

# Ch 173-218 WAC

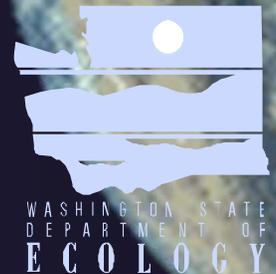
## Underground Injection Control Program Rule Revision

Geologic Sequestration of  
Carbon Dioxide.



# Washington Climate Change Legislation: ESSB 6001

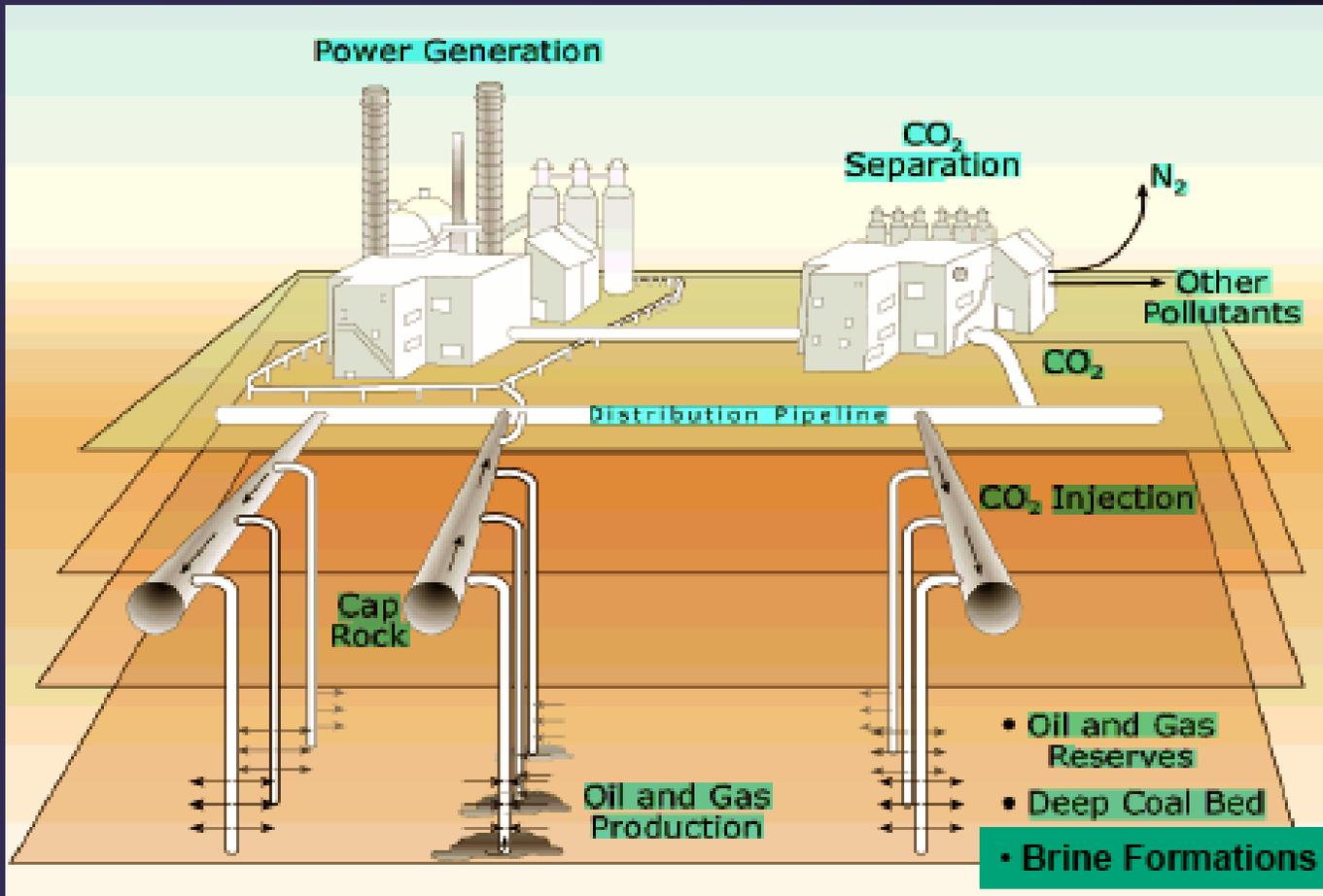
- Passed in April 2007
- Requires Ecology and EFSEC to develop rules for the Geologic Sequestration of Carbon Dioxide.
- Rules must be adopted by June 30, 2008.



