Uranium Mining in Virginia

The Coeur d'Alene Basin

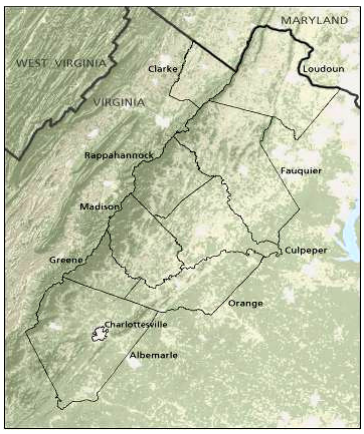
"[U]ranium mining in the Western United States in the last century created a shameful legacy in terms of human and environmental devastation…."

The Piedmont Environmental Council

a 35-year-old non-profit organization dedicated to promoting and protecting the Piedmont's rural economy, natural resources, history and beauty.

PEC principally serves a nine County area –

Albemarle, Madison, Greene, Orange, Rappahannock, Fauquier, Loudoun, Culpeper, and Clarke.



Uranium Moratorium

- There has been a moratorium on uranium mining in Virginia since 1982
- The moratorium was put into place so that the Virginia Coal and Energy Commission could study this type of mining and determine whether it should be allowed in Virginia

Commission Report

- In 1985 the commission delivered its report to the Virginia General Assembly
- The report concluded that Uranium mining could be allowed in Virginia with certain conditions; however, there was a strong dissent.
- The Virginia General Assembly never lifted the moratorium on uranium mining & milling.

Dissent

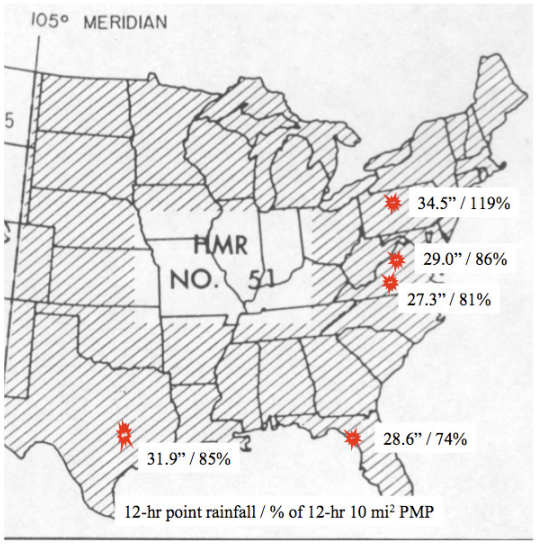
The experimental nature of the uranium industry in Virginia's wet climate and the environmental problems from radioactive tailings disposal in the West have caused the General Assembly to be justifiably cautious in approving the industry. Legislation called for an assessment of risks and benefits. The US/UAG has had no actual experience to evaluate. French uranium is cited by the industry as similar, but no impacts data were produced on this situation. Rather, the UTF and US/UAG reports and conclusions about costs, benefits and risks of a uranium industry are based upon consultants predictions using mathematical models and other techniques to speculate about future effects of one mine and one mill…No estimates were made of impacts of a statewide industry.

