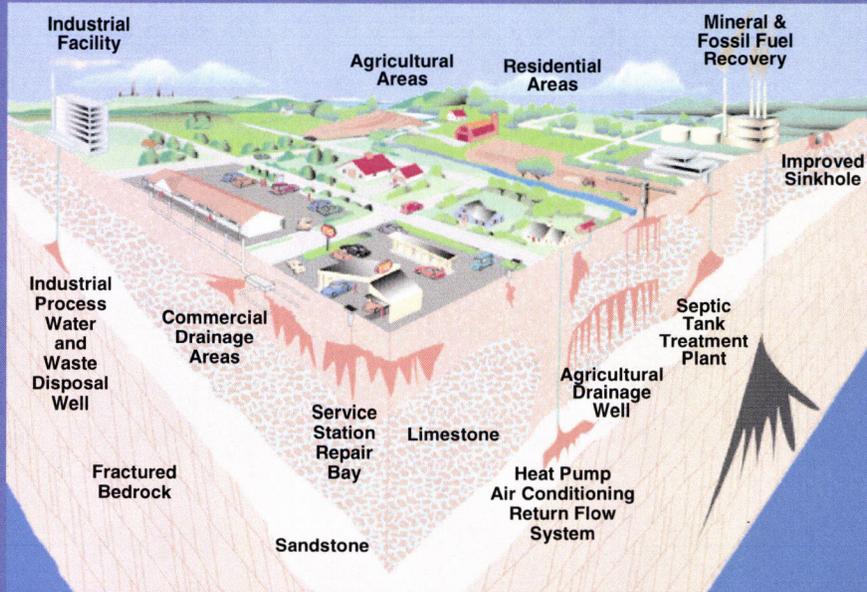
Class IV Wells

- Used to dispose of hazardous or radioactive waste into or above a formation which contains a USDW within 1/4 mile of the well
- Prohibited
 - One exception: wells that reinject into same formation treated ground water pursuant to approved CERCLA or RCRA clean-ups
 - Voluntary site clean-ups not subject to exception

Class V Wells

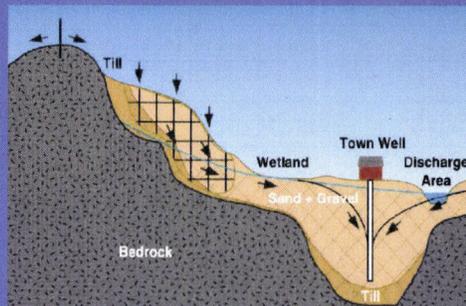
- Class V: All injection wells that do not meet the definitions of Classes I, II, III, or IV
- Most are shallow and low-tech
- Most inject into or above USDWs
- Operators must submit inventory information
- Must not endanger USDWs

Class V Wells



Source: Ohio EPA

SOURCE WATER PROTECTION



- *Watershed protection* for surface water sources
- *Wellhead protection* for ground water sources

Sole Source Aquifer (SSA) Program

- Sole source aquifer provides at least 50 percent of the drinking water to affected area
- EPA reviews petitions for SSA designation
- EPA reviews Federally-funded projects that may contaminate SSAs

Montana Contacts for UIC Program

Montana Deep Well

Class II State Contact

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Montana Board of Oil and Gas Conservation

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