# Geologic Sequestration?

- The injection of carbon dioxide, usually from human activities like burning coal or oil, into subsurface geologic formations to prevent its release into the atmosphere.

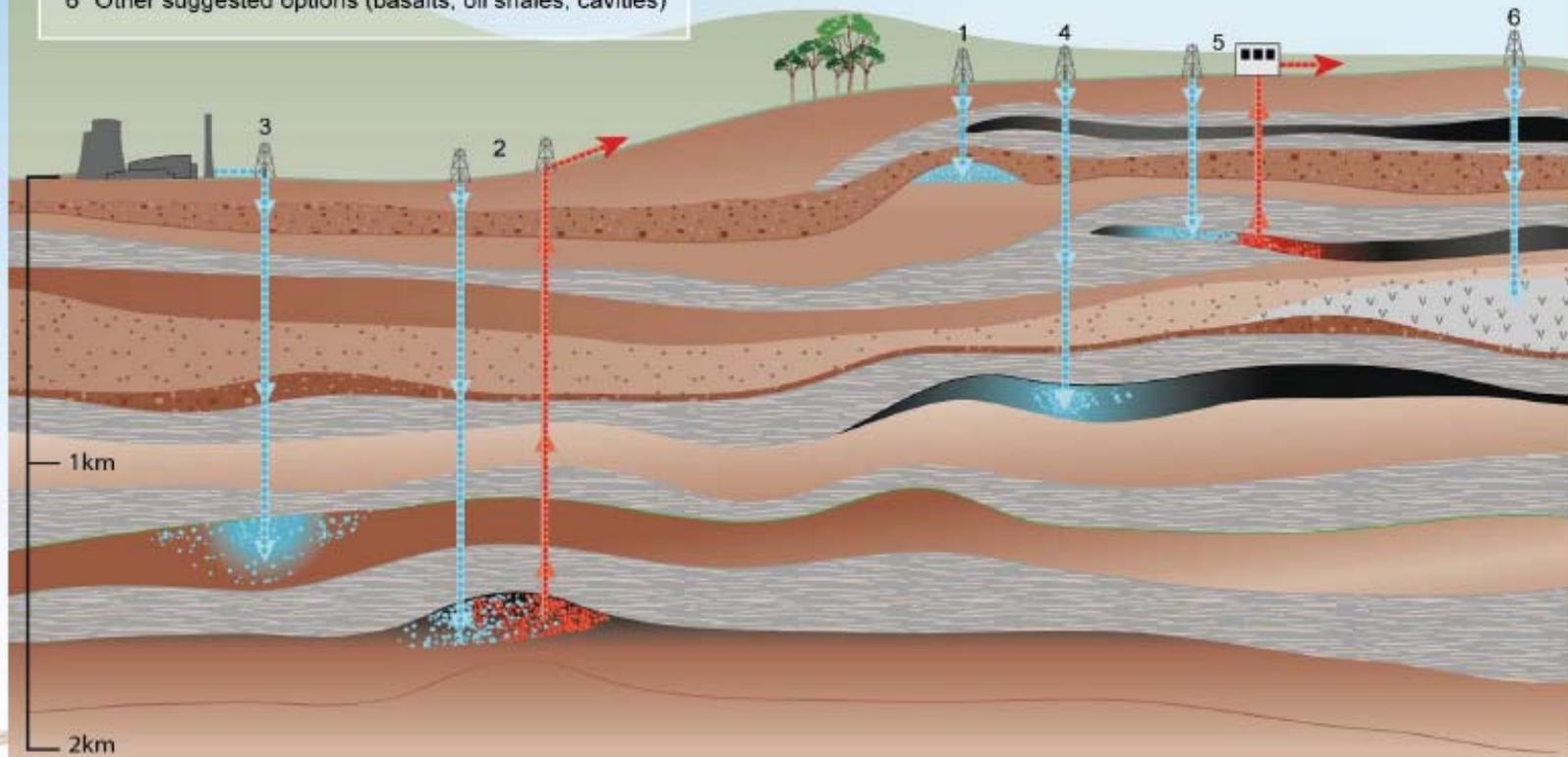




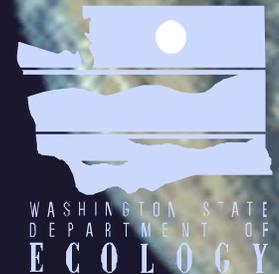
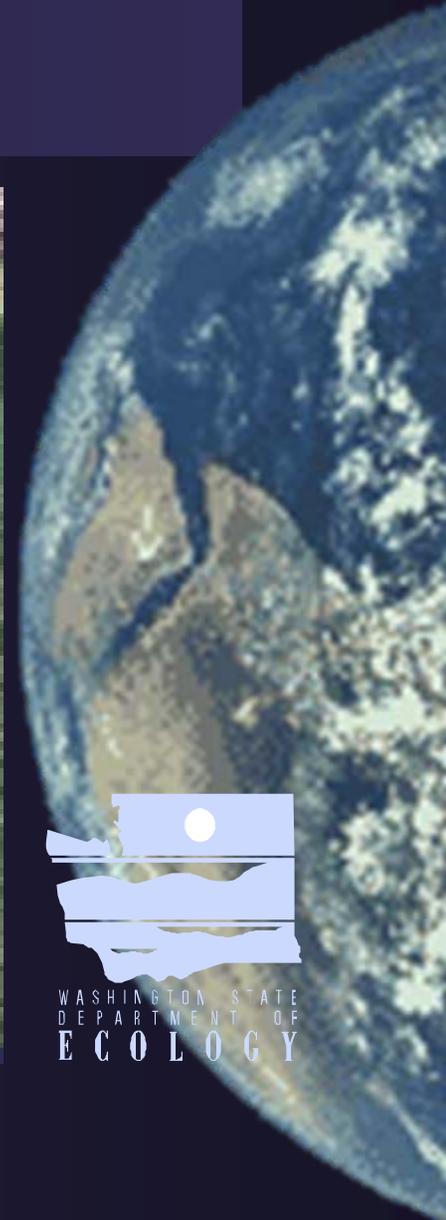
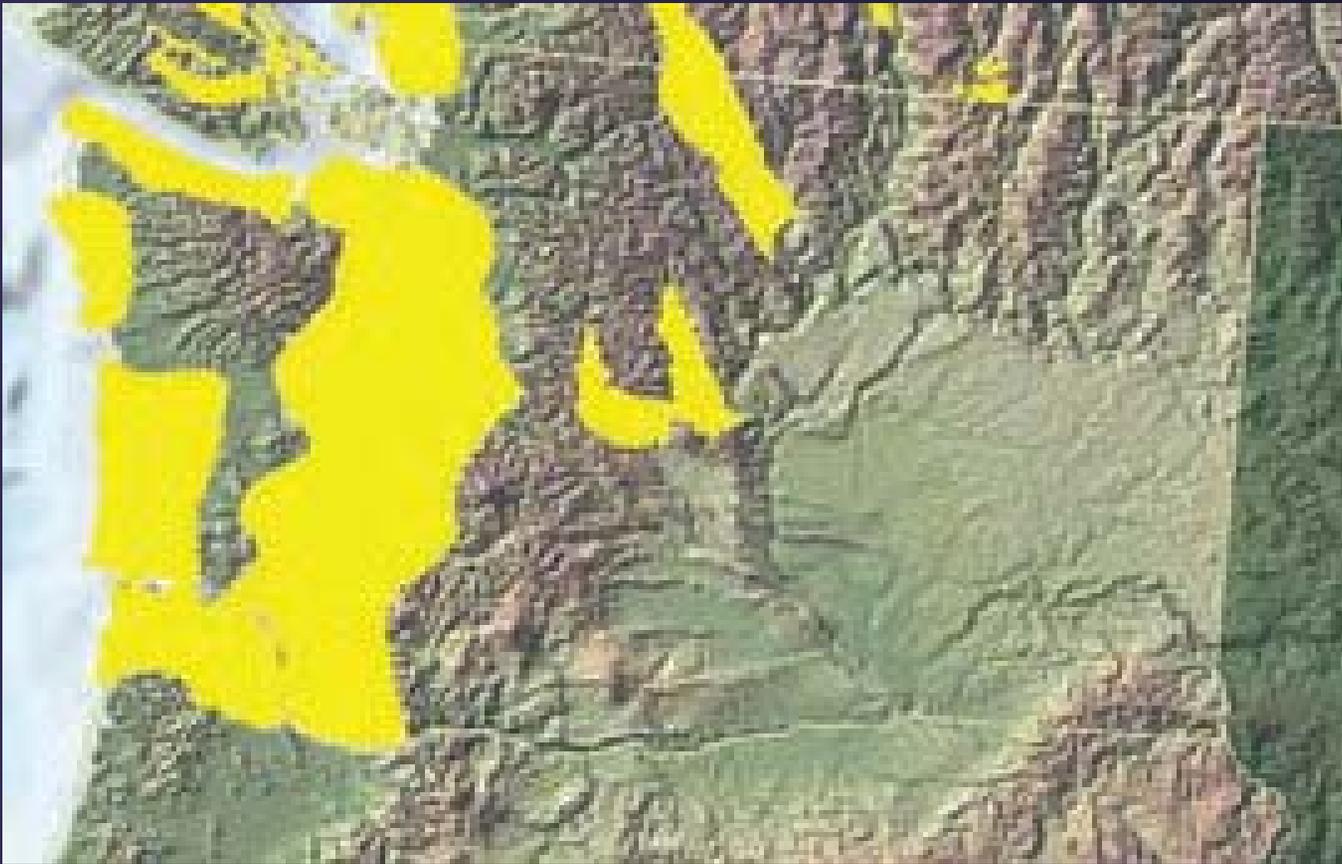
# Options for Geological Storage

