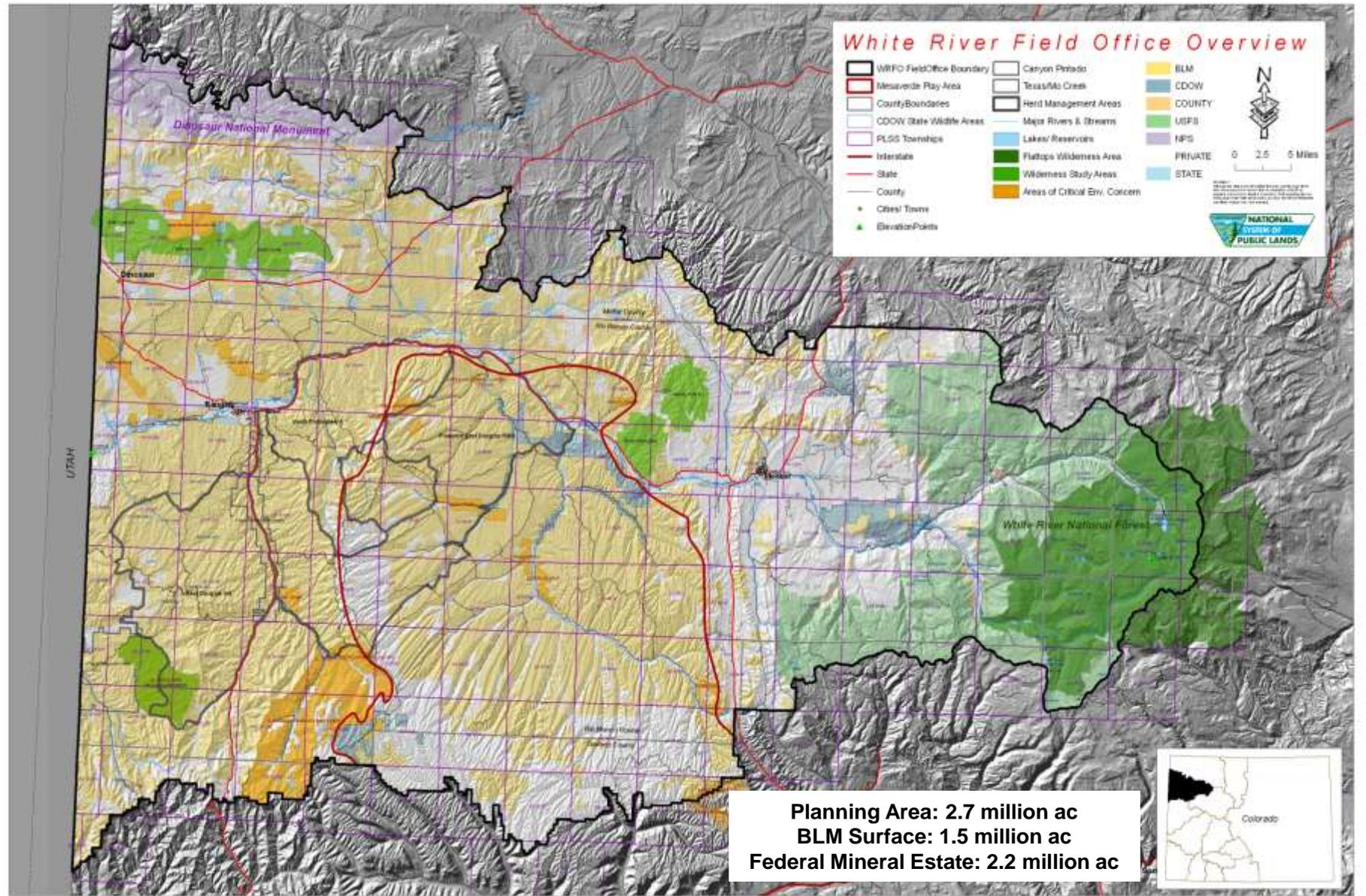




**White River Field Office
Oil & Gas Development Draft RMPA/EIS
Northwest Resource Advisory Council
August 23, 2012**

Meeting Objectives

- Cooperating Agencies
- Planning Process Overview
- Key Planning Criteria & Assumptions
- Presentation of Final Draft Alternatives
- Preferred Alternative Discussion
 - Development Thresholds
 - Key Resources
- Document Navigation
- How to Comment & Public Meetings

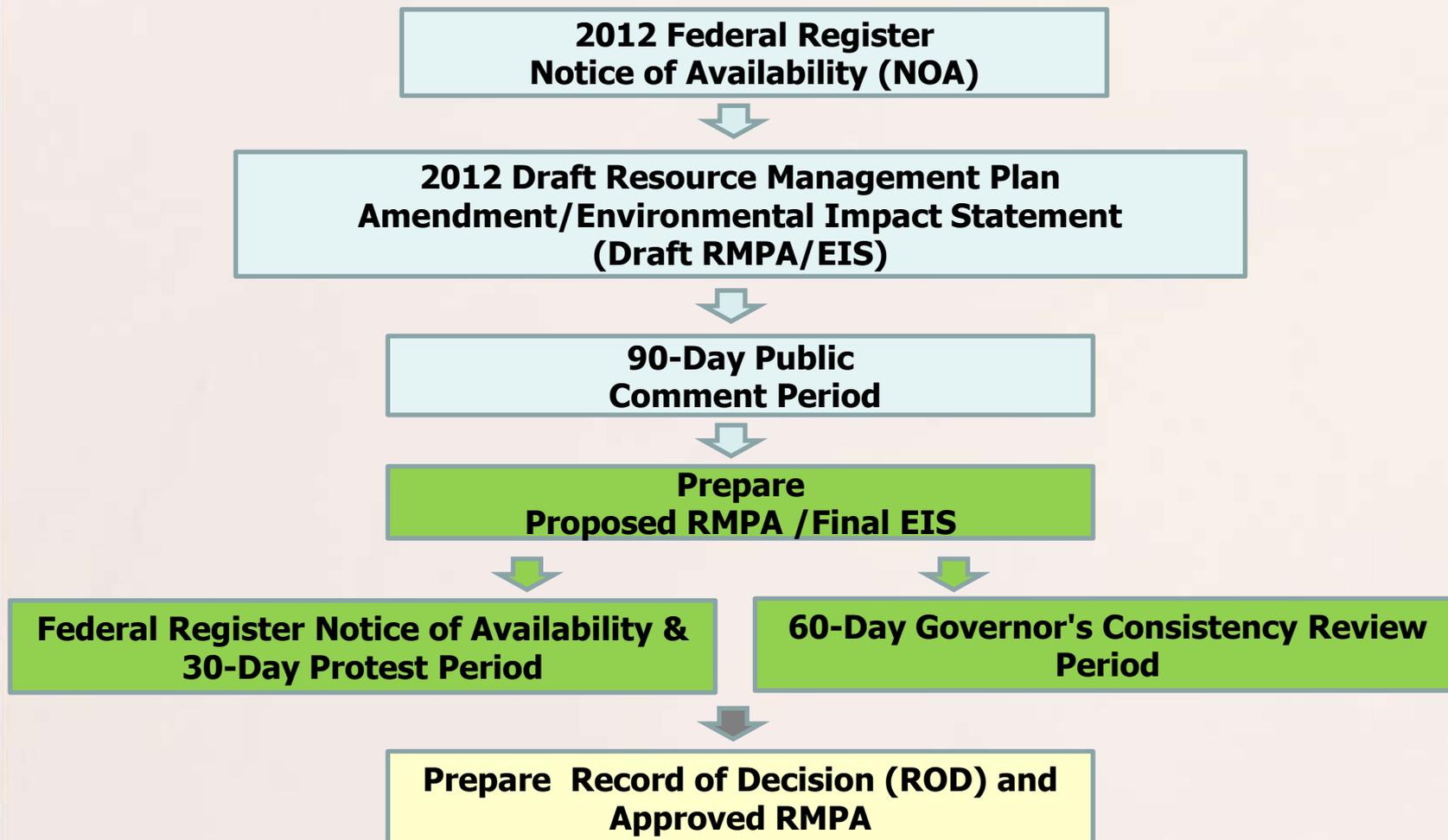


Cooperating Agencies & Tribes

- Federal Agencies
 - EPA, Region 8
 - US Army Corp of Engineers
 - US Fish & Wildlife Service
 - US Forest Service
 - National Park Service
- Tribes
 - Ute Mountain Ute Tribe
 - Ute Indian Tribe
 - Southern Ute Indian Tribe
 - Eastern Shoshone Tribe
- State of Colorado
 - CDPHE
 - Air Pollution Control Division
 - Water Quality Control Division
 - DNR
 - Colorado Parks & Wildlife
 - Natural Areas Program
 - COGCC
 - Department of Local Affairs
- Local Government
 - Garfield, Moffat, and Rio Blanco Counties
 - Rangely and Meeker



Planning Process





Amendment vs. Revision

- An **Amendment** looks at a single, specific aspect or issue in a Field Office RMP. The scope of an amendment is narrow.
- A **Revision** completely revises the document, taking a fresh look at all the decisions in an RMP. The scope of a revision is broad.

The White River Field Office is amending its 1997 Resource Management Plan to address an increase in oil and gas activity.

In addition to this Oil and Gas Amendment, two additional planning efforts that could amend the 1997 WRFO RMP are underway: The Northwest Colorado Greater Sage-grouse Environmental Impact Statement and the Oil Shale and Tar Sands Programmatic EIS.



