

Rapid Ecoregional Assessments: Opportunities for Development, Restoration, and Conservation



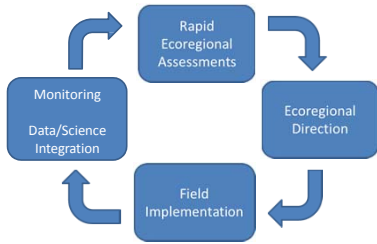
Climate Change Vulnerability Assessment Training
June 29, 2015 - Janine Book, BLM



Landscape Approach (why?)

BLM
Rapid Ecoregional Assessment

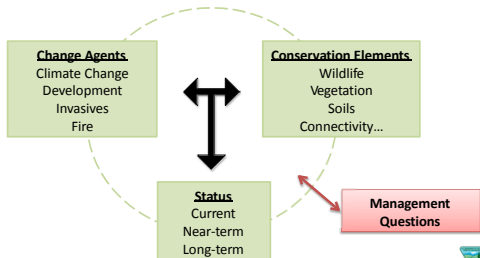
- Components of BLM's Landscape Approach:



What is an REA?


BLM
Rapid Ecoregional Assessment

An REA is a rapid assessment of an ecoregion's conservation elements, the change agents that impact them, and their current and future status.




What is an REA?

- REAs geospatially describe the location of “conservation elements” potentially vulnerable to “change agents” in the future:
 - Vegetation communities vulnerable to change agents
 - Aquatic and terrestrial species and high biodiversity sites vulnerable to change agents
 - Distribution of dominant native plant and invasive species change as a result changes in temperature and precipitation




What is an REA?

- REAs highlight and map areas of high ecological value, and gauge potential risks to those areas from climate change, wildfires, invasive species, energy development, and urban growth.
- REAs are limited to currently available information and existing data – no new research, inventory, or monitoring – hence “rapid” (when?)
- REAs are targeted toward addressing specific management questions



What REAs Do and Don't Do



- REAs do not allocate resource uses or make management decisions.
- REAs provide science based information and tools for land managers and stakeholders to consider in subsequent resource planning and decision-making processes.



BLM
Rapid Ecoregional Assessment

REA Breakdown (what?)

- Conservation Elements
 - Representative ecological systems
 - Vulnerable species assemblages
 - Vulnerable landscape species habitats
- Change agents
 - Wildland fire effects
 - Development effects
 - Invasive species effects
 - Climate change effects
- Management Questions
 - Assess current ecological integrity
 - Change effects near-term (5 to 20 years)
 - Climate change effects near-term and long-term (possibly 15 and 50 years)

BLM
Rapid Ecoregional Assessment

Conservation Elements


- In other Words:
 - Native Fish, Wildlife, or Plants of Regional Concern
 - Regionally-Important Terrestrial Ecological Features, Functions, or Services
 - Regionally-Important Aquatic Ecological Features, Functions, or Services



BLM
Rapid Ecoregional Assessment

Change Agents


- Will identify:
 - Areas that have been changed by wildfire or with potential to change from fire
 - Areas that are developed, areas with planned development and areas with development potential.
 - Areas where invasives are or could be present and areas susceptible to invasion
 - Areas that are most susceptible to seasonal changes in temperature or precipitation as a result of changes in climate

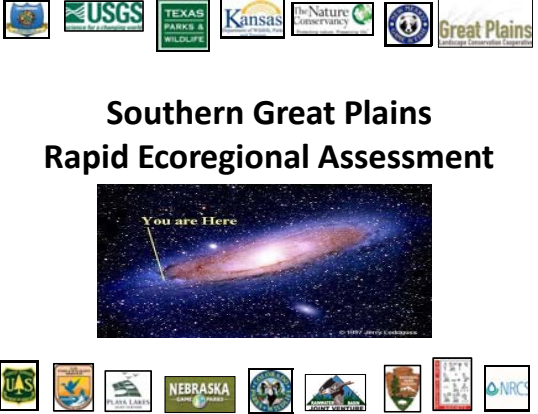


Management Questions


- Core Management Questions
 - Where are the CEs?
 - Where are the CAs?
 - Where do the CAs intersect with the CEs?
 - How do the CAs affect the spatial distribution of CEs?
- Integrated MQ Themes
 - Where are the priority areas?
 - Where are the potential areas for conservation?
 - Where are the potential areas for restoration/management?
 - Where do the CAs pose the greatest threats?