## Geological Storage Options for CO<sub>2</sub>

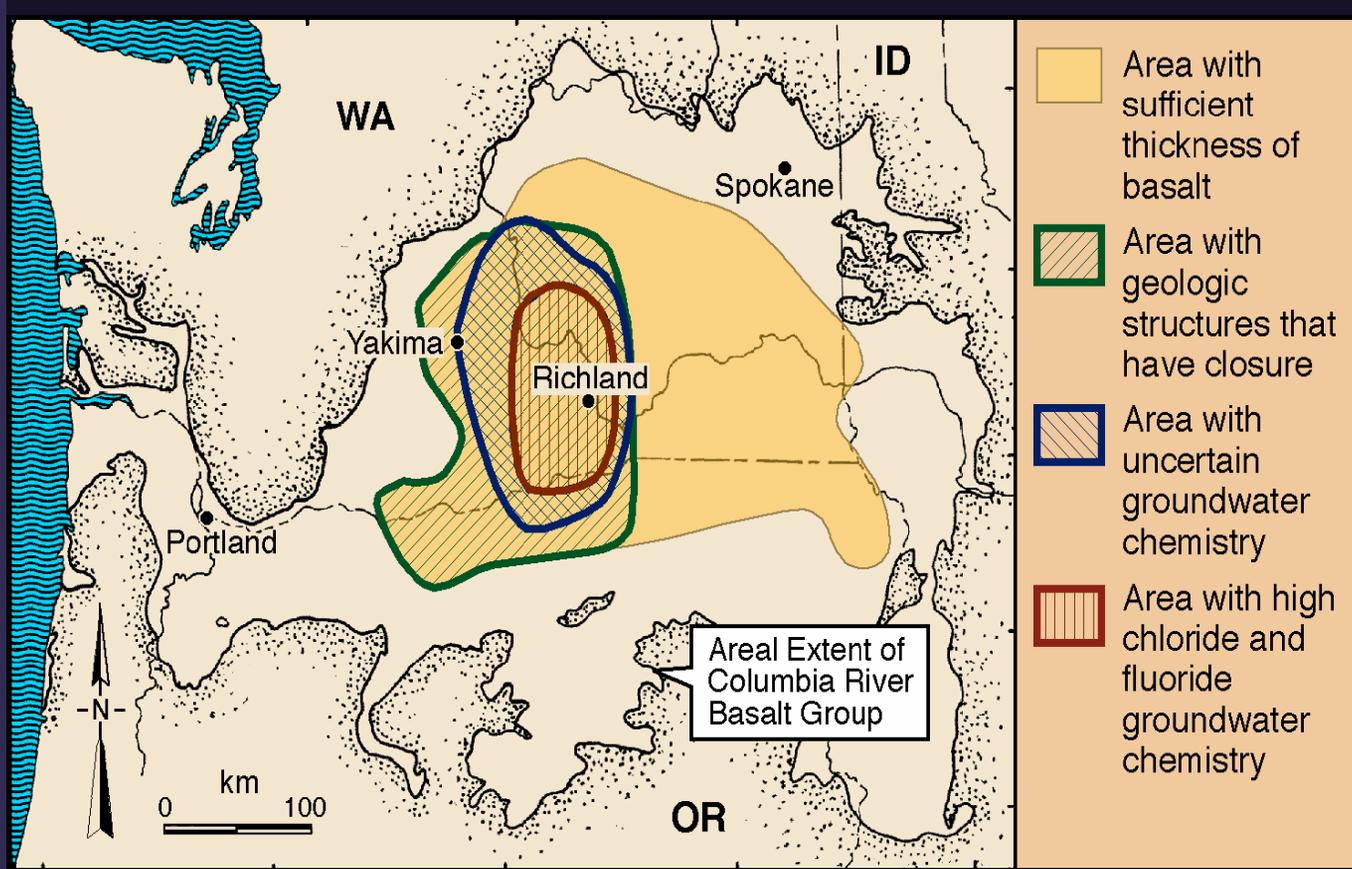
- 1 Depleted oil and gas reservoirs
- 2 Use of CO<sub>2</sub> in enhanced oil recovery
- 3 Deep unused saline water-saturated reservoir rocks
- 4 Deep unmineable coal seams