Reasonably Foreseeable Development (RFD) Scenario

- Projects the maximum levels/types of development & associated surface disturbance
- Assumptions
 - all potentially productive areas, except those areas designated as closed to leasing by law, regulation or executive order, are open to leasing and development; and
 - only standard lease terms and conditions would be imposed, affording minimum protections to other important resource values.

Project Overview

Since the 1997 RFD, the WRFO has seen changes in the location, type, and level of activity associated with oil and gas development.

Comparison Element	1997 RFD	2007 RFD
Area of Majority of Oil and Gas Development (OGD)	67% of OGD south of Rangely (did not account for Piceance Basin)	95% of OGD in Piceance Basin, Mesaverde Gas Play area
Number of Wells	1,100 oil and gas wells	4,603 – 21,200 oil and gas wells
Well Pad Type	1,100 single well pads	550 – 2,556 multi-well pads (average 8 wells per pad)
Acres of Disturbance per Pad	10 acres of disturbance per well (including roads and pipelines); 11,000 acres	12 acres of disturbance per pad (including roads and pipelines); range of 6,600 – 30,672 acres
20-year Development Projection	55 wells per year	230 – 1,500 wells per year

Key Planning Criteria

- Planning Area is WRFO
- Only Considers Decisions Related to Oil & Gas Development
- No changes to leasing decisions (open vs. closed)
 - Six WSAs and Harper's Corner Rd are closed (83,300 acres).
- No new special designations
- No changes to decisions in the Roan Plateau RMPA
 - Federal Mineral Estate (5,262 acres)
 - Trapper/Northwater Creek ACEC

Assumptions

- 95 % of future development in Mesaverde Play Area (MPA = Piceance Basin)
- Average disturbance of 12 acres per pad (includes access road and associated infrastructure)
- Different Development Types in Different Areas
 - Outside of the MPA: single well pads
 - Within the MPA: average of 8 wells per pad
- Development Rate Increases Over Time



Alternatives

A	No Action	Uses current management decisions but updates development projection.
B	Conservation Focus	Emphasizes conservation and protection of other resources concurrently with oil and gas production.
C	Managed Development	Allows for concentrated development and year-round drilling by granting exceptions to timing limitations if development remains within defined thresholds.
D	Development Focus	Emphasizes the production of oil and gas under environmental protection afforded by laws, regulations, and BLM policy.

Alternative C is the Preferred Alternative

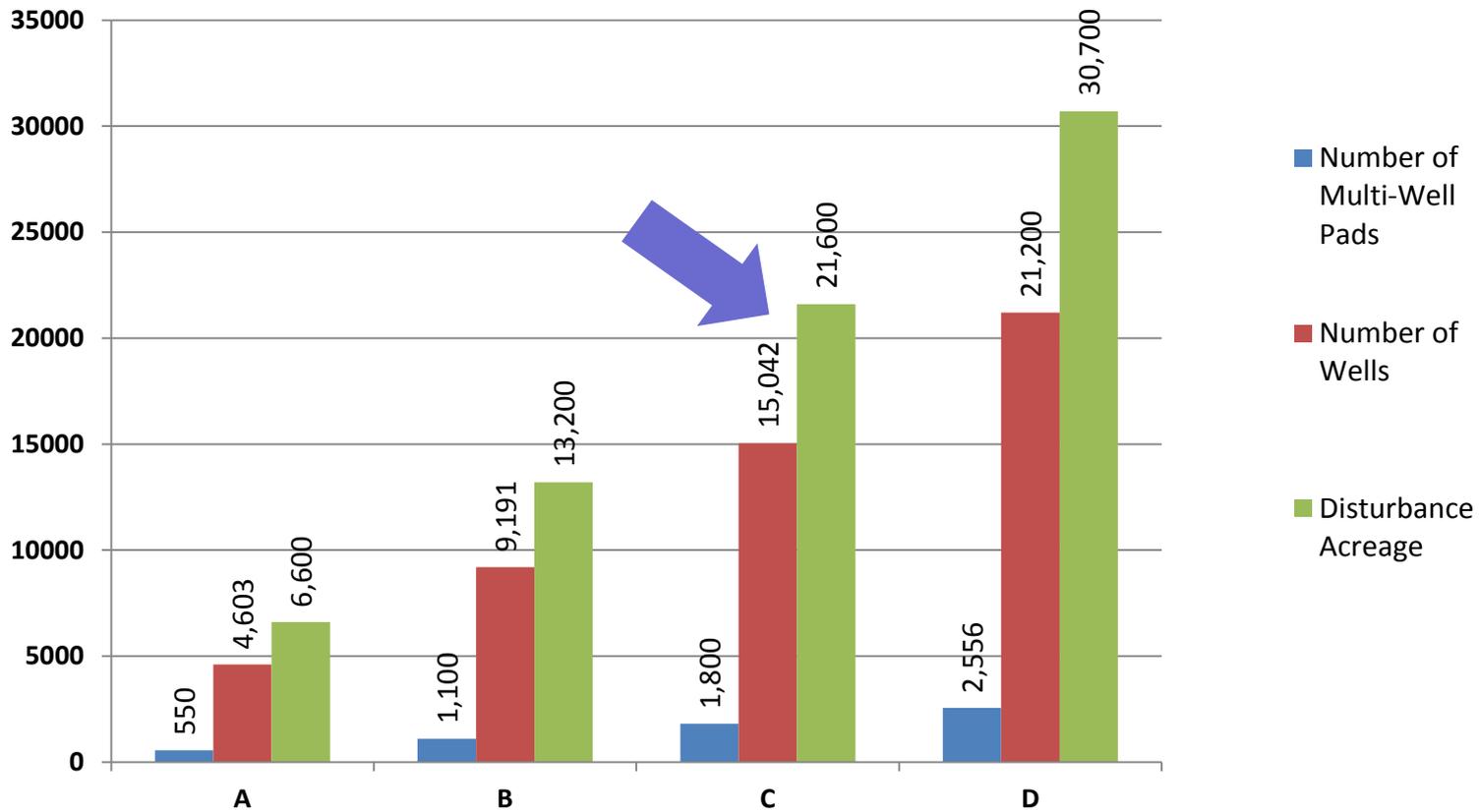


Preferred Alternative vs. Proposed Amendment

- The BLM has identified Alternative C as the preferred alternative in the draft EIS.
- It is important to note that identification of a preferred alternative does not constitute a commitment or decision in principle, and there is no requirement to select the preferred alternative in the Record of Decision.
- Different aspects of the analyzed alternatives in the draft can also be “mixed and matched” to develop a complete alternative and proposed amendment in the final EIS.