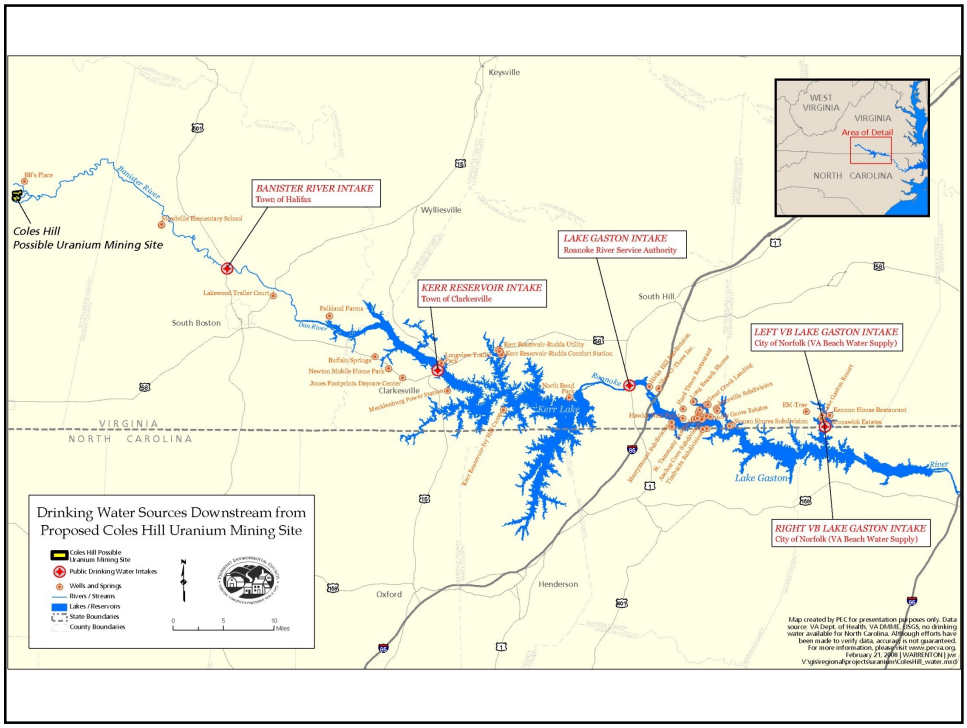
"Water is perhaps the most significant means of dispersal of uranium and related [radioactive materials] in the environment from mines and mine wastes…Uranium is very soluble in acidic and alkaline waters and can be transported easily from a mine site."

EPA

3 of the top 5 most intense 12-hour storms in the U.S. occurred in the Mid-Atlantic region