- 5 Use of CO<sub>2</sub> in enhanced coal bed methane recovery
- 6 Other suggested options (basalts, oil shales, cavities)



# Deep Saline Aquifers



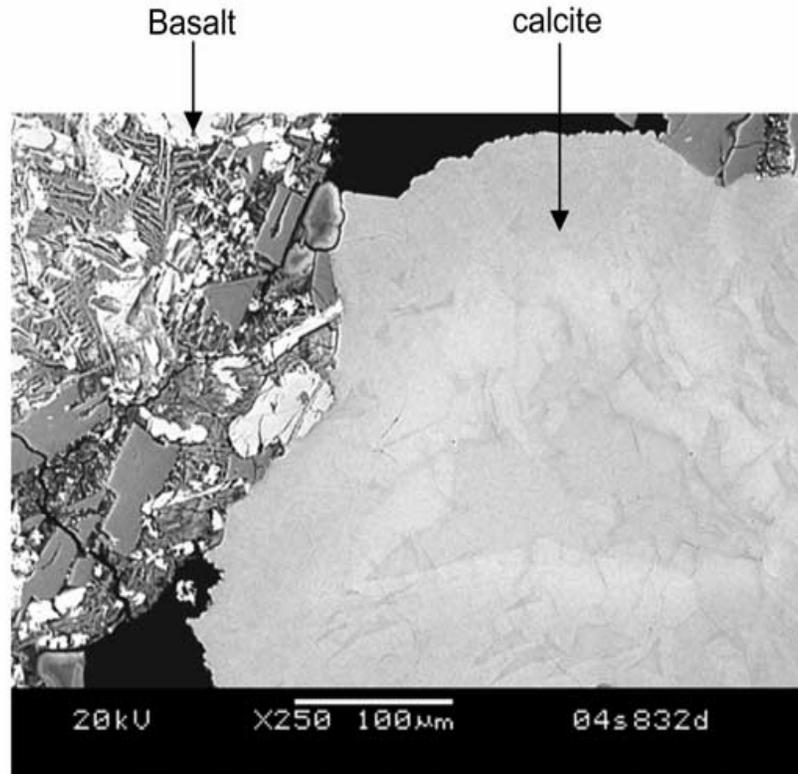
# Columbia River Basalt Group



# Mineralization of Basalt



(a)