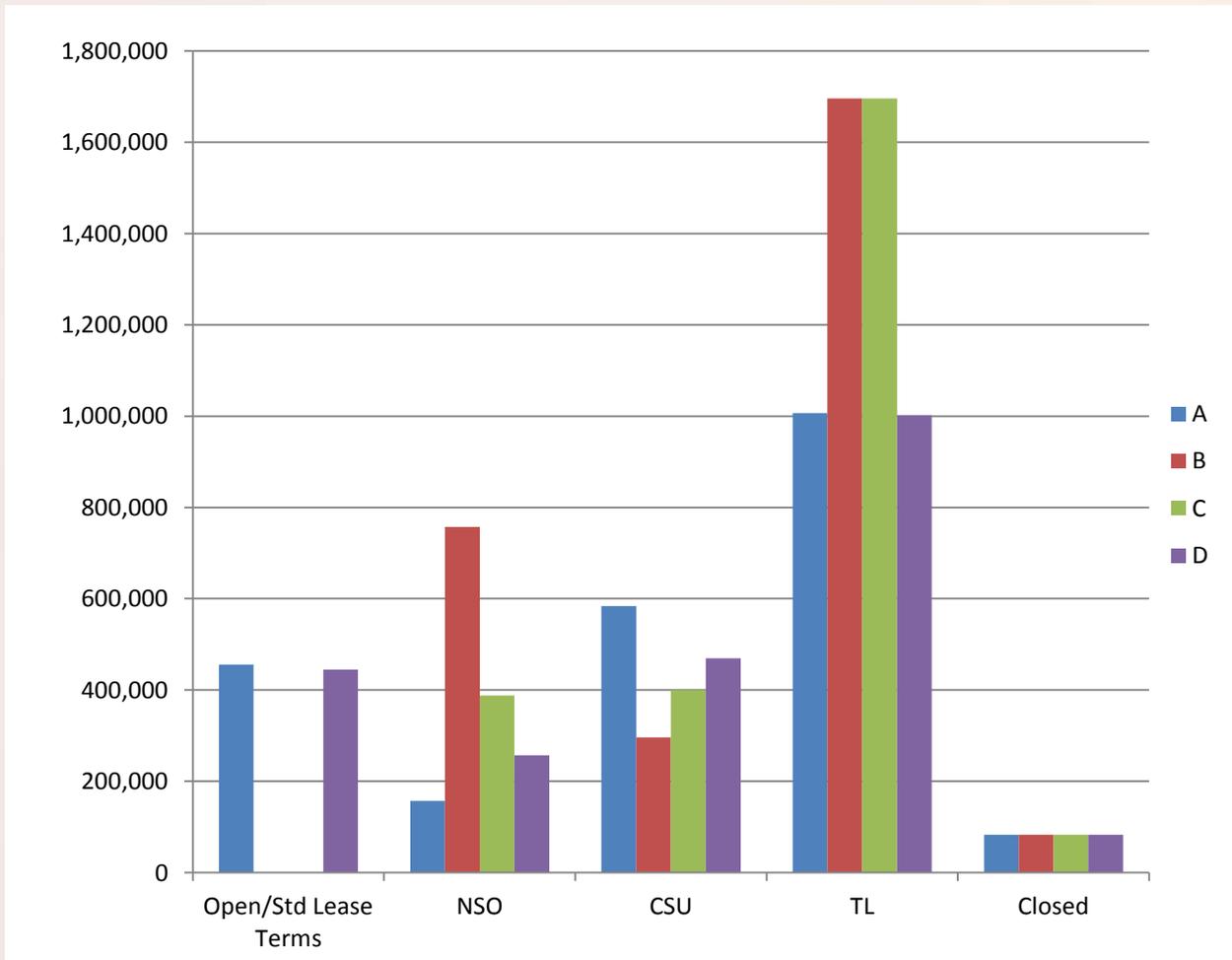


Alternatives



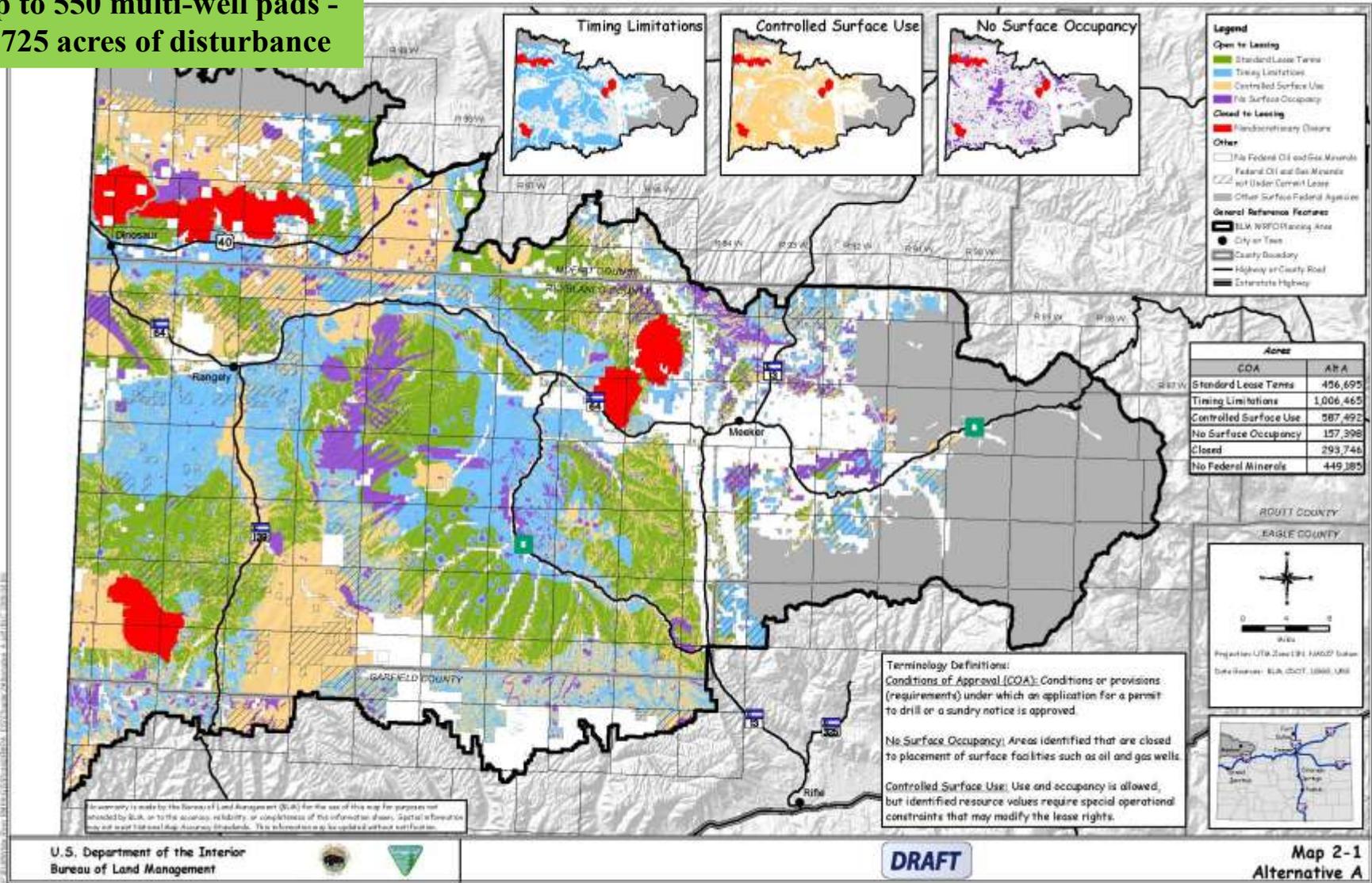


Acres Managed by Lease Stipulations





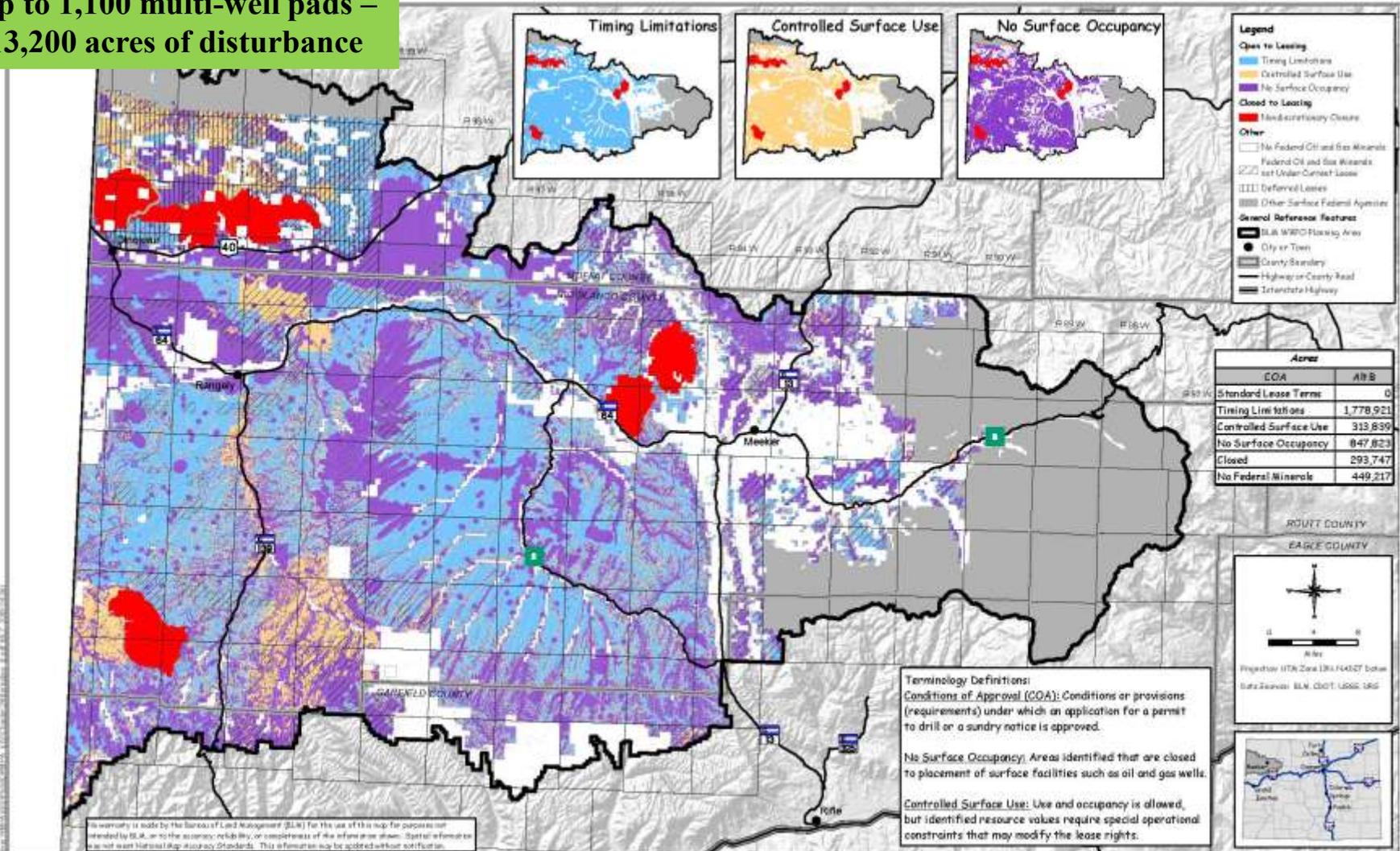
Up to 550 multi-well pads - 6,725 acres of disturbance



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**Up to 1,100 multi-well pads –
13,200 acres of disturbance**



Legend

Open to Leasing

- Timing Limitations
- Controlled Surface Use
- No Surface Occupancy

Closed to Leasing

- Non-discretionary Closure

Other

- No Federal Oil and Gas Minerals
- Federal Oil and Gas Minerals set Under Contract Leases
- Deferred Leases
- Other Surface Federal Agencies

General Reference Features

- BLM WFO Flowing Area
- City or Town
- County Boundary
- Highway or County Road
- Interstate Highway

COA	Acres	
	COA	Alt B
Standard Lease Terms		0
Timing Limitations	1,778,921	
Controlled Surface Use	313,839	
No Surface Occupancy	847,823	
Closed	293,747	
No Federal Minerals	449,217	

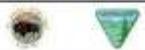
Terminology Definitions:
Conditions of Approval (COA): Conditions or provisions (requirements) under which an application for a permit to drill or a sundry notice is approved.
No Surface Occupancy: Areas identified that are closed to placement of surface facilities such as oil and gas wells.
Controlled Surface Use: Use and occupancy is allowed, but identified resource values require special operational constraints that may modify the lease rights.

