Environmental Concerns for Oil Sands Development in Utah

Serious Unanswered Questions

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Understanding the Resource

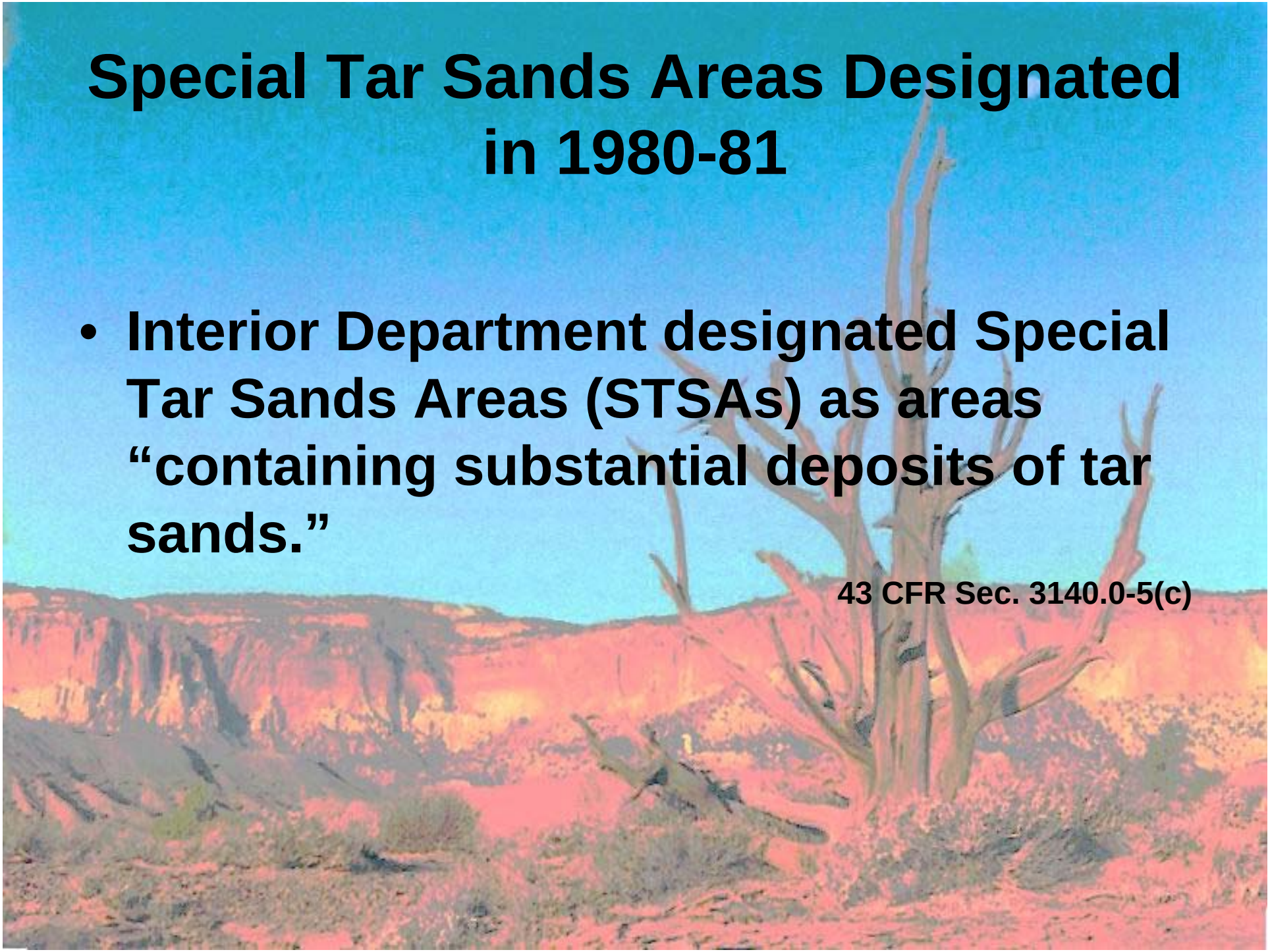
- **> 3 trillion barrels of oil in tar sands in the world**
- **~650 billion barrels in North America**
- **Utah has > 90% of U.S. resource**
- **~12-20 “known recoverable” billion barrels in Utah**
- **At most 3% of North American reserves in Utah**

Sources: UGS, BLM, EIA

“Known Recoverable?”

