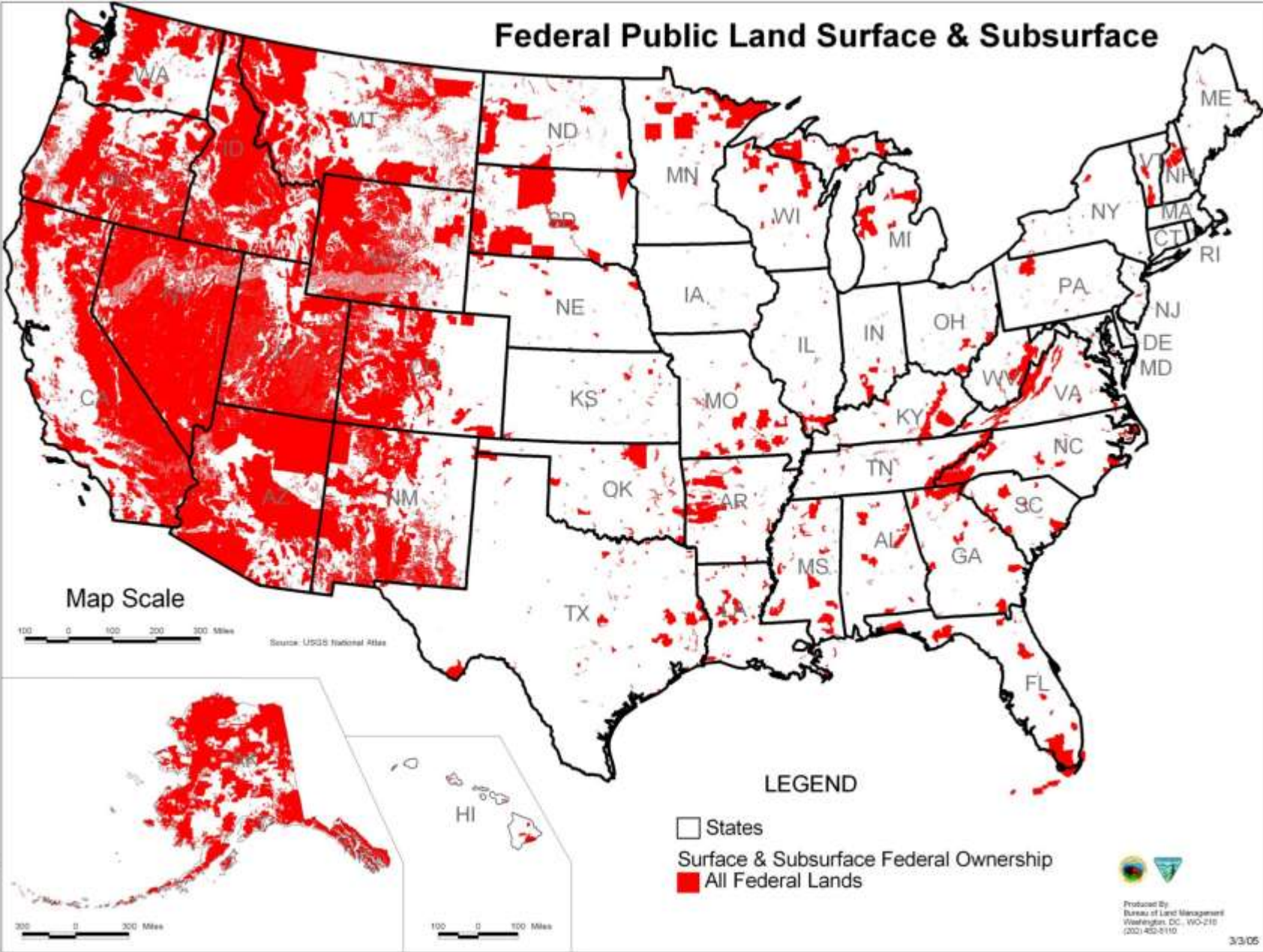


Oil and Gas Development and BLM NEPA Analysis

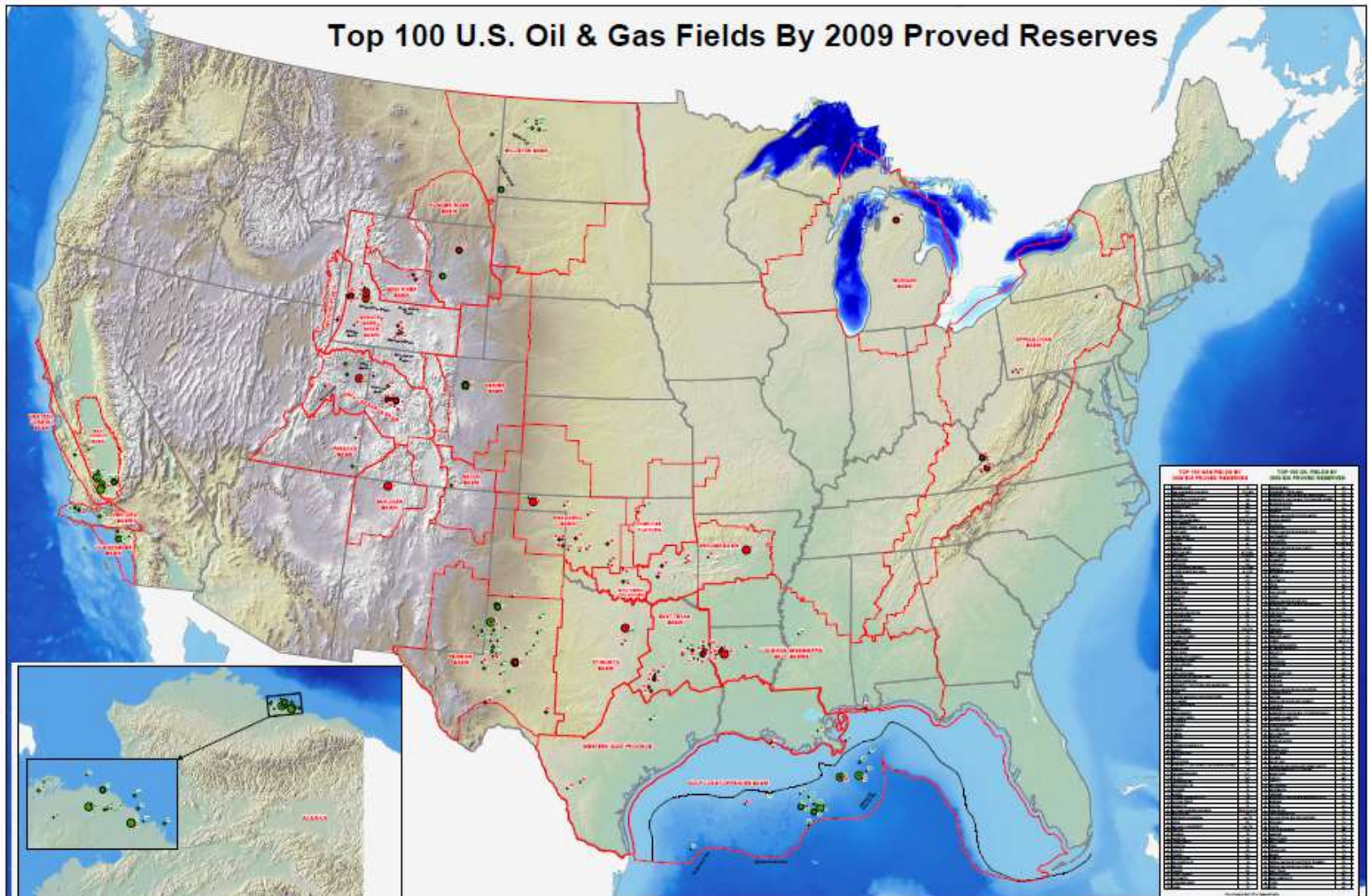


Federal Public Land Surface & Subsurface



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(202) 452-5110

Top 100 U.S. Oil & Gas Fields By 2009 Proved Reserves

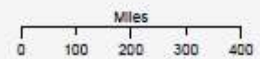


TOP 100 OIL FIELDS BY 2009 PROVED RESERVES		TOP 100 GAS FIELDS BY 2009 PROVED RESERVES	
Field Name	Rank	Field Name	Rank
Alaska	1	Alaska	1
Alaska	2	Alaska	2
Alaska	3	Alaska	3
Alaska	4	Alaska	4
Alaska	5	Alaska	5
Alaska	6	Alaska	6
Alaska	7	Alaska	7
Alaska	8	Alaska	8
Alaska	9	Alaska	9
Alaska	10	Alaska	10
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Alaska	95	Alaska	95
Alaska	96	Alaska	96
Alaska	97	Alaska	97
Alaska	98	Alaska	98
Alaska	99	Alaska	99
Alaska	100	Alaska	100

Top 100 Oil and Gas Fields by 2009 Proved Reserves Rank

- Oil**
 - 1-10 (Green circle)
 - 11-20 (Light green circle)
 - 21-50 (Yellow circle)
 - 51-100 (Orange circle)
- Gas**
 - 1-10 (Red circle)
 - 11-20 (Dark red circle)
 - 21-50 (Black circle)
 - 51-100 (Grey circle)

- Province Outlines
- 200 Meter isobath (BOEMRE "Deep Water" Boundary)

