Using a Landscape Design Conservation Planning Process to Assess and Plan for Wind Energy Development in the Western Great Plains, USA.

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Playas
We grow:

- Wheat
- Corn
- Cotton
- Cattle

And provide lots of the rest:

- Wind
- Water
- Oil and Gas

"Bread Basket of America"
What Is Landscape Design?

Landscape design integrates societal goals and values with established biological conservation goals using science grounded in landscape ecology to describe future scenarios where specific and measurable biological goals can be attained.


(References: Lindemayer and Hobbs 2007; Lovell and Johnston 2009; Mussachio 2009; Nassuaer and Opdam 2008; Termorshuizen et al. 2007)
Current Landscape Pattern / Process
(e.g. pitted playas, cropland, grass, energy, etc.)

Drivers

At every step, spatially explicit models (e.g. HABS) relate the landscape to the goal

Future Landscape Pattern / Process
As informed by drivers (e.g. tillage, wind development, etc.)

Technical

MB & partners determine what drivers to include in planning (e.g. tillage, wind development, etc.)

GOAL
(population response, aquifer recharge, happy hunters, etc)

Mgmt. Board

Larger partnership executes the LCD

Conservation Opportunities

Conservation Partners

MB & partners set direction on programs to use (e.g. CP23a, SWG, mitigation funds, etc.) & where to apply

A Landscape Conservation Design
Landscape Design to avoid this...
But to achieve this...

- Help meet Department of Energy goal of 20% wind by 2030
- Provide at least 20% of the diet of migrating waterfowl from native seed sources
Driver: Wind Energy
Driver: Tillage Likelihood
Playa Availability by 2040
Thank You

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Great Plains LCC
Nebraska Game and Parks
USFWS

Advice:
Jeff Evans at TNC
www.pljv.org