BLM
Rapid Ecoregional Assessment






**Southern Great Plains
Rapid Ecoregional Assessment**



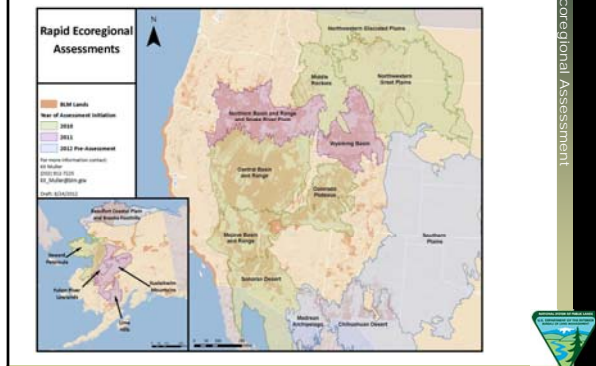
Choose your boundary wisely (where?)

- The EPA maintains a system of Level III Ecoregions as derived by Omernik (1987).
- These Ecoregions are areas with generally similar ecosystems and with similar types, qualities, and quantities of environmental resources.
- The Ecoregion boundaries were determined by examining patterns of vegetation, animal life, geology, soils, water quality, climate, and human land use, as well as other living and non-living ecosystem components.

BLM
Rapid Ecoregional Assessment

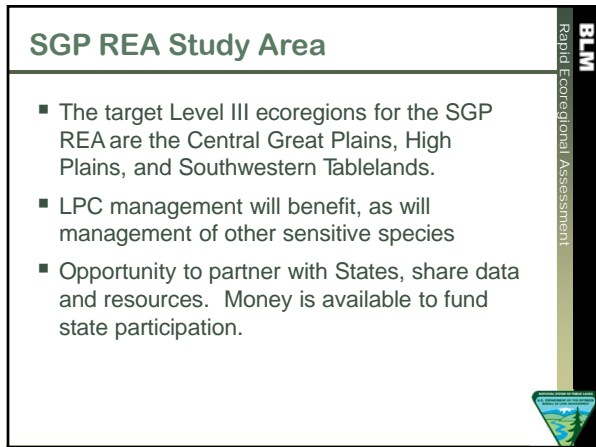


REAs Currently Underway

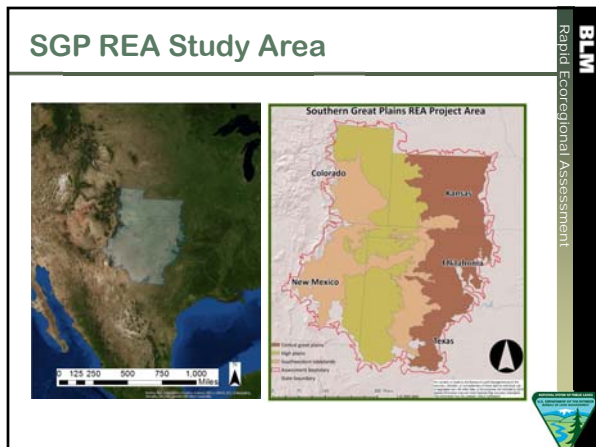


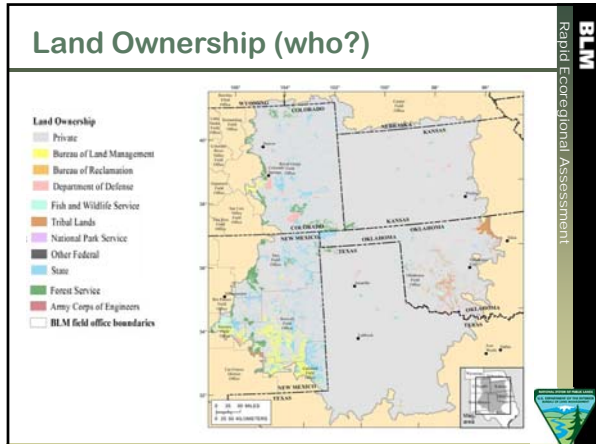
SGP REA Study Area

- The target Level III ecoregions for the SGP REA are the Central Great Plains, High Plains, and Southwestern Tablelands.
- LPC management will benefit, as will management of other sensitive species
- Opportunity to partner with States, share data and resources. Money is available to fund state participation.