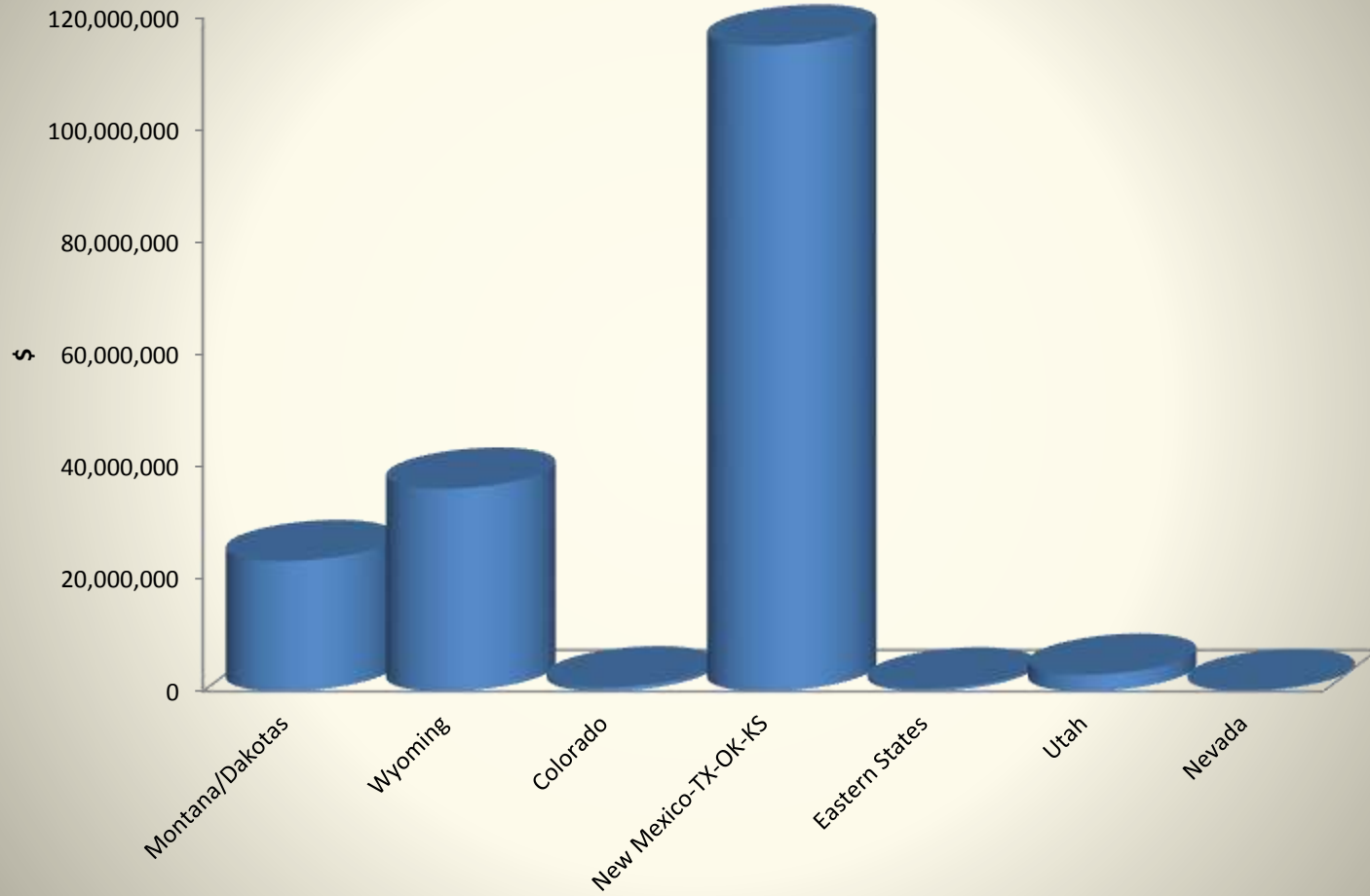


U.S. Energy Information Administration
 1700 K Street, N.W.
 Washington, D.C. 20548
 Telephone: (202) 547-2425
 www.eia.doe.gov
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BLM management of lands for energy development

- Public lands managed for renewable energy development, oil and gas, and coal operations
