



Potential Environmental and Socioeconomic Impacts of Oil Sands Leasing and 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 billion barrels in Utah**
- **At most 3% of North American reserves in Utah**
 - **EIA predicts that roughly only 1/5 of total Canadian tar sands recoverable**

Sources: UGS, BLM, EIA

Special Tar Sands Areas Designated in 1980-81

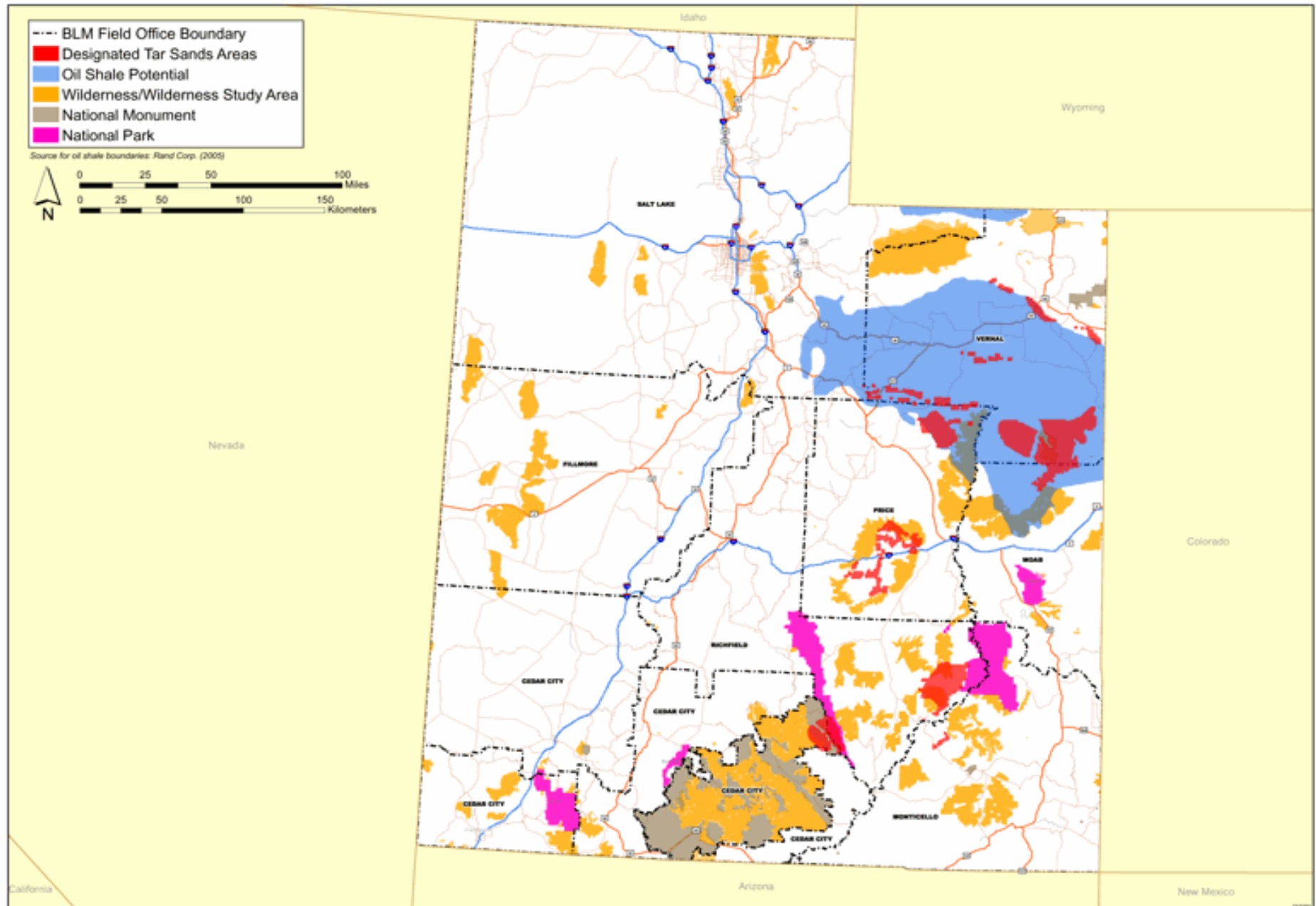
- **“The deposits are in very beautiful places...[a]nd much of it is on arid lands, which are very tough to reclaim.”**

Steven Schamel, Principal GeoX Consulting (SLC)