SGP REA Study Area







Teams

- Assessment Management Team (AMT)
 - Composed of government managers - provides overall direction
- Technical Teams
 - Composed of technical specialists within the ecoregion
- Partners/Stakeholders:
 - LCCs
 - State & Federal Agencies
 - Others

BLM
Rapid Ecoregional Assessment

Process (how?)

- Identify Assessment Management Team, Technical Teams, Stakeholders, and Partners
- Identify Conservation Elements, Change Agents, and Management Questions
- Identify, Evaluate and Recommend Potential Datasets
- Identify, Evaluate and Recommend Models, Methods and Tools
- Conduct Analysis and Generate Findings
- Prepare REA Document



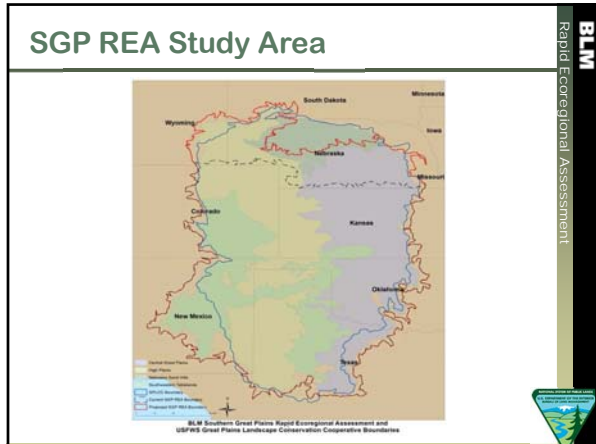
AMT Membership

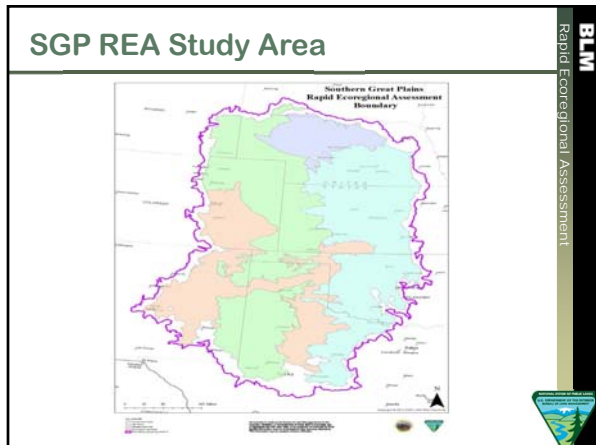


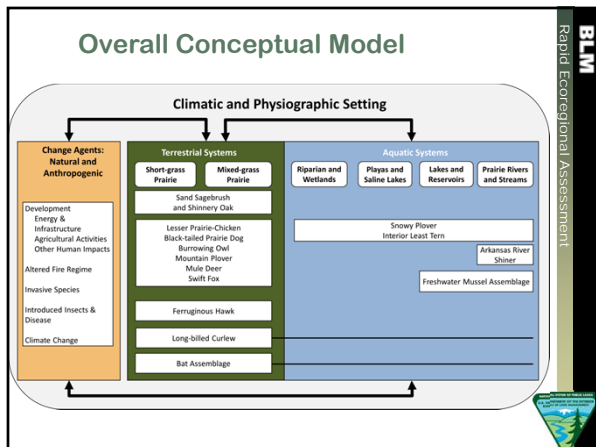
Stakeholders

- Interested parties where the REA will provide information/utility
 - Native American Tribes
 - State and Federal Agencies Beyond Partners
 - NGO State and Regional Offices
 - LCC Members
 - Conservation Districts
 - Cooperative Extensions and Universities
 - Interested Citizens