- Companies pay royalties, rents and bonus payments
- Half of revenue goes to states, half to U.S. Treasury for oil and gas
- BLM determines best management practices for energy projects to minimize environmental impacts

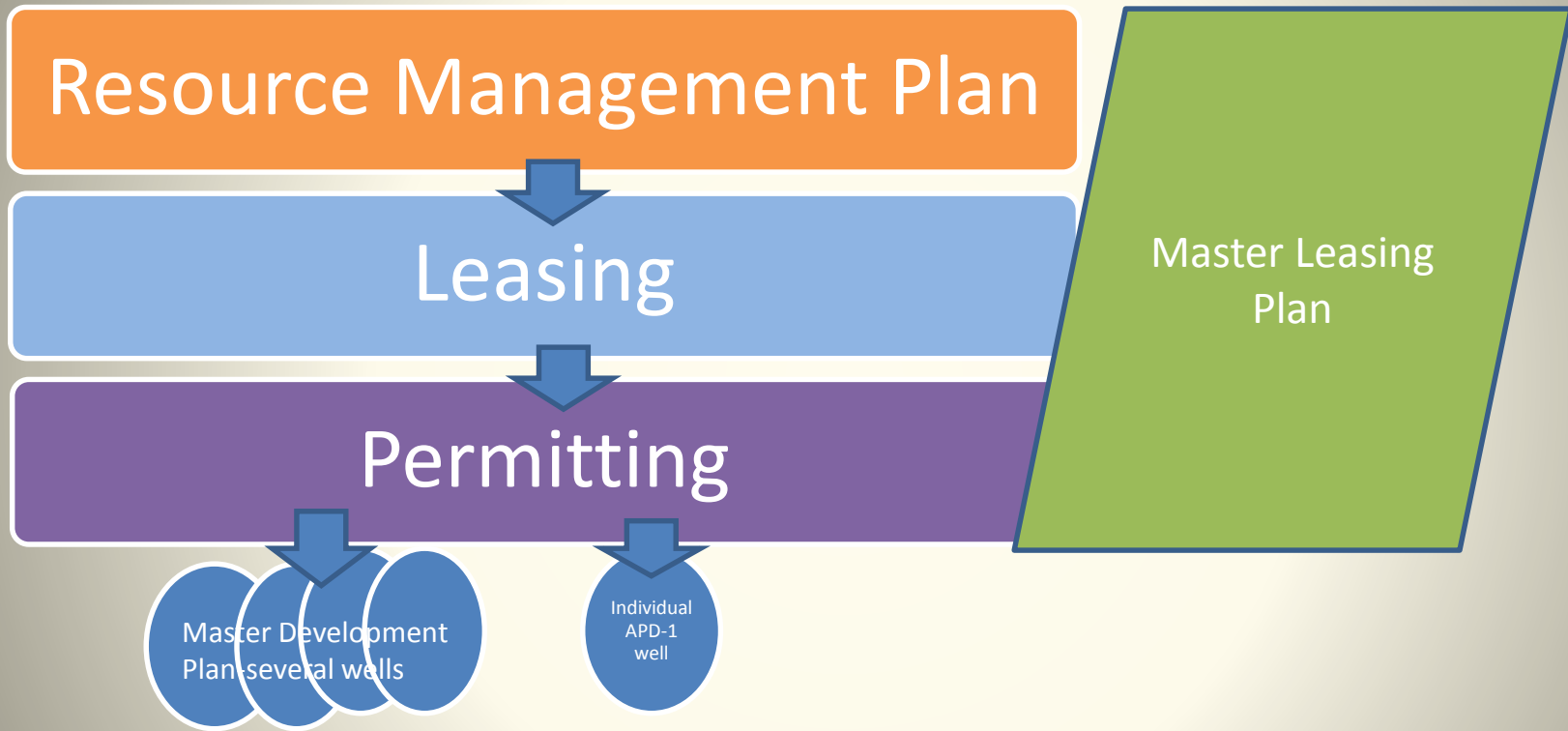
Calendar Year 2014 BLM Oil and Gas Lease Sales