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

43 CFR Sec. 3140.0-5(c)

Oil Shale & Tar Sand Deposits in Utah



Grand Staircase-Escalante National Monument (Circle Cliffs STSA)



Dirty Devil Wilderness Study Area (Tar Sands Triangle STSA)



San Rafael Swell Wilderness Study Areas (San Rafael STSA)



White Canyon (White Canyon STSA)

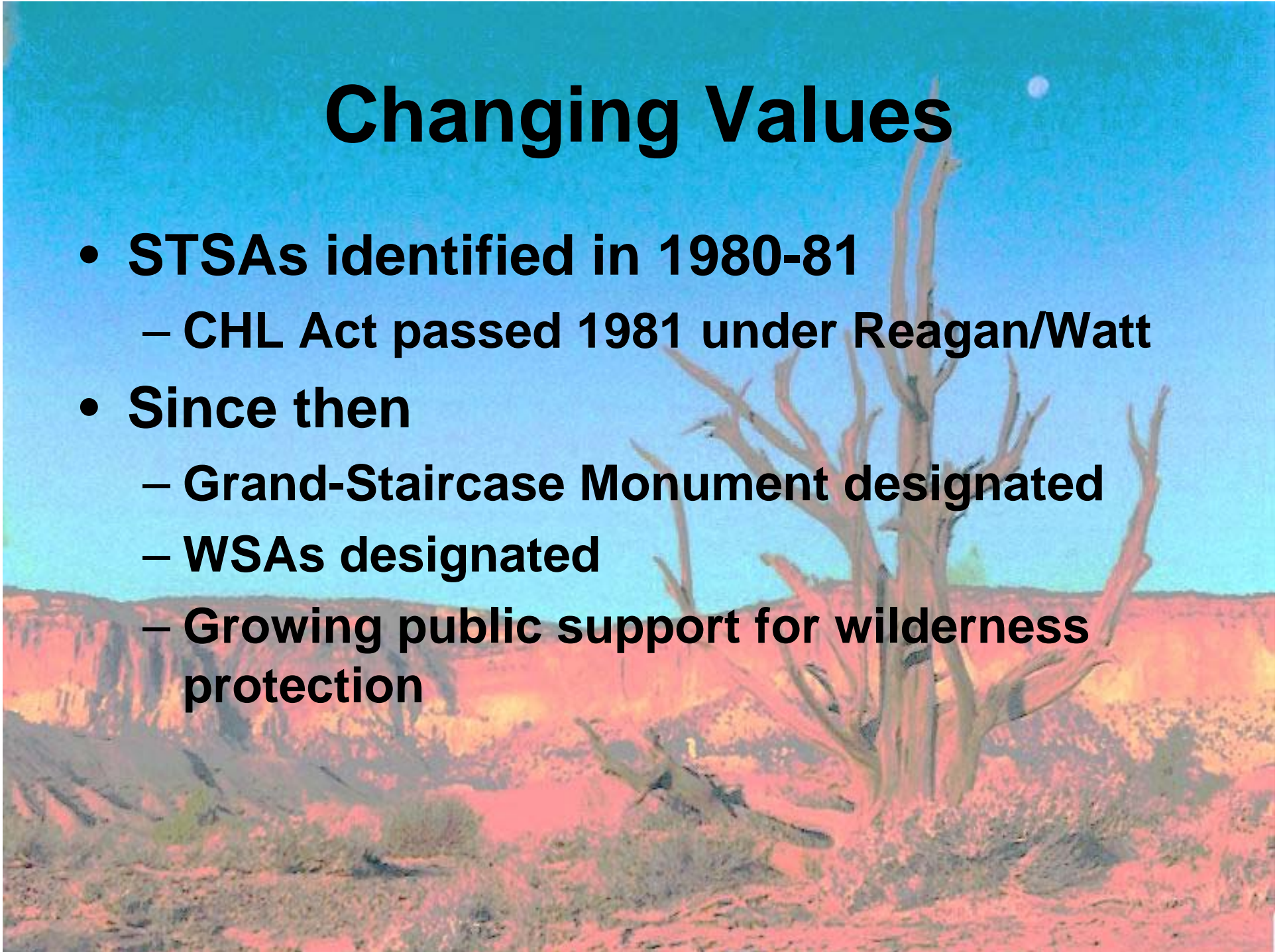






Changing Values

- **STSAs identified in 1980-81**
 - **CHL Act passed 1981 under Reagan/Watt**
- **Since then**
 - **Grand-Staircase Monument designated**
 - **WSAs designated**
 - **Growing public support for wilderness protection**



CHL Conversions

- **CHL Act allows conversion of conventional o/g lease to Combined Hydrocarbon Lease**
- **Numerous applications received**
- **Several EISs initiated**
 - **Some completed; some processes stopped**
- **Most applications shelved in early '80s**
- **Should we pull them off the shelf today?**
 - **Circle Cliffs, Tar Sands Triangle, Book Cliffs/PR Springs STSAs**

Political Pressure Overtakes Protection of America's Special Places?

