SLIDES: Water for Oil (Shale)?

Bart Miller

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Forecasting Change – Water Context For Oil Shale
Water for Shale

- **Estimated demands** for large scale development:
  - 1.55 million barrels of oil per day
    - Direct demand = 112,675 acre feet (af)
    - Electric power = 244,535 af
    - Increased population = 21,100 af
    - **Total = 378,310 af**

- Denver Metro Area (approx. 1.4 million people) – 275,000 acre feet annually

- **HUGE Uncertainties** affecting water needs:
  1. How much shale could industry reasonably develop
  2. What are water needs for yet-undeveloped technologies?
  3. Power source(s) – Coal? Natural gas? Nuclear?

*Source: RAND Corporation, BLM, Yampa, CO, and White River Roundtables*
“Water on the Rocks” – WRA’s 2009 Report

- **Absolute Rights**: 650 cfs. in more than 100 existing irrigation ditches in the Colorado and White River Basins.

- **Conditional Rights**: 200 separate structures in the Colorado and White River Basins that could potentially be developed to support oil shale.
  - Most conditional rights have priority dates from the 1950s and 1960s.

**Colorado River Basin**
- Diversions: 4,996 cfs
- Storage: 367,310 af

**White River Basin**
- Diversions: 5,693 cfs
- Storage: 1,186,000 af
Recent Developments

- Water Right application on the Yampa River:
  - 375 cfs from the Yampa
  - 45,000 acre-foot storage bucket
  - 60,000 acre-feet used annually
  - 25 statements of opposition
Competing Uses for Water
Limiting Factors
Our Future?

- “Large-scale oil-shale development could create problems for us and other users” – Chips Barry, Denver Water
- “Oil shale could be a game changer” – Harris Sherman, DNR
- “Any large transfer of water to oil shale would shift the West Slope from an agricultural landscape to an industrial one” – Chris Treese, CRWCD
- “Commercial oil shale development has tremendous potential to transform western Colorado communities” – State Senator Gale Schwartz

Western Resource Advocates
So, What Do We Do?

- We need answers to key questions:
  - Sequencing of development projects
  - Rate of consumption
  - Power generation needs
  - Competition for shared resources
  - Impacts of perfecting conditional water rights on junior users
  - Impacts of climate change
- Let’s not leap before we look.
For more information and a copy of *Water on the Rocks* . . .

Please visit WRA’s website:

www.westernresources.org