

# Environmental Issues Associated With Shale Gas Development

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Angie Burckhalter

*Vice President of Regulatory Affairs*

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Oklahoma Independent  
Petroleum Association

## ABOUT THE OIPA

- The OIPA is the state's largest oil and gas advocacy group, representing more than 2,100 members in the crude oil and natural gas exploration and production industry.
- Our members range in size from small "mom and pop" operations to large, publicly traded corporations like Devon and Chesapeake.
- Membership includes various industry affiliated companies.





- Founded in 1955, the OIPA was designed to be a voice for independent crude oil and natural gas producers.
- Our mission is “to enhance and protect the ability of Oklahoma’s independent oil and natural gas producers to conduct their business and make a fair profit.”
- The only oil and gas state association to have both a full-time regulatory/environmental affairs person and lobbyist on both the state and federal level.

# INDEPENDENT PRODUCERS

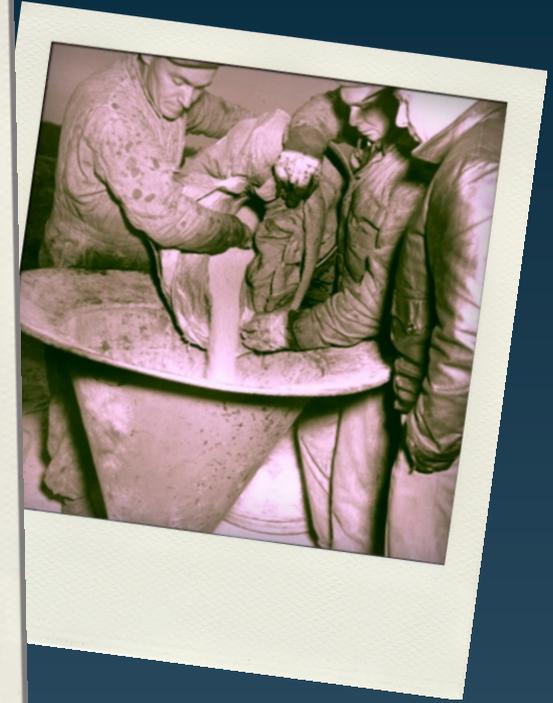


- Independents drill 90 percent of the wells in the United States, produce 68 percent of America's crude oil and 82 percent of domestic natural gas.
- Approximately 46 percent of our members have 19 or less employees.
- Approximately 31 percent of our members drill 50 or less wells per year.

# LOOKING TO THE FUTURE



# ENVIRONMENTAL ISSUES



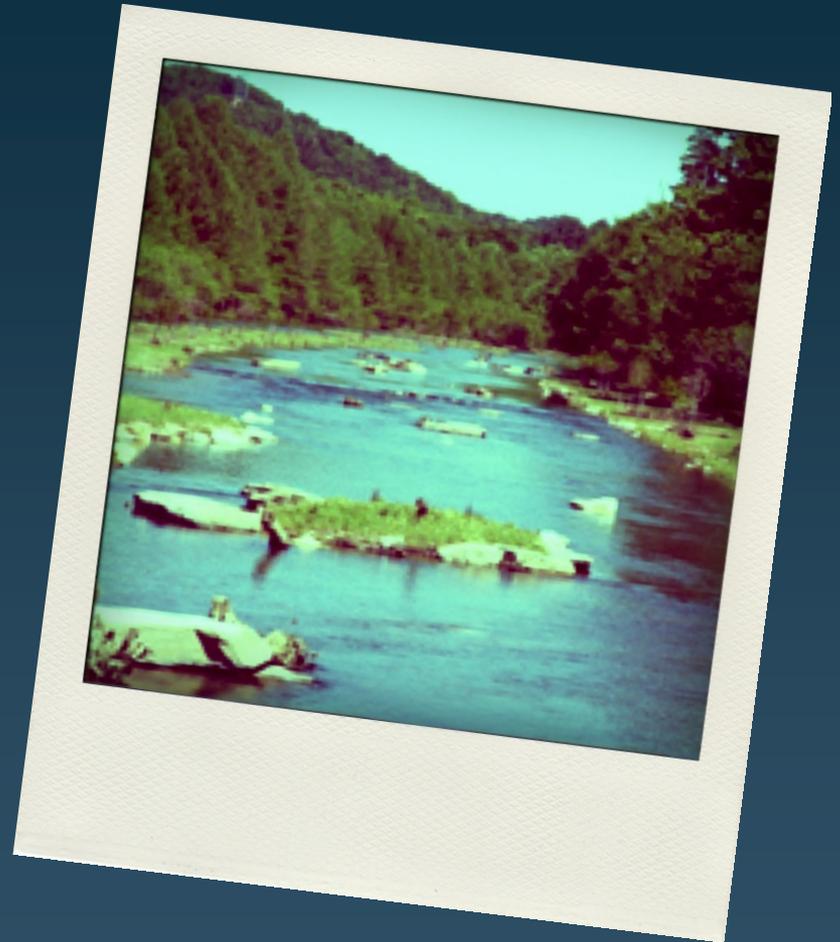
- The use of chemicals in hydraulic fracturing has raised concerns regarding shale gas development.
- There are a number of other environmental issues that may impact future shale gas development.