- **Discussing a claim in BLM PEIS that the Uintah Basin contains 80 billion barrels of known recoverable oil shale reserves and 12 billion barrels of known recoverable oil from tar sands “BLM acknowledges the estimates aren’t based on reality.”**
- **“The term ‘known recoverable’ is misleading, as are the yield estimates, but the agency [BLM] had to include some number in its environmental study, said Washington, D.C. based BLM spokeswoman Heather Feeney.” . . .**
- **Salt Lake Tribune, February 21, 2008**
- **EIA predicts that roughly only 1/5 of total Canadian tar sands recoverable**

Special Tar Sands Areas Designated in 1980-81



- **Interior Department designated Special Tar Sands Areas (STSAs) as areas "containing substantial deposits of tar sands."**

43 CFR Sec. 3140.0-5(c)

STSAs and Competing Resources

- Circle Cliffs (GSENM, WSAs, WCAs Capitol Reef NP)
- Tar Sands Triangle (WSAs, Glen Canyon NRA, potential WSR)
- San Rafael (WSAs, WCAs, potential ACEC and WSR)
- White Canyon (WCA)
- Sunnyside (WSAs, WCA, potential ACEC)
- Argyle Canyon (Nine Mile Canyon)
- PR Spring (WSAs, WCAs, potential ACECs and WSR)
- Raven Ridge (potential ACEC)