BLM Onshore Oil and Gas- By The Numbers-FY13

- **47,427** leases in effect
- **36,092,482** acres leased
- **12,617,743** acres in production
- **99,975** producible and service completions
- **123,029,214** bbls of oil
- **2,636,277,484** mcf gas

NEPA Analysis-When does it occur?



Air Analysis completed for NEPA

- Detailed oil and gas emissions inventories specific to the basin for current and future year inventories (criteria pollutants, HAP, GHG)
- Photochemical Grid Modeling
- Near-field air modeling
- Long range transport modeling

BLM projects and BLM contributions to Oil and Gas Air Analysis in the West

- Major funder of WestJumpAQMS
- Major funder to 3 State Air Quality Study
- CARRMS in Colorado/NW New Mexico
- Several PGM studies in Wyoming
- Utah PGM and Uintah Basin ozone analysis
- 1-hour NO₂ drill rig study
- Montana/Dakotas inventory improvements and PGM study

Reducing Emissions

- BLM has identified state-of-the-art best management practices to control air pollution from oil and gas production sites
- Through Resource Management Plans, stipulations and notices, BLM requires site-specific air pollution control for oil and gas production
- Required emissions reductions (state, EPA and BLM) are reflected in current and future year inventories for the wells and equipment associated with Record of Decision for that project

Challenges

- Technologies and E&P practices changing / advancing at a rapid pace
- Historic inventories and equipment configurations are not necessarily good predictors of future inventories after RoD
- Significant difficulty / uncertainty in predicting future year inventories
- Emerging technologies may address one environmental issue at the expense of another
- Differences within in-basin geology and new technologies developing new formations may result in large differences in air emissions
- Lack of national air requirements for oil production like NSPS OOOO
- Record of decision cannot impact activities occurring on state or private land
- Lack of consistency between inventories and modeling

Opportunities

- BLM NEPA analysis drives the acquisition of detailed emissions information about oil and gas development in the west
- Linkage of basin-specific information has been achieved in the past for regional analyses (WestJumpAQMS)
- 3 States Air Quality Study demonstrating usefulness of data sharing, development of modeling platform

Questions?

- Mary Uhl (muhl@blm.gov)
- Forrest Cook (fcCook@blm.gov)