## Water

- EPA's Hydraulic Fracturing Study – Lifecycle Assessment of Water Used in the Process
- Oklahoma Comprehensive Water Plan Outcome
- Tribal Water Rights

## Waste Management

- NRDC's Resource Conservation and Recovery Act (RCRA) Petition
- Naturally Occurring Radioactive Material (NORM)



## Air

- GHG mandatory reporting requirements & future GHG emission rules for smaller sources.
- Tribal New Source Review requirements.
- EPA review of O&G sector air emissions (NSPS & NESHAP).
- National Ambient Air Quality Standards (NAAQS) i.e. ozone, NO<sub>x</sub>, etc.

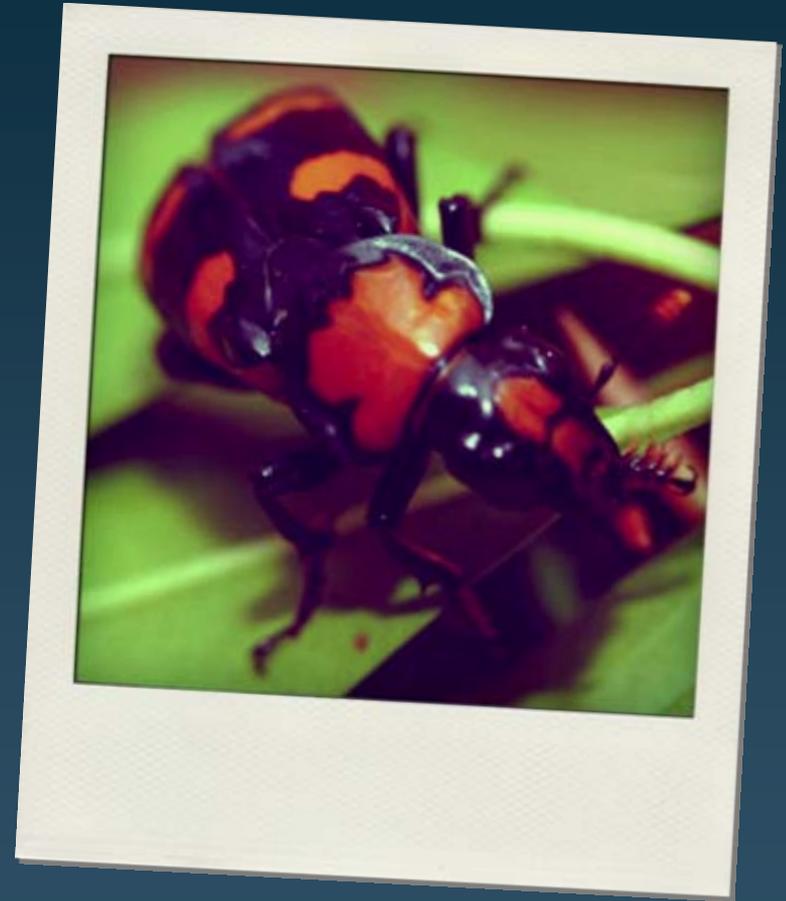


## ESA

- Changing requirements for listed species.
- Listings of new species as threatened or endangered and designation of critical habitat in shale development areas.

Additional environmental regulation could come from multiple sources i.e. federal, state and local entities such as:

- OSHA, PHMSA, Tribes, etc.
- OCC, ODEQ, OWRB, Oklahoma Conservation Commission, etc.
- Counties, municipalities, etc.



## EPA vs. State Regulation

- One-size-fits-all federal regulations is not always the solution, as it provides little flexibility.
- Water, air, geology issues/needs vary from state to state.
- States can adopt/amend rules quickly to address specific issues or issues in geographic areas and can respond more rapidly.



# Shale Gas Plays, Lower 48 States



Source: Energy Information Administration based on data from various published studies.  
 Updated: March 10, 2010

- New shale plays will allow the U.S. to develop clean, abundant, affordable American natural gas.
- Provide direct and indirect jobs.
- Benefits to national, state and local economies.

# OKLAHOMA INDEPENDENT PETROLEUM ASSOCIATION

3555 NW 58th Street, Suite 400 | Oklahoma City, OK 73112

1-800-838-6472 | [www.OIPA.com](http://www.OIPA.com)