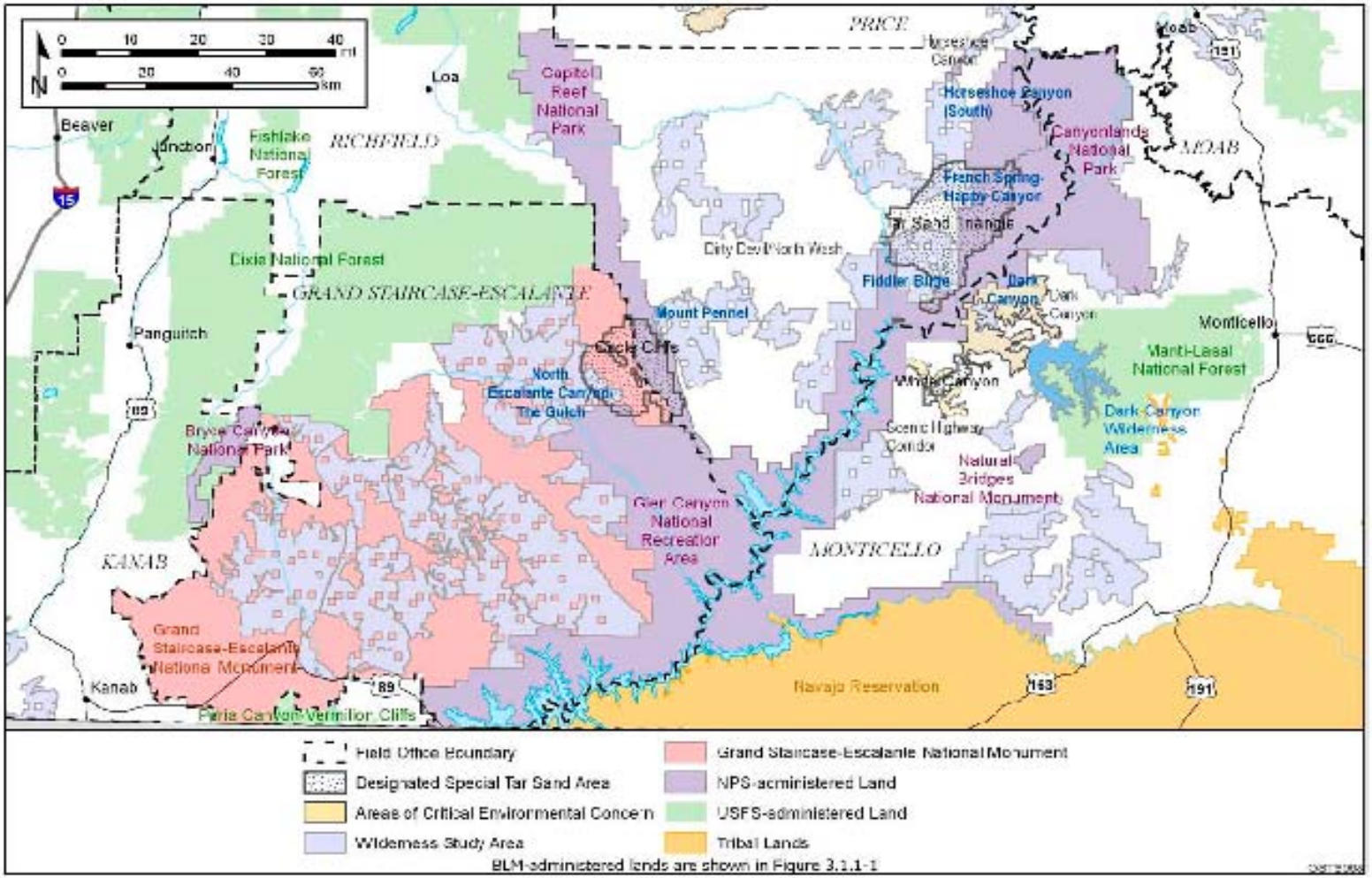


FIGURE 3.1.1-4 Portions of the Grand Staircase–Escalante National Monument and the Monticello and Richfield Field Offices Where Tar Sands Resources Are Located

Happy Canyon Wilderness Study Area (Tar Sands Triangle STSA)

Grand Staircase-Escalante National Monument (Circle Cliffs STSA)


Dirty Devil Wilderness Study Area (Tar Sands Triangle STSA)

White Canyon (White Canyon STSA)