ROUTT COUNTY
GARFIELD COUNTY

Projection: NAD 83 Zone 12N F4327 datum
Data Source: BLM, COG, USGS, SRG



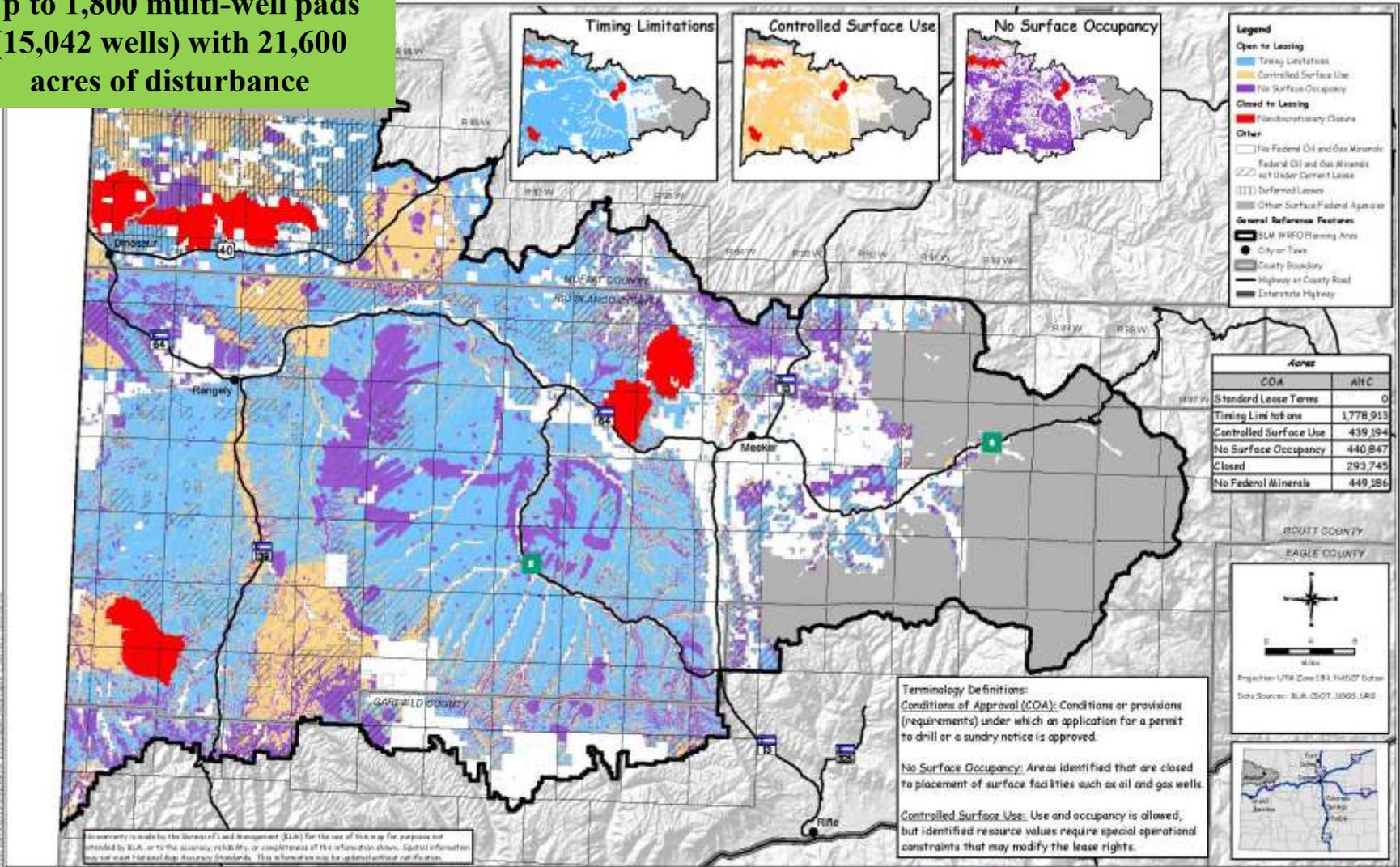
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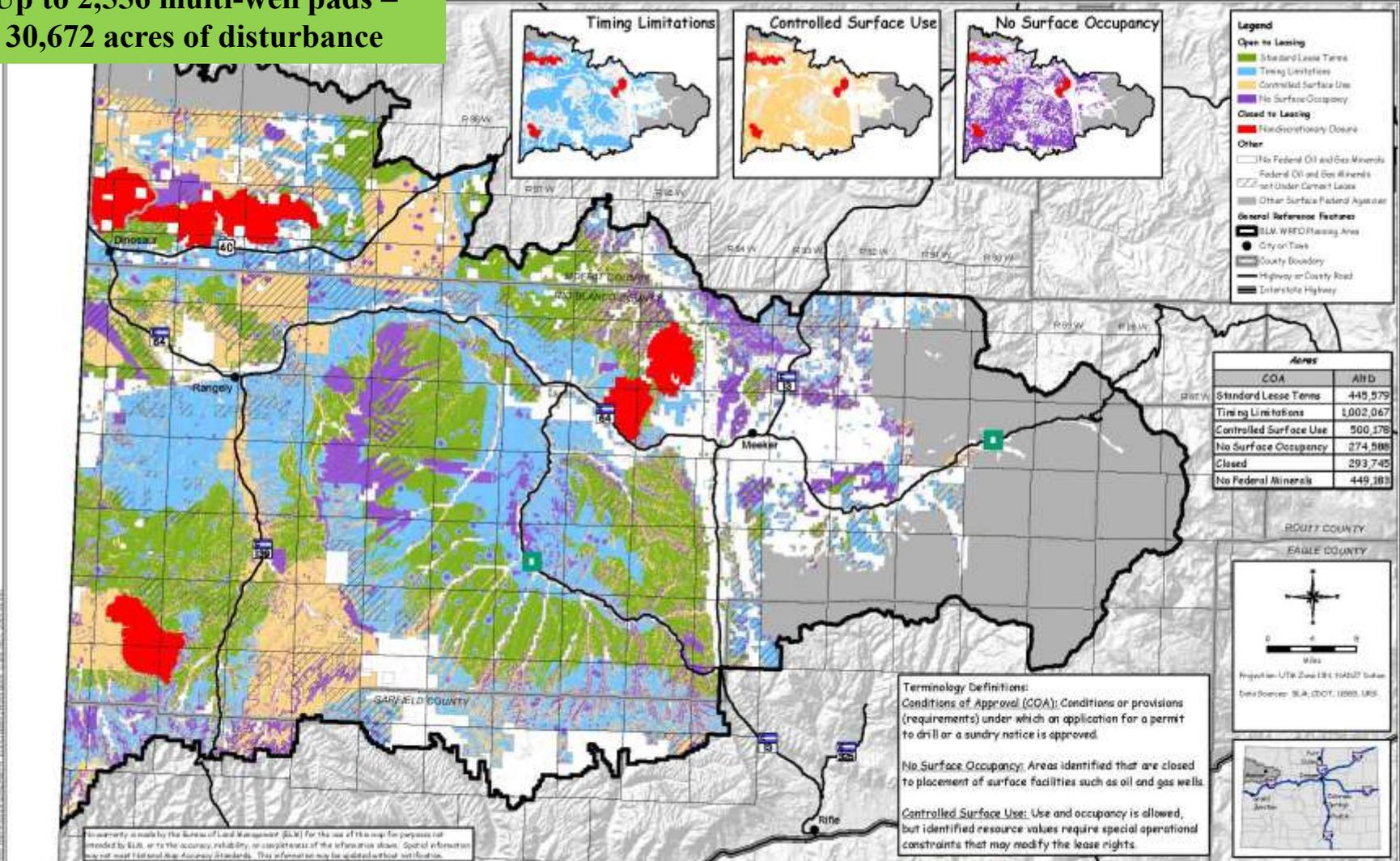


Up to 1,800 multi-well pads (15,042 wells) with 21,600 acres of disturbance





Up to 2,556 multi-well pads – 30,672 acres of disturbance

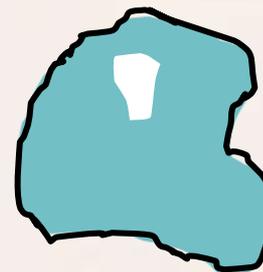


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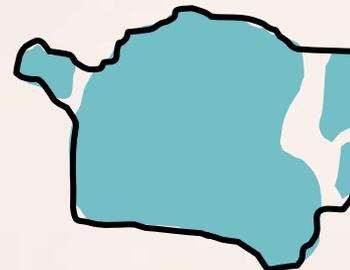
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Effective NSOs

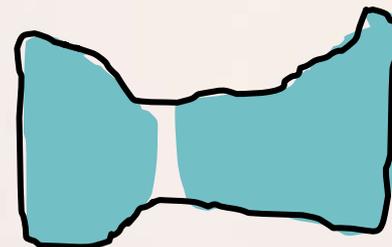
- Less than 7.5 acres within an NSO area