- **Old lessees are beating 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**



Environmental Devastation – Tar Sands Development in Canada

- **Turning the earth inside out – strip mining**
 - **Enough dirt/sands moved in 2 days to fill Yankee Stadium**
- **Requires huge amounts of natural gas**
- **On-site refining**
- **Massive waste byproduct**



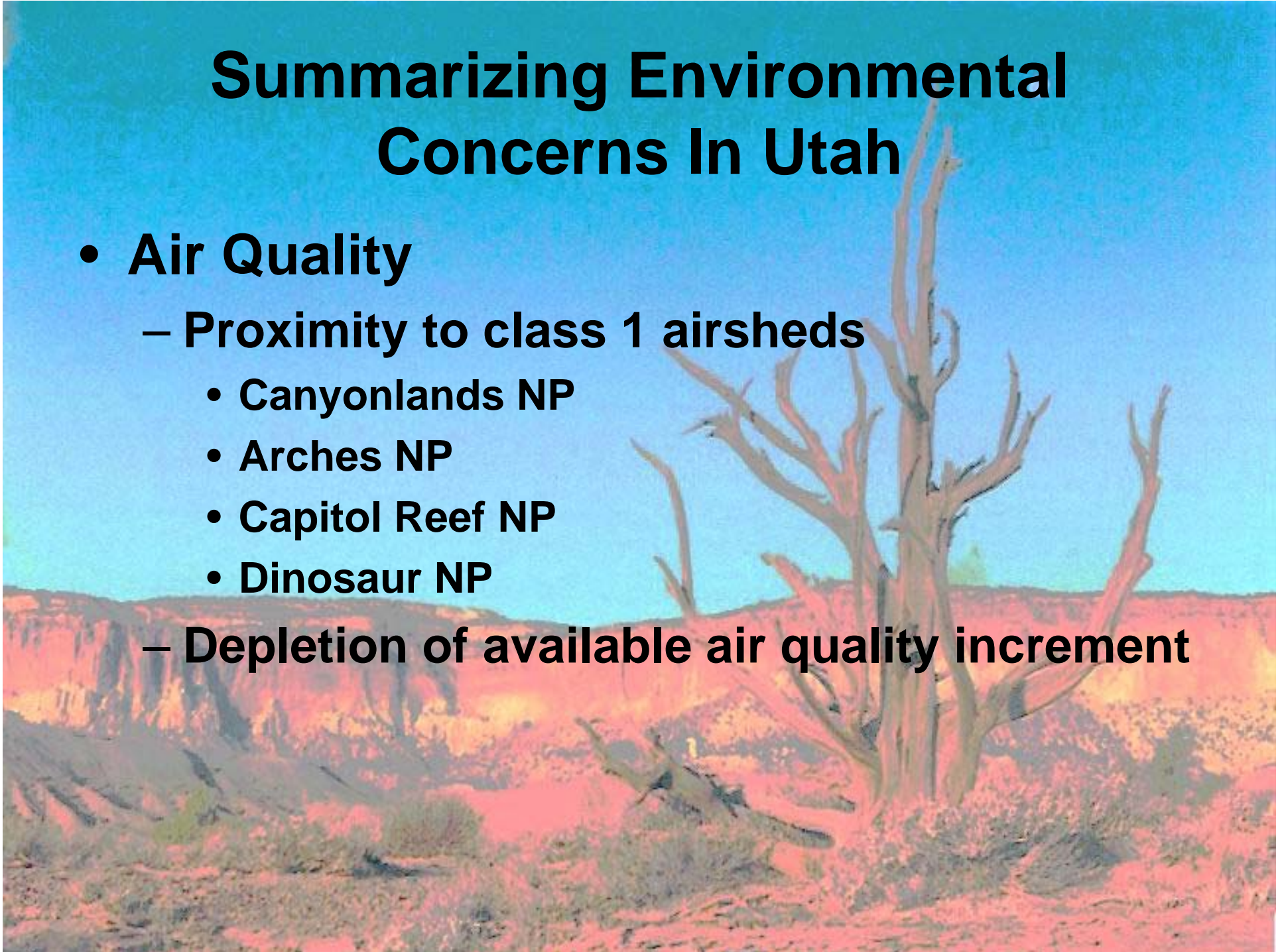
Summarizing Environmental Concerns In Utah