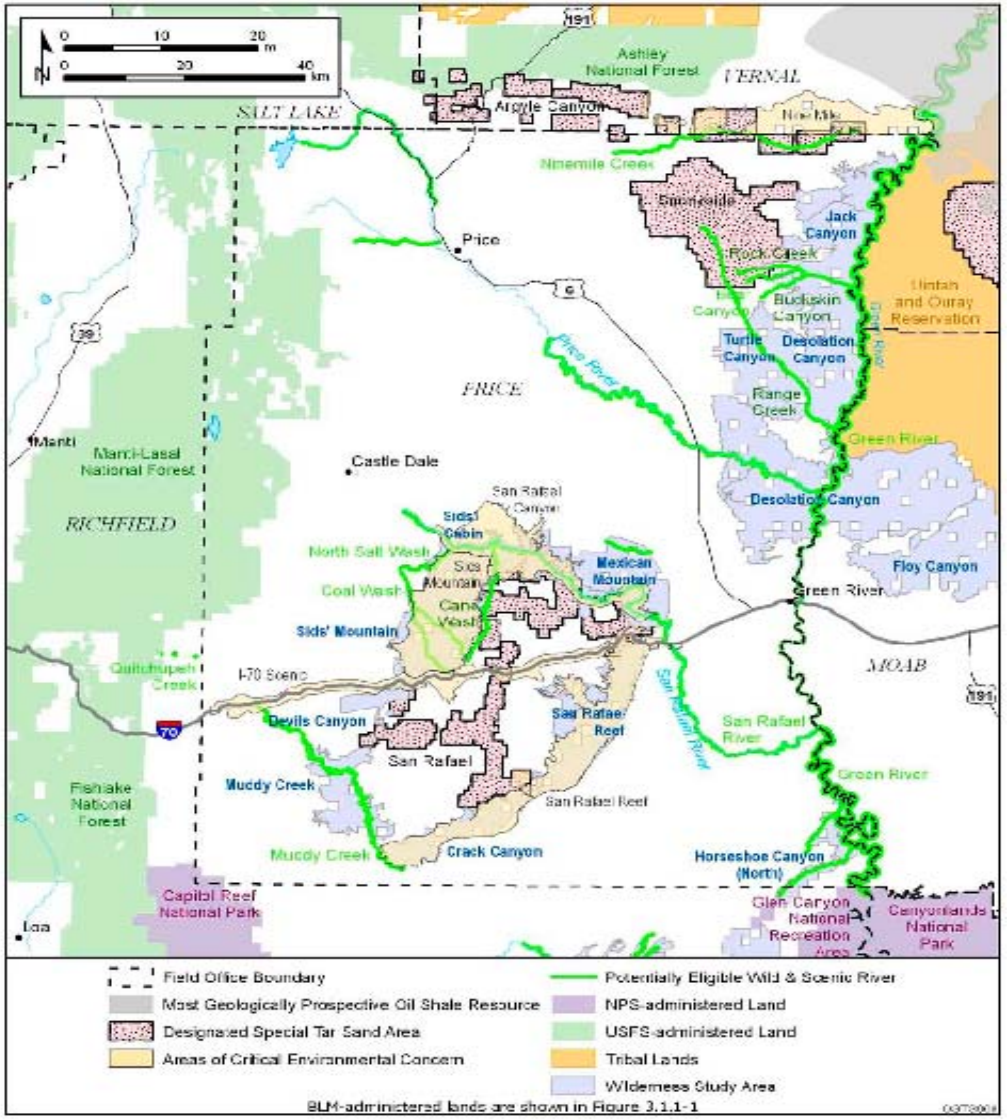


FIGURE 3.1.1-6 Price Field Office RMP Planning Area

San Rafael Reef Wilderness Study Area (San Rafael STSA)