- Aggregate of small NSOs within 600 ft of a larger NSO



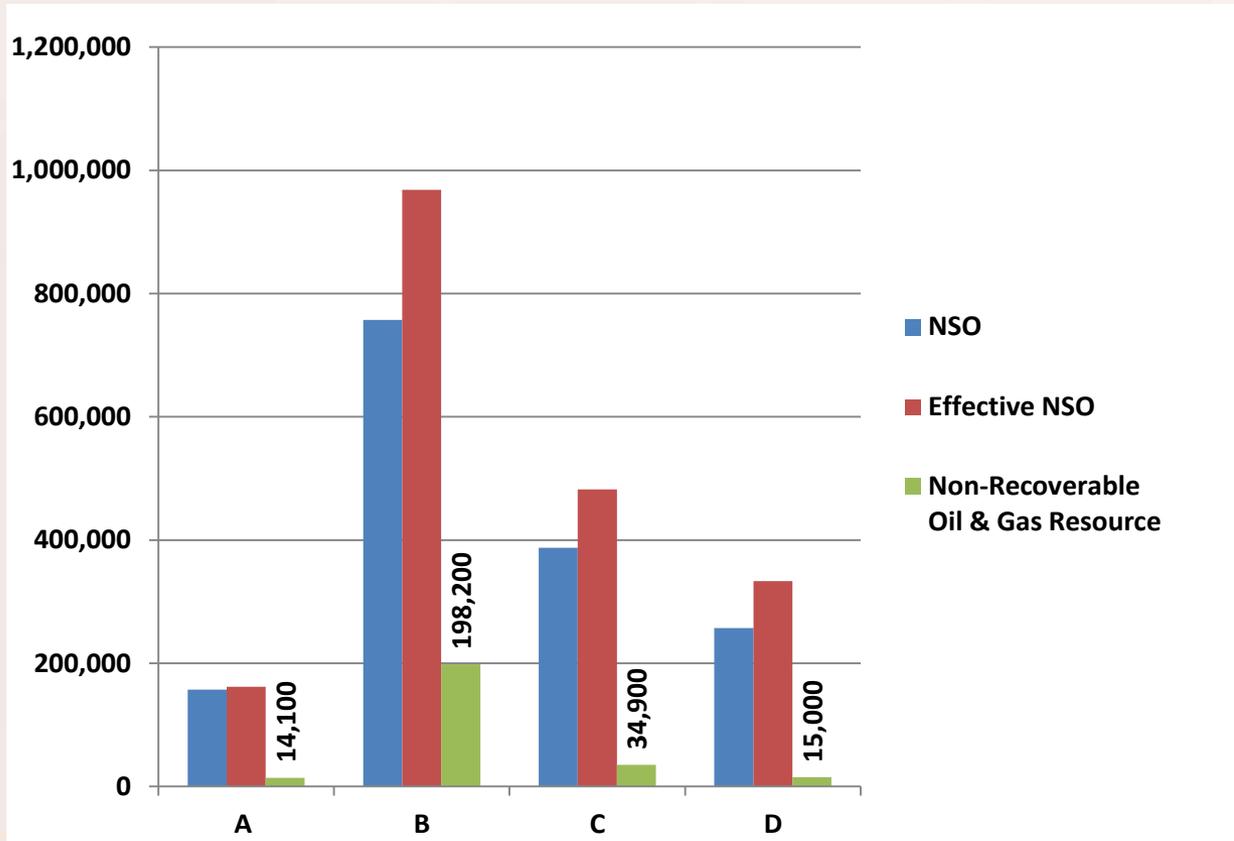
- NSOs with less than 600 ft between boundaries





Potential Non-Recoverable Oil & Gas Resource

Assumed current technology could drain resources from 2,900 ft from the edge of effective NSO areas.



Threshold Concept

What is it?

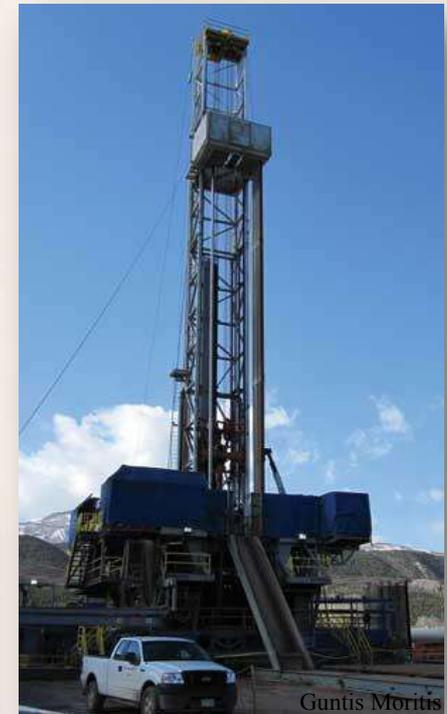
- A “managed development approach” to **limit the spatial extent of surface disturbance** from development activity to predetermined & manageable levels.
- An **incentive-based** means to achieve temporally clustered development. Compliance allows for year-round drilling.
- Goal is to manage the extent of big game seasonal range subjected to adverse behavior effects.



Threshold Concept

Benefits of Using Thresholds?

- Supports year-round oil and gas activities
- Encourages prompt reclamation
- Supports clustering development



Threshold Concept

How does it work?

- All of WRFO would have TL stipulations
- Mapped mule deer seasonal ranges can not overlap (modified CPW map)
- Adverse Behavioral Effects
 - Acute Effects
 - Collective Effects
- Thresholds Applied by:
 - Game Management Unit
 - Mule Deer Seasonal Range
 - Leaseholder/Unit



Threshold Concept

Acute Effects:

- Intensive activities (e.g., construction, drilling, and completion activities)

Collective Effects:

- Includes acute effects plus residual or incomplete activities (e.g., does not meet reclamation criteria, frequent vehicle visitation)

Areas Not Included in Acute or Collective Thresholds:

- Meets reclamation success criteria (WRFO Surface Reclamation Plan)
- Visitation is less than 7 vehicle trips per week

Big Game Timing Limitations & Thresholds

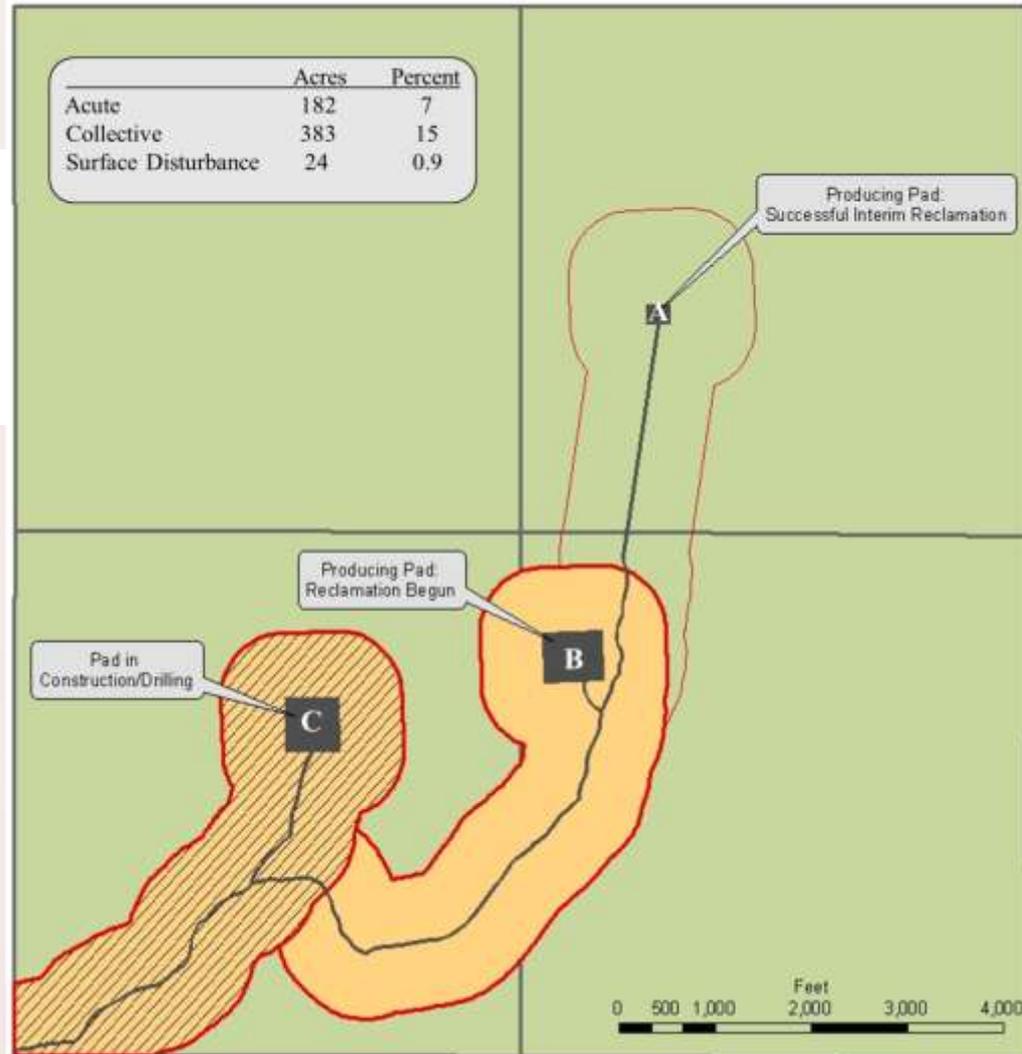
	B	C
Timing Limitations	Summer Range: May 15 - Aug 15 Severe Winter Range: Dec 1 - Apr 30 Winter Range: 90 day deferrals TL up to 120 days	Summer Range: May 15 - Aug 15 Severe Winter Range: Jan 1 - Apr 30 Winter Range: 60 day deferrals TL up to 90 days
Acute Thresholds	10% deer seasonal ranges 5% severe winter range/winter conc. area	25% deer seasonal ranges 10% severe winter range/winter conc. area
Collective Thresholds	20% deer seasonal ranges 10% severe winter range/winter conc. area	25% deer seasonal ranges 20% severe winter range/winter conc. area
Buffers	660 ft on winter ranges 1,300 ft on summer ranges	660 ft on all seasonal ranges