- **Location, Location, Location**



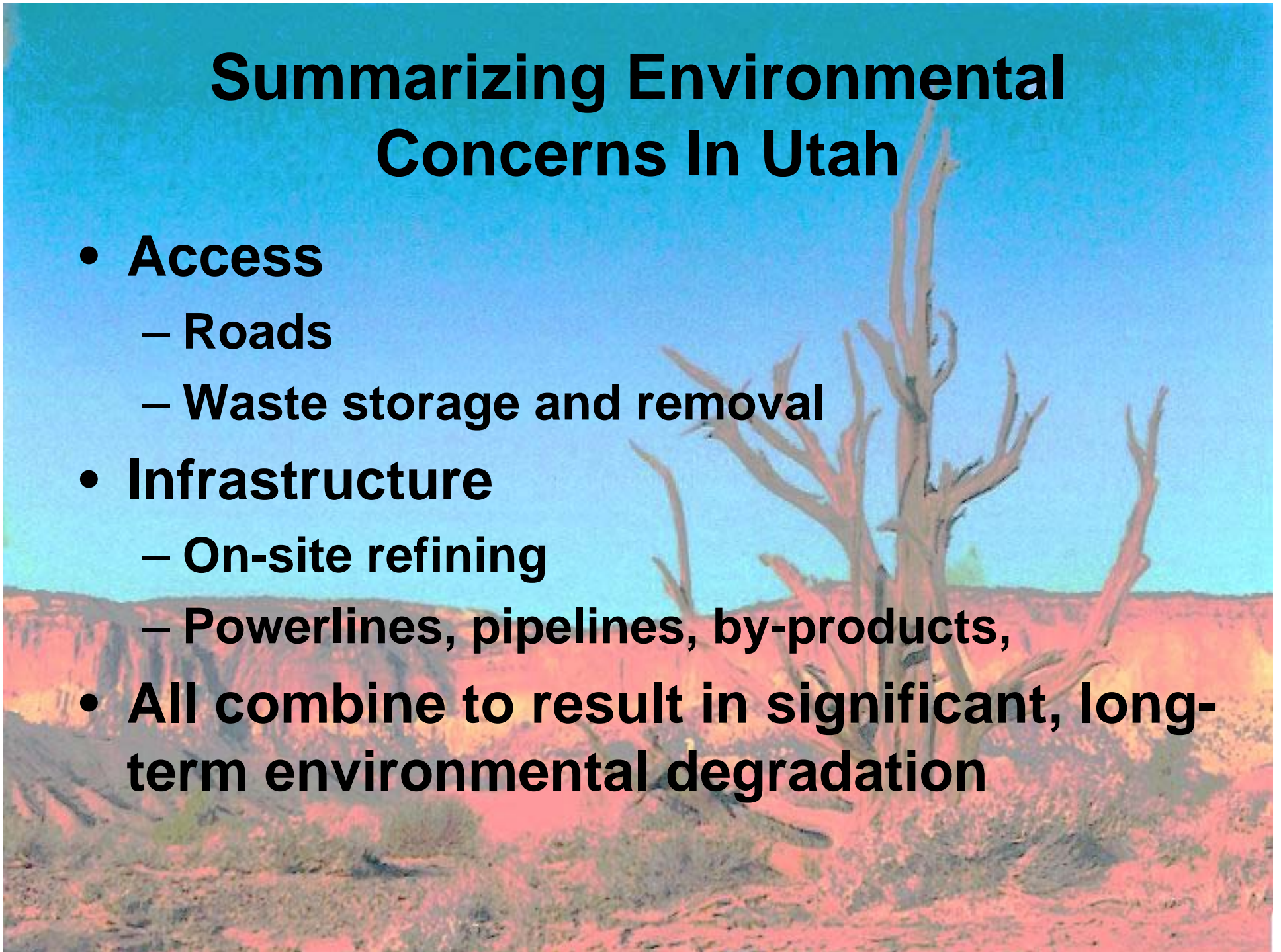
Summarizing Environmental Concerns In Utah

- **Air Quality**
 - **Proximity to class 1 airsheds**
 - Canyonlands NP
 - Arches NP
 - Capitol Reef NP
 - Dinosaur NP
 - **Depletion of available air quality increment**