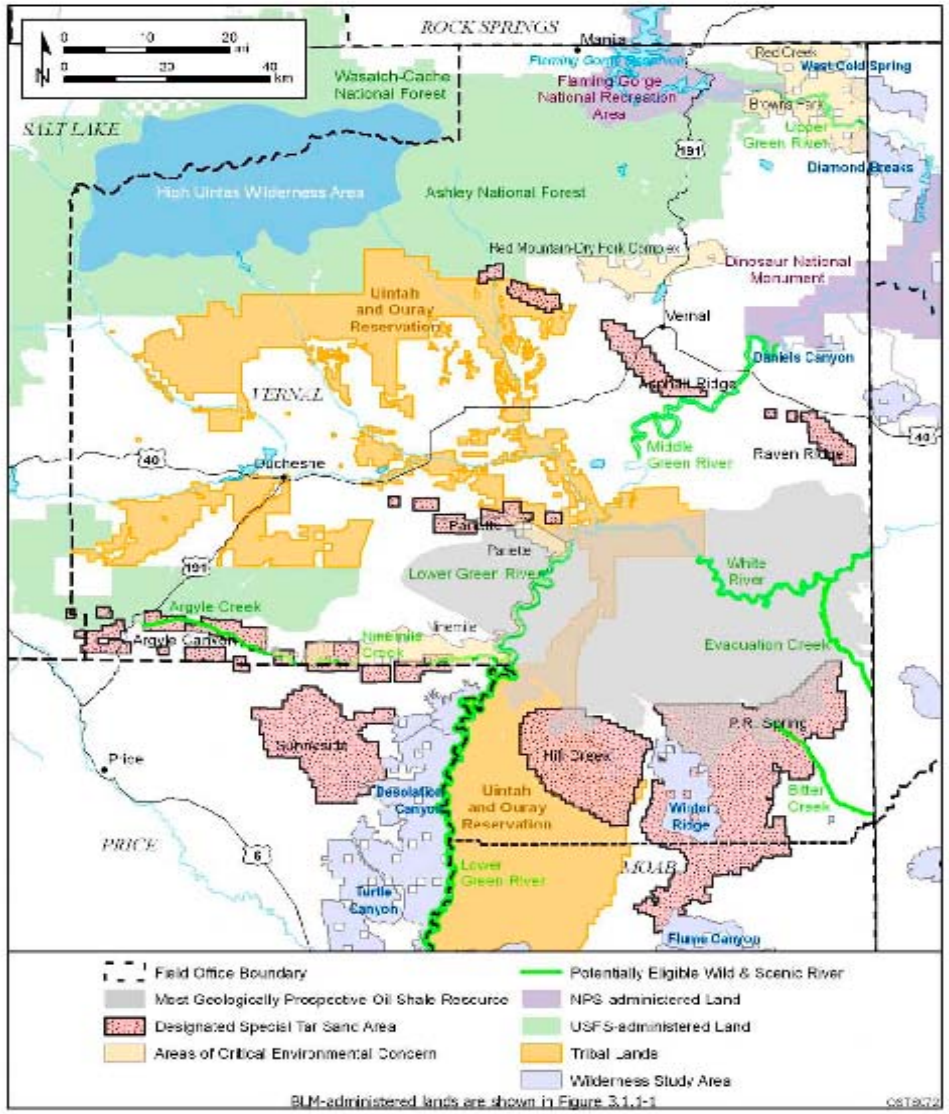


FIGURE 3.1.1-11 Vernal Field Office RMP Planning Area

Argyle Ridge STSA

Changing Values

- **STSAs identified in 1980-81**
  - **CHL Act passed 1981 under Reagan/Watt**
- **Since then**
  - **Grand-Staircase Monument designated**
  - **WSAs designated**
  - **Additional wilderness character lands identified by BLM and public**
  - **Additional resources (ACECs/WSR) identified in land use planning processes**
  - **Growing public support for wilderness protection and generally protection of public lands**

CHL Conversions

- **CHL Act allows conversion of conventional oil and gas lease to Combined Hydrocarbon Lease**
- **Numerous applications received early 1980s**
- **Several EISs initiated**
  - **Some completed; some processes stopped**
- **October 2006 – January 2007: BLM tries to pull some of these off the shelf, puts others to rest**
  - **Circle Cliffs, Tar Sands Triangle, Book Cliffs/PR Springs STSAs**

Political Pressure Overtakes Protection of America's Special Places?

- Old lessees have beaten a quick path to BLM's door
- Pressure from Administration and Congressional Delegation to develop
- Places we all thought were protected may be at risk

Litigation and Appeals

- **Several industry appeals over BLM decisions to reject CHL applications and/or BLM decision to require payment of back rentals. SUWA has moved to intervene in some of these appeals.**

- **Conservation groups are also litigating BLM decisions to "retroactively suspend" conventional oil and gas leases in Circle Cliffs and Tar Sands Triangle STSAs.**

Environmental Devastation – Tar Sands Development in Canada

- **Global Warming:**
- *"Producing a barrel of synthetic crude oil from Alberta's bitumen generates on average more than three times more greenhouse-gas emissions that conventional crude. In Canada, oil sands are now the single largest contributor to the growth of gases linked to climate change."*
  - **Wall Street Journal, Feb. 5, 2008**

- **Requires huge amounts of natural gas**
- **On-site refining**
- **Massive waste byproduct**

Environmental Concerns In Utah

- **<u>Location, Location, Location</u>**
- **STSAs located in some of Utah's most sensitive and spectacular public lands**
- **Existing WSAs, WCAs, areas proposed for ACEC/WSR designations.**
- **Leasing and development in these places will be challenged**

Related On-The-Ground Environmental Concerns in Utah

- Access
  - Roads
  - Waste storage and removal
- Water (scarce resource)
- Infrastructure
- On-site refining
  - Powerlines, pipelines, by-products

- All combine to result in significant, long-term environmental degradation


Environmental Concerns In Utah
Air Quality

Air Quality

- Exceeding PSD Increments
- Exceeding NAAQS: Ozone, PM_{10}, $PM_{2.5}$
- Proximity to class 1 airsheds (haze)
  - Canyonlands NP
  - Arches NP
  - Capitol Reef NP
  - Related point – greenhouse gas emissions

Environmental Risks Posed By New Technologies

- Steam Assisted Gravity Drainage (SAGD)
- Vapour Extraction (VAPEX)
- Toe-to-Heel Air Injection (THAI)
- Claims that these technologies are environmentally benign should be questioned

Oil Shale-Tar Sands PEIS

- **Our review of the PEIS is troubling:**
  - **Inadequate range of alternatives**
  - **Leasing in sensitive landscapes**
  - **Failure to seriously analyze environmental impacts including air quality and water quality (and quantify)**