Threshold Concept Diagram

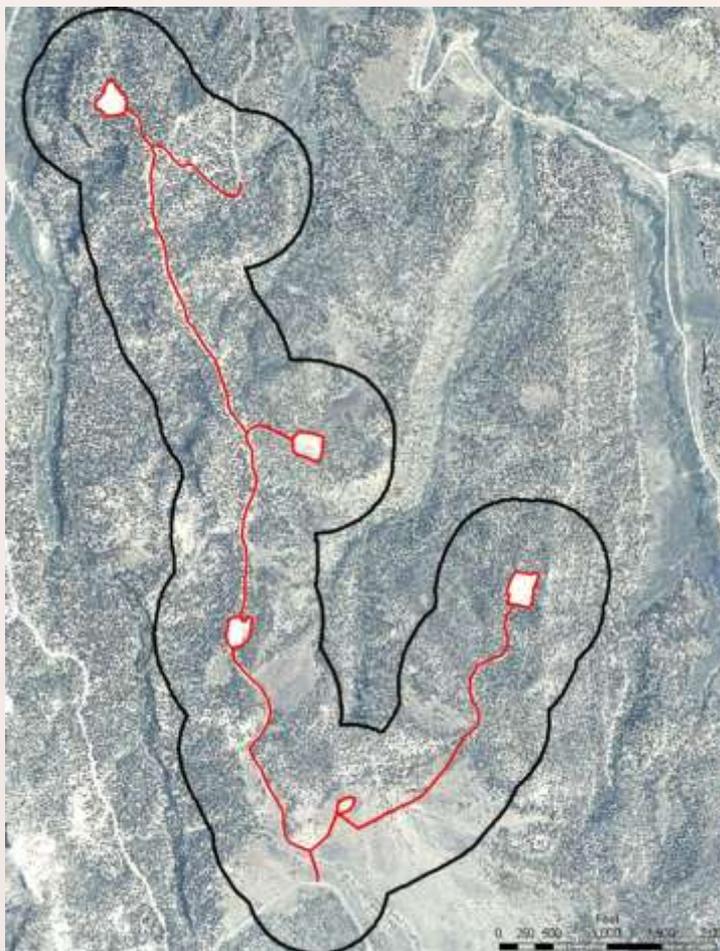
Thresholds applied by:

- 1) leaseholder
- 2) GMU
- 3) seasonal range





Example of Actual Well Pads and Access Roads with 660ft Buffer



WRFO Surface Reclamation Plan (Appendix D)

- Surface reclamation and/or stabilization of all disturbed areas
 - Interim reclamation: all areas not needed for production
 - Final abandonment of the location

- Plan Includes:
 - Timeframe
 - Success criteria
 - Seeding methods



Data Management System (DMS)

Jonah Infill Data Management System

Location Entry Page: CAB 11-19

Navigation:

- Summary
- Status Reports
- Spatial Reports
- Photographs
- Airport
- Anadarko
- Compressor Station
- Ridgier
- Compressor Station
- CAB 11-19
- CAB 11-25
- CAB 11-30
- CAB 12-19

Downloads:

- ESRI Shapefile
- Microsoft Excel

Location Status:

Type: Well Pad
 Status: Rollover Not Met
 Latest Seeding: 10/01/2007 (A)
 Latest Quantitative Report: 05/24/2010
 Latest Qualitative Report: 06/19/2011
 Latest Spatial Report: 12/21/2009
 Disturbed Acreage: 4.88 acres
 Reclamation: 4.06 acres

Most Recent Status Report:

Collection Date: 06/19/2011
 Collection Method:
 Reviewed By BLM: No

Qualitative:

Is seed germination apparent?	Yes	✓
Is the area free of undesirable materials (trash, construction materials, liquids, etc)?	Yes	✓
Is the soil stable with no indications of subsidence, slumping and/or significant erosion?	Yes	✓
Are other undesirable species absent?	Yes	✓
Is there evidence of good reproductive capability?	No	⊘
<i>Explanation: Grass reprod forbs only</i>		
Are noxious weeds absent?	Yes	✓
Stage of Reclamation:	Stage 2	
Stage Regressed:	No	✓

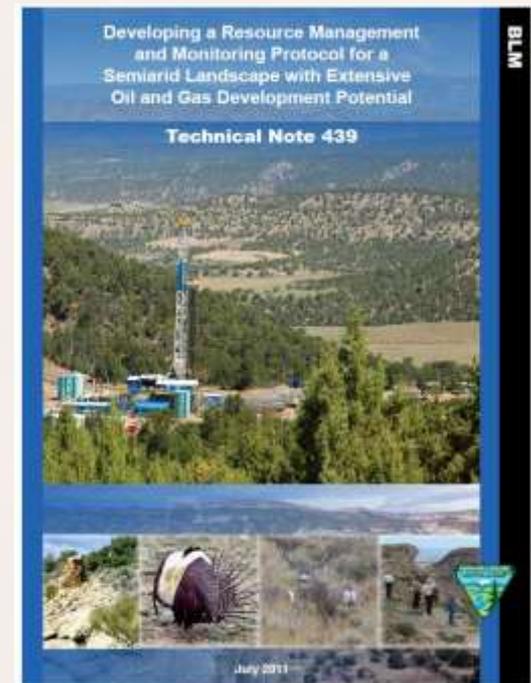
Most Recent Photographs:

Close-up 07/10/2010	East 07/10/2010	North 07/10/2010
South 07/10/2010	West 07/10/2010	

- Input by both Industry and BLM
- Available for the public to view online

Resource Management & Monitoring Protocol (RMMP)

- Not a decision making tool but is a means to inform decisions and to measure effectiveness of management decisions
- A framework for considering all other resource-specific monitoring (e.g., air & water)
- Dynamic and both metrics & protocols can be change without additional NEPA
- BLM Technical Note 439



Greater Sage-Grouse



- GRSG EIS NOI Published in December 2011
- WRFO Oil & Gas Draft RMPA/EIS will be the first land use plan document in CO available for public review since the NOI was published
- Added GRSG NTT Report Alternative as an Alternative Considered but Not Carried Forward for Detailed Analysis
 - Oil & Gas RMPA considers management of sage-grouse as it relates to management of oil and gas development
 - GRSG NTT Report includes guidance for a wide range of programs including travel management, recreation, lands and realty, range, wild horses, soild minerals, locatable minerals, salable minerals, vegetation treatments, and fire management
 - Programs other than oil and gas development are outside of the scope of the Oil & Gas Development RMPA

Greater Sage-Grouse



Alternative C (Preferred Alternative):

- Defer leasing on 96,100 acres on Blue Mountain
 - Only core area in WRFO per 2008 Statewide Conservation Plan
- CSU within 0.6 mi of leks
- Thresholds for GRSG timing limitations
 - Meeker and Northwest Colorado Populations have lower thresholds than the Piceance-Parachute-Roan (PPR) Population

Alternative B:

- PPR Population to have same (lower) thresholds as the other populations
- NSO within 0.6 mi of leks
- Defer leasing on Blue Mountain
- Surface disturbance cap of 2 percent
- Increase timing limitations by a month for both winter and nesting habitat

Fluid Minerals

- Concentrated Development Plans
 - would be required for all oil and gas activities (Alt B, C, D)
 - Important that unit agreements to best conform to the objectives of the CDP (Alt B and C)

- Section 17 or Section 39 MLA lease suspensions (Alt B and C)
 - when in the interest of conservation of natural resources
 - prevented from operating by matters beyond reasonable control
 - applied to Development Exclusion Areas cooperatively identified by BLM, CPW, and the operator





Air Quality

- Criteria Pollutants Relevant to Oil & Gas Development (NAAQS & CAAQS)
 - Carbon Monoxide (CO)
 - Nitrogen Dioxide (NO₂)
 - Ozone (O₃)
 - Particulate Matter (PM_{2.5} and PM₁₀)
- Other Considerations
 - Visibility
 - Nitrogen & Sulfur Deposition
 - Lake Acid Neutralizing Capacity
 - Hazardous Air Pollutants

