



# Department of Environmental Quality



## Southeast Wyoming Oil Shale Seminar Environmental Considerations

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Cheyenne - August 31, 2010  
Torrington - September 1, 2010  
Wheatland - September 1, 2010

# Discussion Highlights



- Environmental Considerations

- Air Quality
- Water Quality
- Secondary Impacts



# Air Quality

<http://deq.state.wy.us/aqd/>



- Emission Sources
  - Drill Rigs
    - How many
    - Pace and duration of drilling
    - Not a regulated source (not a stationary source)
      - Some federal regulations apply to the manufacture of new engines
    - Opportunities for voluntary reductions
      - Sublette County (Jonah and Pinedale Anticline)
        - » Regulate drill rigs through negotiations
  - Emissions include:
    - Volatile Organic Compounds (VOC's)
    - Hazardous Air Pollutants (HAP's)
    - National and State Ambient Air Quality Criteria Pollutants

# Air Quality



- Emission Sources
  - Road Traffic
    - Dust Control
    - County Roads, Haul Roads, Operation and Maintenance Roads
    - Lack of Pipeline Infrastructure
    - Can be addressed through minor source permitting
    - Counties can play important role with support by Industry
      - Opportunity to plan development and minimize roads
      - Good example of model program in Sublette County
      - Avoid excessive road infrastructure (e.g. CBM Development in Powder River)

# Air Quality



- Emission Sources
  - Production Equipment (Minor source permitting)
    - State Requirement (Not required by Federal Regulation)
    - e.g. pump jack engines, tanks, gas collectors, dehydration units
    - Applies stringent Best Available Control Technology (BACT) for HAP's , VOC's and Nitrogen Oxides (NOx) at production sites
      - Controls dependent on tons per year of pollutants emitted
    - BACT spelled out in guidance
      - Need to know scope, areas of centralization (concentration)
      - Consider cost, technical feasibility and emissions reductions
      - Look at cost per emission reduction
    - Evaluation of development would determine if more Stringent BACT necessary

# Air Quality



- Experience with rapid oil and gas development (e.g. Pinedale)
  - National Environmental Policy Act (NEPA) Environmental Impact Statement (EIS) Process
    - Provides opportunity to press for additional controls outside of our regulatory reach
    - Only applicable where federal nexus exists
- Diesel emission reduction program (DERA)
  - Opportunities for federal funding through EPA
  - Non-regulated heavy machinery mobile sources

# Water Quality

<http://deq.state.wy.us/wqd/>



- Surface Water Quality
  - Construction Stormwater Permit
    - Erosion Control
    - Spill Containment
    - Reclamation
    - Inspections



# Water Quality



- Surface Water Quality
  - Surface discharges
    - Not expected but rules and program in place if necessary
    - Can be a positive or a negative
  
  - Ambient water quality monitoring program
    - If adverse impacts
      - » Enforcement program
      - » Total Maximum Daily Load (TMDL) Program

# Water Quality



- Ground Water Quality Protection
  - Construction of oil and gas wells regulated by OGCC
  - Hydraulic fracturing regulated by OGCC
  - Construction of water supply wells regulated by SEO
  - Enforcement of groundwater contamination by DEQ
    - Occurs whenever groundwater quality standards are exceeded

# Water Quality



- Ground Water Quality Protection
  - Underground Injection Control Wells
    - Regulated as Class 2 by the OGCC if in conjunction with oil & gas development
      - Reviewed by DEQ and EPA
    - Regulated as Class 1 by DEQ
      - Below the deepest usable aquifer
  - Commercial Waste Disposal Pits
  - Spill Response

# Secondary Impacts



- Waste Water Treatment Facilities
- Solid Waste Disposal Facilities
- Gravel Mining
- Subdivisions
- Oil and Gas Drilling and Production Activities Exempt from Industrial Siting Act
  - No Impact Assistance Funds Available

# Summary



- DEQ is tracking the progress of development
  - Early stages
  - Several unknowns
- We have the experience and regulations in place to protect our air and water resources
- We will collaborate with other state agencies, counties, local governments, citizens and industry to develop workable solutions to environmental concerns



<http://deq.state.wy.us/>