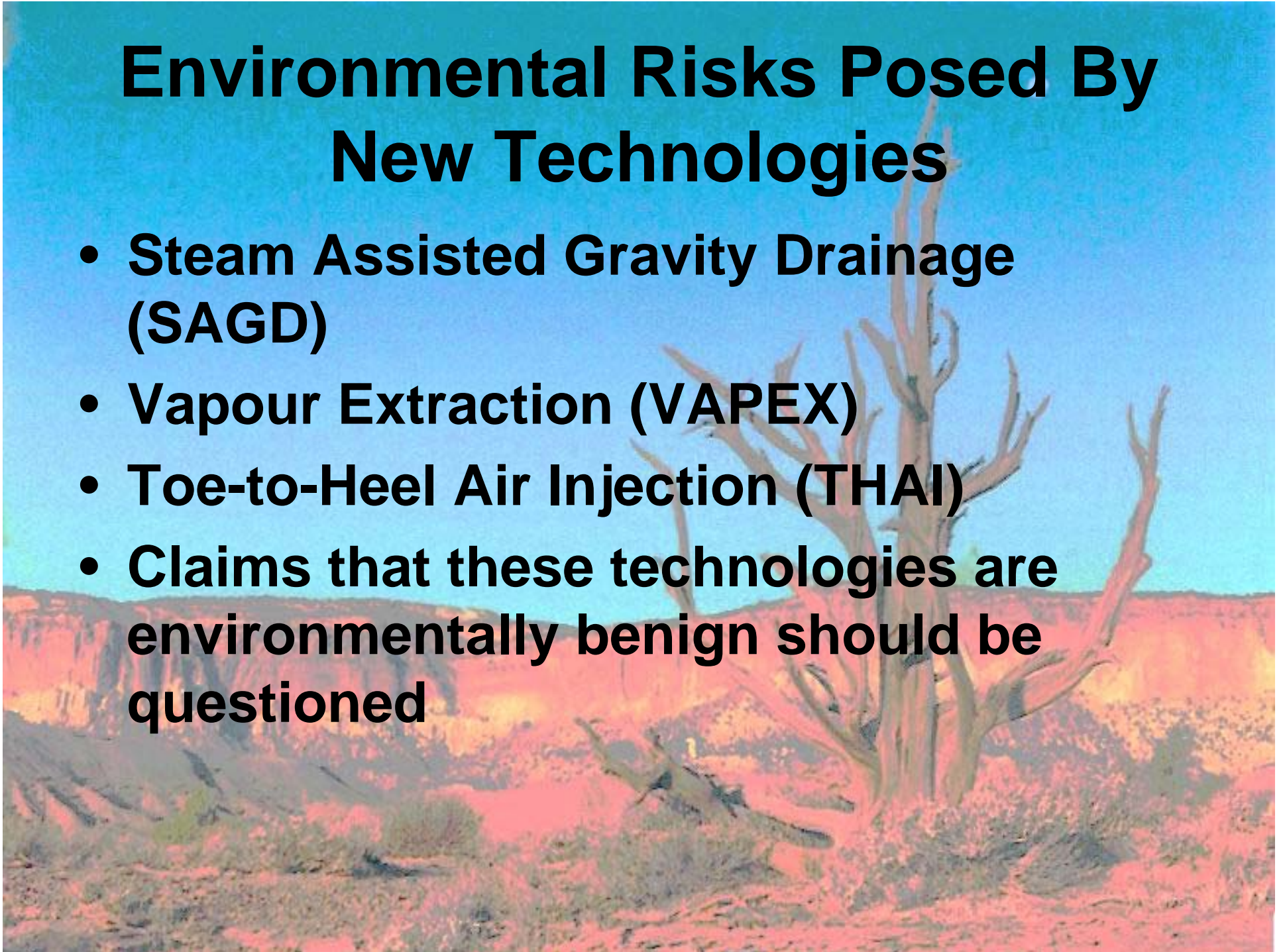
Summarizing Environmental Concerns In Utah

- **Access**
 - Roads
 - Waste storage and removal
- **Infrastructure**
 - On-site refining
 - Powerlines, pipelines, by-products,
- **All combine to result in significant, long-term environmental degradation**



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**



Socioeconomic Impacts of Tar Sands Development

- **Similar to predicted socioeconomic impacts from conventional oil and gas development**
- **Local communities would experience a large influx of workers**
- **Major shortages would occur in housing, education, law enforcement, fire protection, health care and public utility sectors**
- **Travel on some area roads would exceed capacity resulting in road deterioration and higher operating costs**