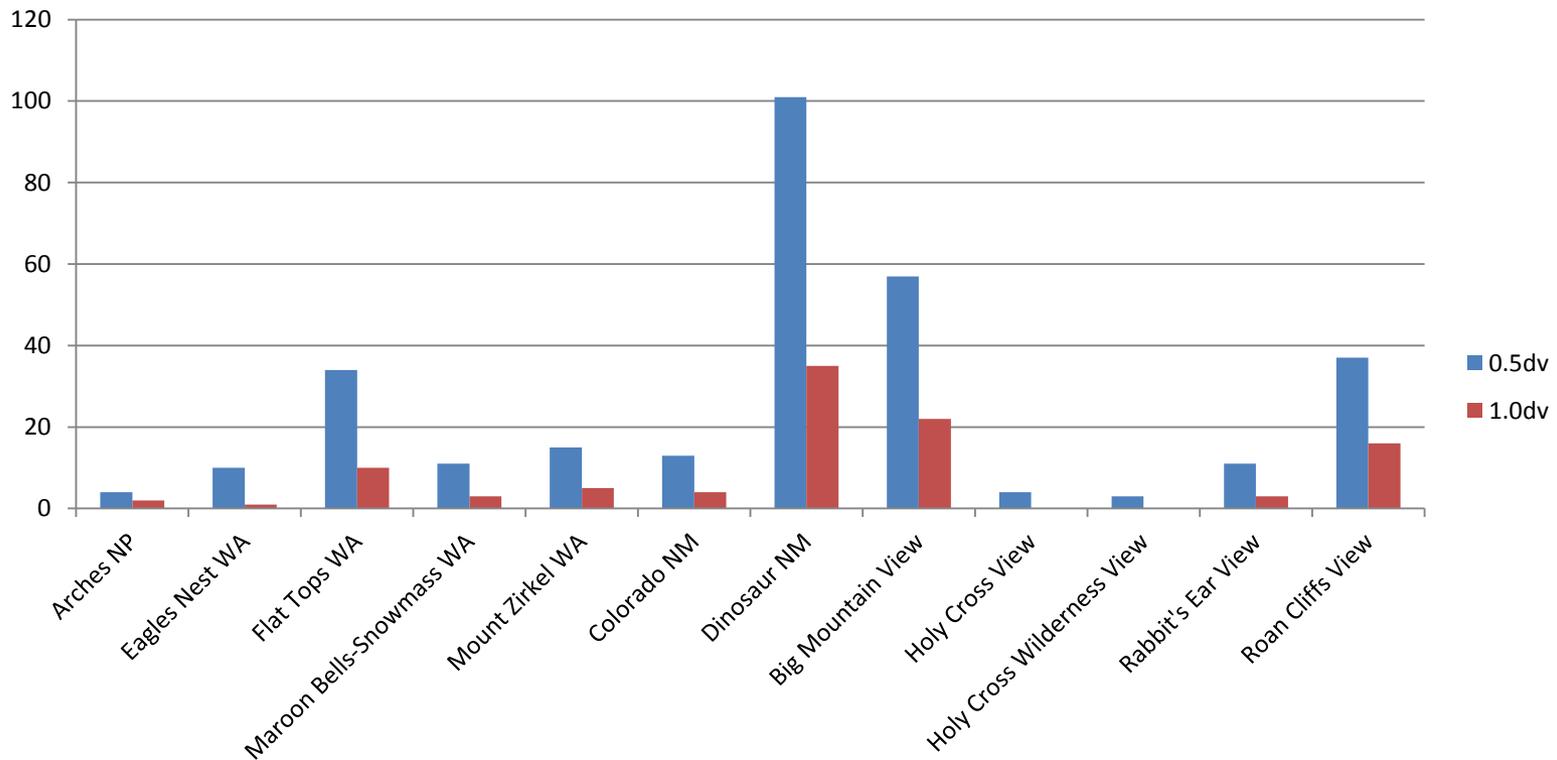
Air Quality

- **No potential project impacts** above NAAQS (under all alternatives) for any criteria pollutants
- **Potential cumulative impacts** above the NAAQS (under all alternatives) for:
 - NO₂ (1 hour)
 - PM_{2.5} (24 hour and annual)
 - PM₁₀ (24 hour and annual)



Alternative C – Visibility Impacts (Project)

Maximum Number of Days with Visibility Change



Examples of Visibility – Grand Canyon National Park

Excellent Visibility (0 deciviews)



Good Visibility (5 deciviews)



Poor Visibility (13 deciviews)



Bad Visibility (22 deciviews)



Alternative C – Deposition, Lake Chemistry, and HAPs

- Deposition rates below Levels of Concern (LOC) at modeled Class I and sensitive Class II areas
 - Nitrogen Deposition: 50-90% of LOC
 - Sulfur Deposition: 13-17% of LOC
- Lake Acid Neutralizing Capacity changes would be below the Limit of Acceptable Change at all seven modeled lakes
- Hazardous air pollutant (HAP) concentrations would be below health-based standards

Soil & Water Resources

Source Water Protection (Public Drinking Water Supply)

- Surface water: Rangely (Lease Notice)
- Groundwater Wells: Meeker, Dinosaur, Dinosaur NM Headquarters, and Massadona (NSO within ½ mile of wells)
- Additional protection (NSO) for the primary protection area for Meeker's primary aquifer

Other Management for Soil and Water Resources

Landslide Areas	NSO within 50 ft
Saline Soils	NSO (except Coal Oil Basin)
Slopes	35-50%: CSU; >50%: NSO
Water Features	CSU within 100 yr floodplain; 500 ft of perennial water, springs, wells, and wetlands (but NSO for impaired stream segments in MPA); 100 ft of ephemeral channels



Special Status Plants



- Federally Listed, Proposed, and Candidate Plants
 - NSO within 660 ft of occupied and suitable habitat
 - NSO within potential habitat
- BLM Sensitive Plants
 - NSO within 330 ft of occupied and suitable habitat
- Rights-of-ways
 - Exclusion areas: occupied habitat of listed plants
 - Avoidance areas: suitable and potential habitat for listed and candidate plants

Cultural Resources

Cultural Resource Project Plan

- Canyon Pintado NHD
- Dragon Trail/Douglas Arch

ROW Avoidance Areas & Stipulations

- Texas-Missouri-Evacuation Creek (CSU)
- Canyon Pintado NHD
- Duck Creek Wickiup Village (NSO)
- Thornburgh/Battle of Milk Creek Viewshed (CSU)
- Mellen Hill (NSO)
- Within 500 to 1,000 ft of rock art or standing architecture such as cabins, rock structures, or standing wickiups (CSU)





Recreation

- White River Extensive Recreation Mgmt. Area (no SRMAs)
- Maintain opportunities for recreation near communities

	A	B	C	D
Management Emphasis Areas	No similar action.	NSO on Anderson Gulch, LO7 Hill, and 3 Mile Gulch (7,700 ac)	CSU on Anderson Gulch, LO7 Hill, and 3 Mile Gulch (7,700 ac)	NSO on Anderson Gulch and LO7 (6,200 ac)



JB Foster

Lands with Wilderness Characteristics

- All Potential LWC polygons
 - $\geq 5,000$ acres with no visible intrusions (e.g., roads, facilities, etc)
 - Assume have characteristics until on-the-ground inventory completed
 - When possible, roads maintained as primitive road or two-track.
 - Lease Notice regarding efforts to maintain naturalness, outstanding opportunities for solitude, and outstanding opportunities for primitive and unconfined recreation
 - Vegetative screening and contouring.
 - Additional siting considerations to minimize visual impacts.

- Identified for retention of their resource values if $\geq 5,000$ acres and $\leq 20\%$ encumbered by leases set to expire by 2016
 - Estimate 15 out of 30 polygons to meet this criteria (still need inventory)
 - Avoidance Areas for ROWs under Preferred Alternative
 - Alt. B: Exclusion Areas for ROWs and NSO Stipulations

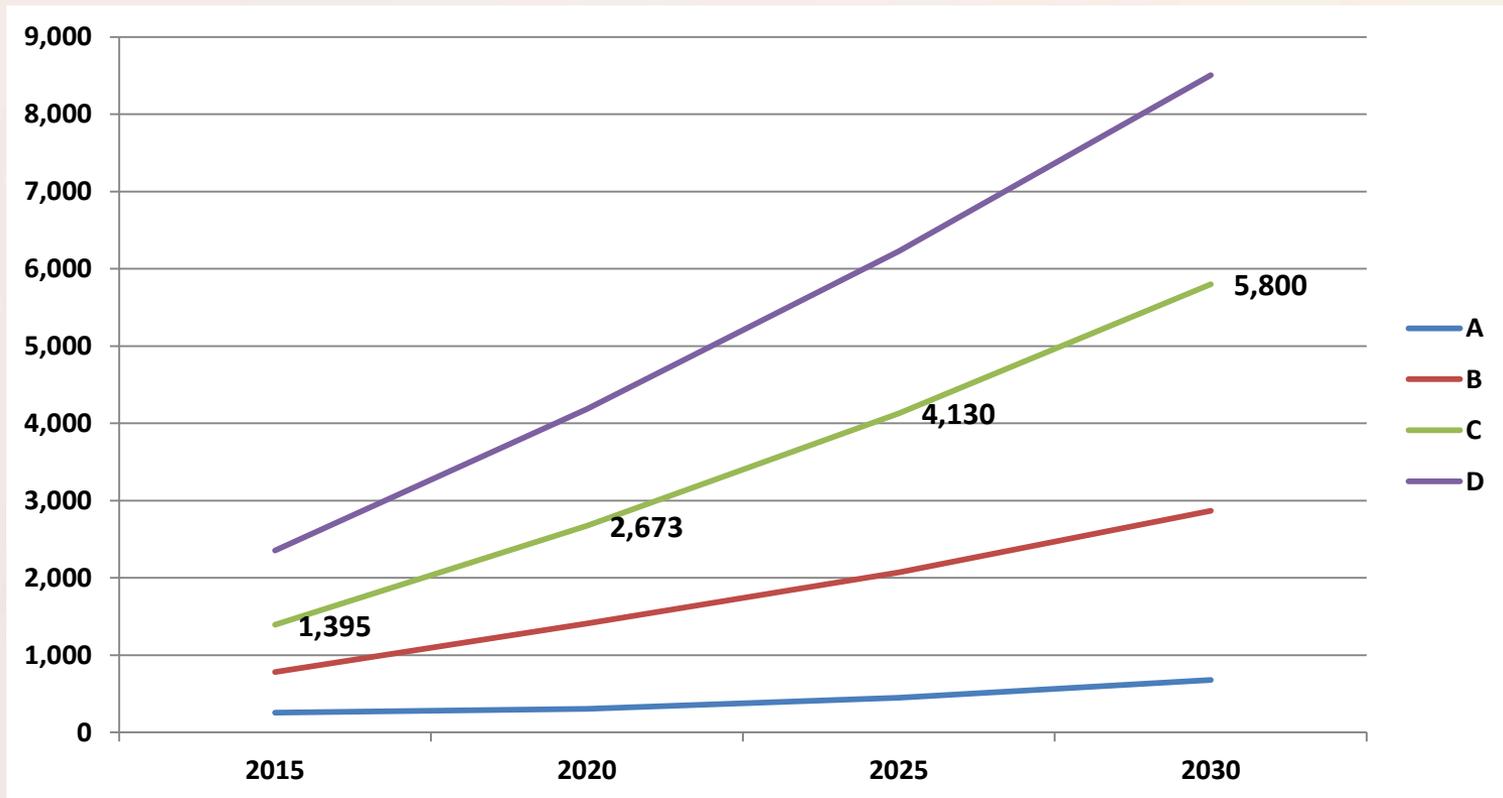
Livestock Grazing (Alt C)