Smethport, PA - 1942
Nelson County, VA - 1969
Madison County, VA - 1995




Keysville
Wyllieswille
South Hill
South Boston
Clarksville
VIRGINIA
NORTH CAROLINA
WEST VIRGINIA
VIRGINIA
Area of Detail
NORTH CAROLINA
Roanoke River
Dan River
Bill's Place
Coles Hill
Possible Uranium Mining Site
BANISTER RIVER INTAKE
Town of Halifax
KERR RESERVOIR INTAKE
Town of Clarksville
LAKE GASTON INTAKE
Roanoke River Service Authority
LEFT VB LAKE GASTON INTAKE
City of Norfolk (VA Beach Water Supply)
RIGHT VB LAKE GASTON INTAKE
City of Norfolk (VA Beach Water Supply)
Kerr Lake
Lake Gaston
Oxford
Henderson
Drinking Water Sources Downstream from Proposed Coles Hill Uranium Mining Site
Coles Hill Possible Uranium Mining Site
Public Drinking Water Intakes
Wells and Springs
Rivers / Streams
Lakes / Reservoirs
State Boundaries
County Boundaries
0 5 10 Miles
Map created by PEC for presentation purposes only. Data source: VA Dept. of Health, VA DMME, DSLS, no drinking water available for North Carolina. Although efforts have been made to verify data, accuracy is not guaranteed. For more information, please visit www.pecva.org.
February 21, 2008 [WARRENTON] jvw
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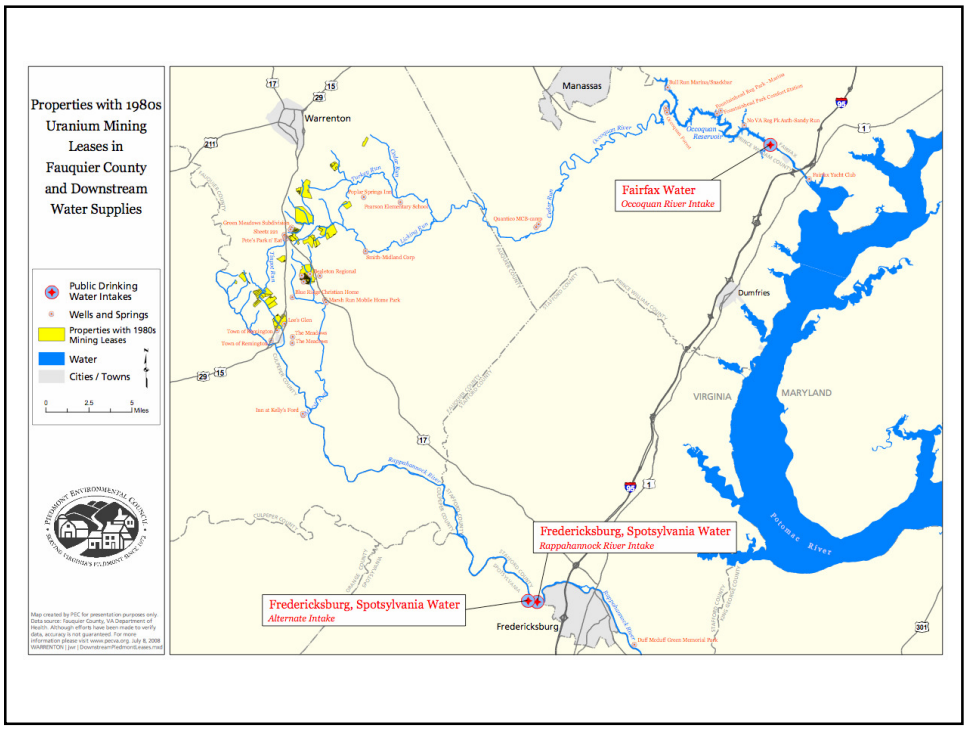
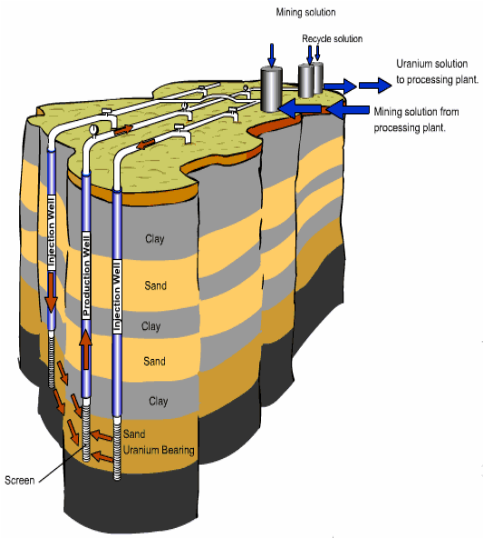
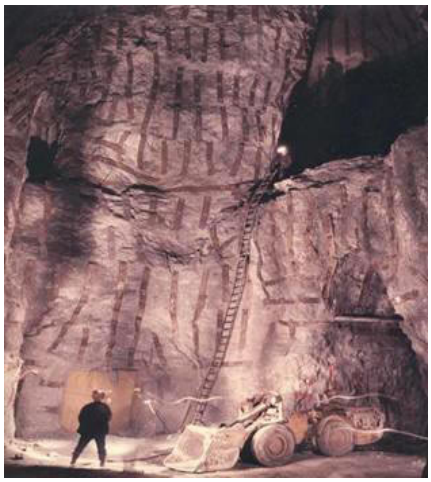

Properties with 1980s Uranium Mining Leases in Fauquier County and Downstream Water Supplies
Public Drinking Water Intakes
Wells and Springs
Properties with 1980s Mining Leases
Water
Cities / Towns
0 2.5 5 Miles
Piedmont Environmental Council
Warrenton
Manassas
Dumfries
VIRGINIA
MARYLAND
Potomac River
Occoquan River
Fairfax Water
Occoquan River Intake
Fredericksburg, Spotsylvania Water
Rappahannock River Intake
Fredericksburg, Spotsylvania Water
Alternate Intake
Fredericksburg
Map created by PEC for presentation purposes only. Data source: Fauquier County, VA Department of Health. Although efforts have been made to verify data, accuracy is not guaranteed. For more information please visit www.pecva.org. July 8, 2008
WARRENTON | jvw | Downstream\Piedmont\Leases.mxd