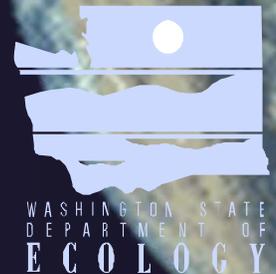


(b)

# ESSB 6001 requirements

## Air & Water Quality Programs

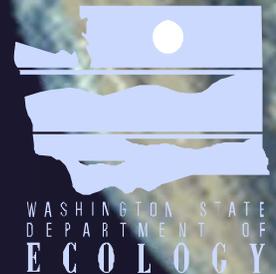
- Air Quality and Water Quality are working together in a single rule revision process.
- Stakeholders began meeting in August to assist in developing rule requirements.
- CR 102 must be filed by late January to meet our legislative due date.



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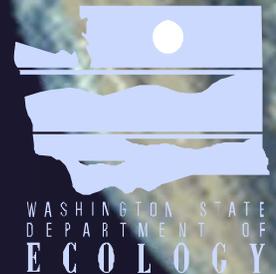
## Underground Injection Control Program

- Controls the injection of any fluids, including Carbon Dioxide, into an aquifer.
- A Waste Discharge Permit is required to inject Carbon Dioxide.
- Currently there are no rules specific requirements for these projects except Protect Water Quality



# Goals for Rule Revision

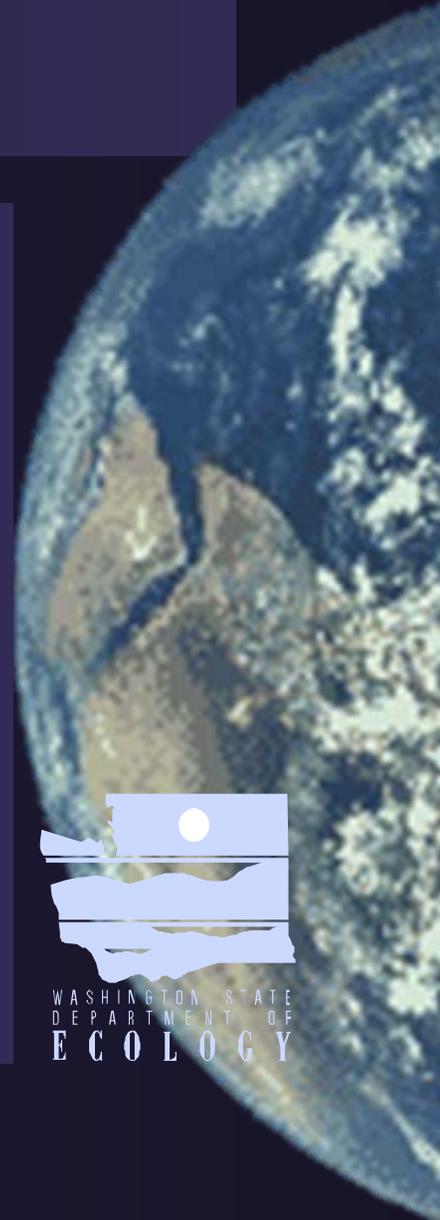
- Allow Geologic Sequestration Projects that protect Public Health and the Environment
- Set clear Standards
- Ensure proper Monitoring and Reporting
- Define standard for Permit Approval



# ISSUES and CHALLENGES



WASHINGTON STATE  
DEPARTMENT OF  
ECOLOGY



# Information on Rule Revision

- CR 102 to be Filed in January 2008
- Background Information and Draft Rules can be viewed at:
  - [http://www.ecy.wa.gov/laws-rules/activity/wac173407\\_218.html](http://www.ecy.wa.gov/laws-rules/activity/wac173407_218.html)