- Recommend compensatory mitigation by oil & gas operators when development precludes effective implementation of a grazing plan
- Close affected allotments or portions of allotments (pastures) throughout period of intensive activity if development increases to a level where the two activities are incompatible
- Exclude livestock from development sites until reclamation vegetation is successfully established (minimum of 3 growing seasons)
 - On all well pads & related surface disturbance
 - When deemed necessary on linear ROWs



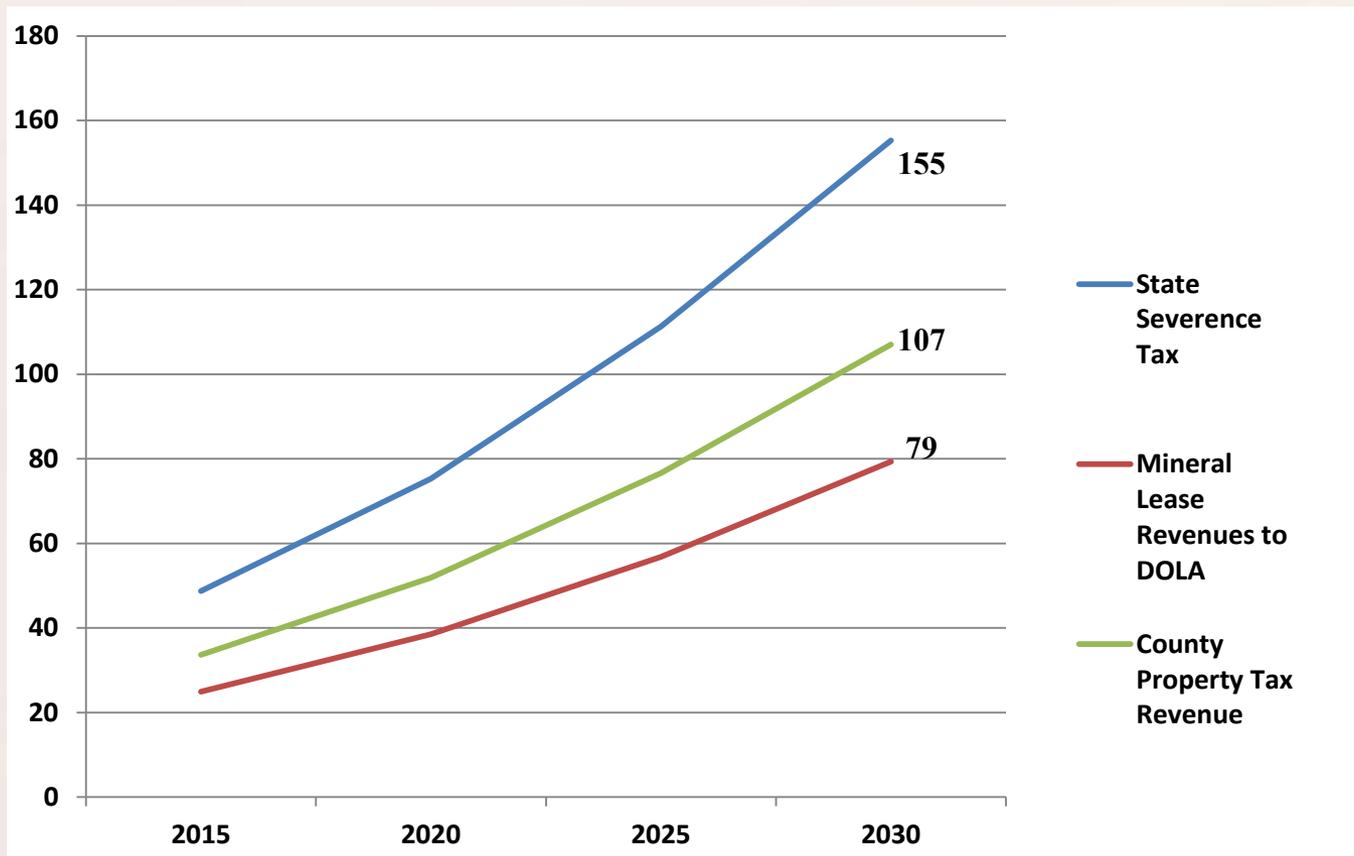


Population Growth PSSA



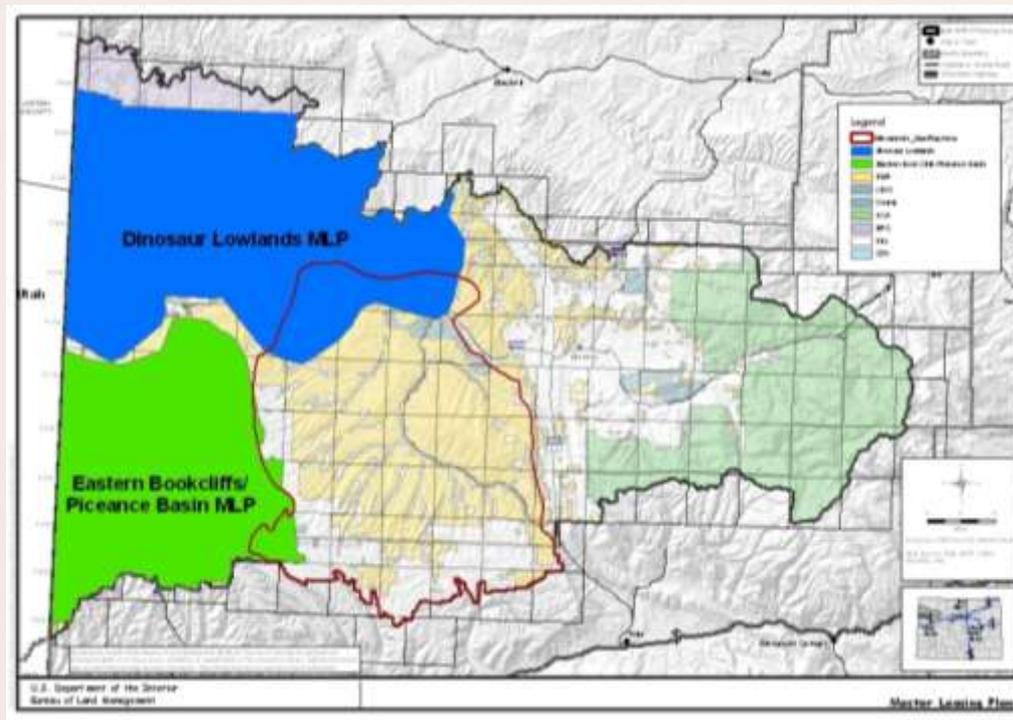


Alternative C – Energy-Associated Revenue Projections (\$ in Millions)



Master Leasing Plans

- Dinosaur Lowlands & Eastern Bookcliffs/Piceance Basin MLPs
- Addressed in Appendix I
- RMPA is an MLP analysis so not carrying these MLPs forward



Document Navigation

- Chapter 1 – Purpose & Need
- Chapter 2 – Alternatives
- Chapter 3 – Affected Environment
- Chapter 4 – Environmental Consequences
- Chapter 5 – Consultation and Coordination
- Chapter 6 – References (Acronym List & Glossary)
- ***Appendix A – Oil and Gas Leasing Stipulations & Lease Notices***
- Appendix B – BMPs and COAs
- Appendix C – Hazardous Materials Management Plan
- ***Appendix D – Surface Reclamation Plan***
- Appendix E – Threshold and Temporal Analysis
- Appendix F – Air Quality Impacts
- Appendix G – Socioeconomic Technical Report
- ***Appendix H – Oil and Gas Operations***
- Appendix I – Master Leasing Plans
- Appendix J – Air Resources Management Plan



How to Comment

- 90-day comment period beginning Sept. 7, 2012
- email: Colorado_WROGEIS@blm.gov
- fax: 970-878-3805
- mail: BLM – WRFO, 220 East Market Street,
Meeker, Colorado, 81641

Before including your address, phone number, email address, or other personal identifying information in your comment, you should be aware that your entire comment - including your personal identifying information - may be made publicly available at any time. While you can ask us in your comment to withhold your personal identifying information from public review, we cannot guarantee that we will be able to do so.



Public Meetings

- Rio Blanco County Lunch-n-Learn: 9/20 from Noon-1pm
- Meeker (Fairgrounds): 9/24 from 4-7pm
- Rangely (CNCC): 9/25 from 4-7pm
- Silt (CRVFO): 9/26 from 4-7pm
- Grand Junction (Clarion Inn): 9/27 from 4-7pm

Contact Information

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- (559) 920-7716

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- hsauls@blm.gov
- (970) 878-3855

Questions?