In Situ Mining



- Injection of wells deep into Earth's core pump leaching substance
- Leaching dissolves ore, which can be extracted & evaporated at a plant
- In Situ Mining is ONLY type of mining regulated by NRC
- Unlikely at Coles Hill

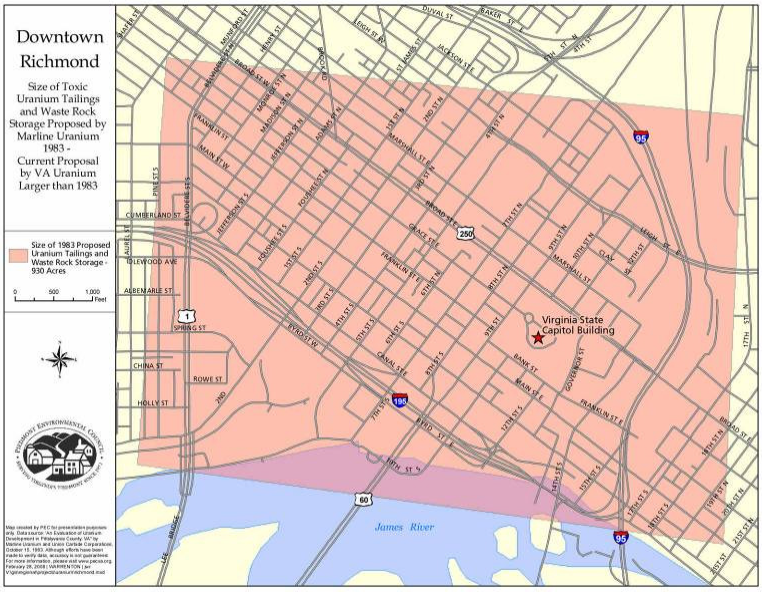
Underground Mining

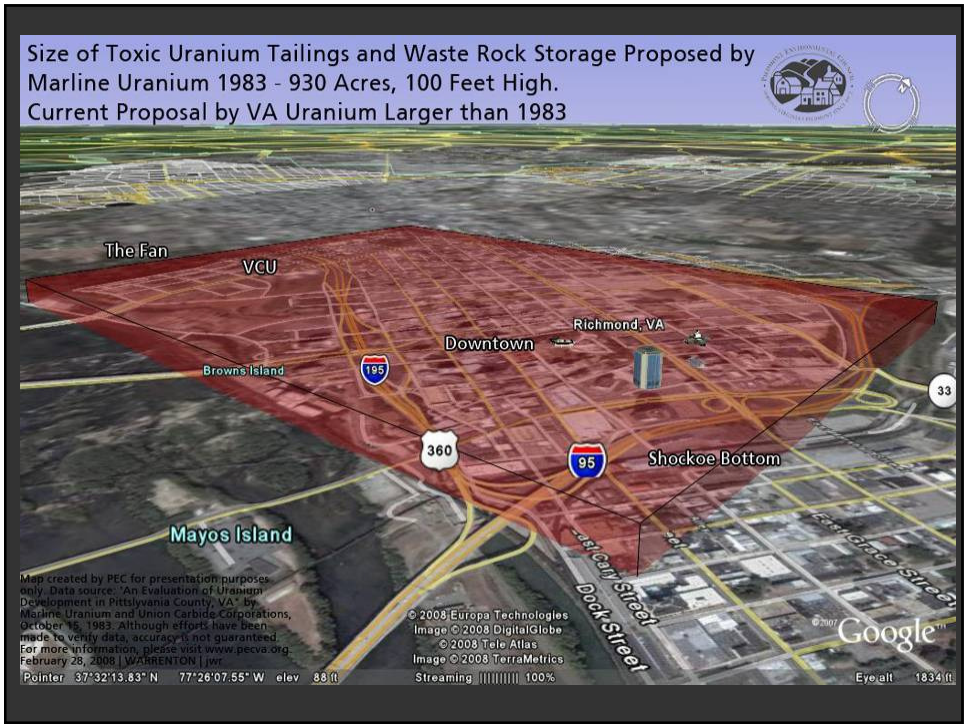


- Ore brought to surface by elevators or trolley systems
- Ratio of waste to ore is much lower than in open pit mines because waste can be placed in mine.

Types of Mining
Open Pit

- Overburden, which is the left over rock, soil, and waste, is piled near the excavation site
- Uranium ore is processed at the nearby plant





What is wrong with a study?

- SB 525 - poorly written, inadequately funded
- 1980s' study - expensive, divisive, inadequate
  - Dissent
    - No actual experience evaluated
    - Based on speculation
- Kuiper's Study
  - EIS wrong 19 out of of 25 times
  - 76% failure rate

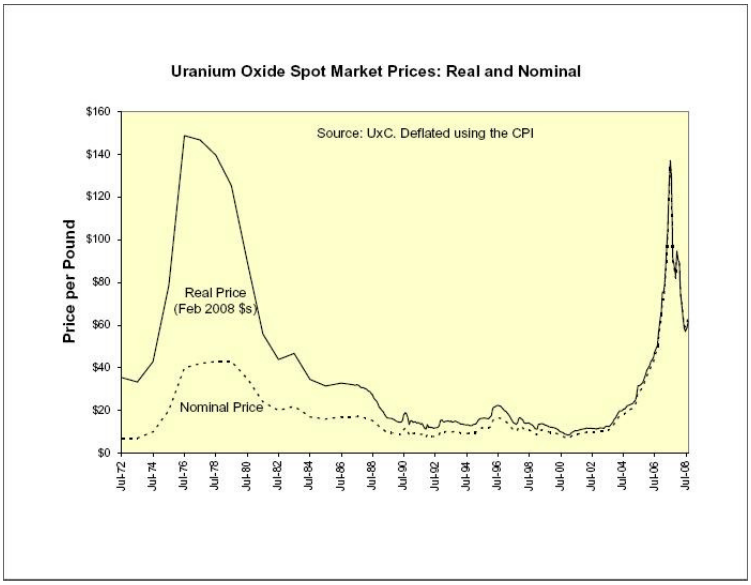
Colorado Experience

RESOLVED, that the Colorado Medical Society opposes the practice of in-situ and open pit mining of uranium due to the adverse health impact of radioactively contaminated water on our agriculture, livestock and civilian population….

In 2007, Colorado adopted House Bill 1161 that requires any prospective applicant for an in situ leach mine to demonstrate five successful mines under similar circumstances before a mining permit may be issued

Virginia should take no action to initiate or sanction a study of uranium mining until the proponents of mining provide reviewable information demonstrating that mining and milling have been undertaken in five places with climate, geology, and population density similar to Virginia and in such a manner as to safeguard the environment, natural and historic resources, agricultural lands, and the health and well-being of citizens of those communities.

- Only after such demonstration should the General Assembly initiate a study of whether uranium mining and milling, transportation, and mine and mill reclamation can be undertaken in a manner that will safeguard the Commonwealth's environment, natural and historic resources, agricultural lands, and the health and well-being of its citizens.



Thomas Michael Power, Ph.D.
University of Montana

Sacrificing the permanent, unique, and irreplaceable for the common and temporary?

“[U]ranium mining in the Western United States in the last century created a shameful legacy in terms of human and environmental devastation….”