Example REA Product: Maps

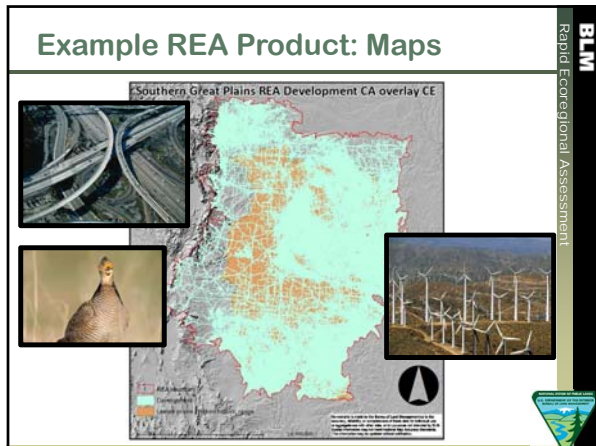
This map displays the Southern Great Plains REA Project Area, covering parts of Colorado, Kansas, Oklahoma, New Mexico, and Texas. A red line indicates the assessment boundary, while a dashed line shows the state boundary. An inset photograph shows a grassy field under a blue sky. The map includes a north arrow and a BLM logo.

Example REA Product: Maps

This map shows the Southern Great Plains REA Conservation Element, highlighted in orange. It covers a large portion of the project area. An inset photograph shows a prairie chicken. The map includes a north arrow and a BLM logo.

Example REA Product: Maps


This map illustrates the Southern Great Plains REA Change Agent, highlighted in cyan. It shows areas with infrastructure like highways and wind turbines. Two inset photographs show a highway interchange and a wind farm. The map includes a north arrow and a BLM logo.



- ### Management Issues – Short-grass Prairie
- Loss of short-grass prairie due to development
 - Degradation/alteration due to inappropriate grazing practices, invasive species, fire exclusion
 - Drought impacts on short-grass prairie
 - Climate change impacts on plant communities

Potential Management Questions

ID	Management Question	Below are initial responses to candidate user proposed questions on these 13 questions.	
		No added value probable	We should pursue
1	Kansas River Drainage	Reduced water flow and altered water quality, impacted by damming and impoundments.	Yes. Exclude only questions that look about AWS.
2	Black-tailed Prairie Dog	Does grazing/plague impact BTRF species?	Yes
3	Black-tailed Prairie Dog	Use of prairie ground, isolation	Yes
4	Lower Prairie-Chickens	What area exhibit local prairie habitat in terms of vegetation composition (seedling and brooding habitat)?	Yes
5	Lower Prairie-Chickens	Does ordinary oak control efforts overlap LPC habitat?	Yes
6	Lower Prairie-Chickens	What areas are under management operations in regions considered for the continued existence of habitat and viable populations? What degraded areas can be incorporated into management schemes to improve conditions?	Yes. The second part of habitat the first part is already assessed by the State Plan.
7	Mixed-grass Prairie	How are ordinary oak stands being impacted by herbicides?	Herbicide use is a management tool recently applied to oak stands here. It has not been used a different way in the past.
8	Mixed-grass Prairie	What are areas of occupied and suitable downy woodpecker habitat being protected by current management activities?	May be possible but only if the data is provided by the partners. May be too fine of a scale.
9	Mixed-grass Prairie	What are currently impacted downy woodpecker habitat areas with potential for recovery?	May be too fine of a scale.
10	Short-grass Prairie	What grazing alternatives can be targeted for large-scale modifications in short-grass prairie management?	Not a CE and too fine of a scale here.
11	Short-grass Prairie	What are high value CSP lands?	Yes
12	General CAs	What areas are available for energy development with limits on surface cap?	Wrong Scale
13	General CAs	What areas are available for energy development with limits on surface cap?	Problem in applying use in CE
14	Integrated MGS	What areas are the grass-ignition interface, including seasonal low areas?	Use of maps for MGS
15	Integrated MGS	What areas are the grass-ignition interface, including seasonal low areas?	Yes
16	Integrated MGS	What areas are the grass-ignition interface, including seasonal low areas?	Probably too ambitious of a question
17	Integrated MGS	What areas represent opportunities to acquire high quality habitat, through fee acquisition or other means?	Wrong Scale



Any Questions?
Contact - Janine Book, Project Manager
918-621-4183

