

A Multi-Species Multi-Regional HCP for American Electric Power (AEP)

Natasha A. Brown
Environmental Solutions & Innovations
Cincinnati, OH

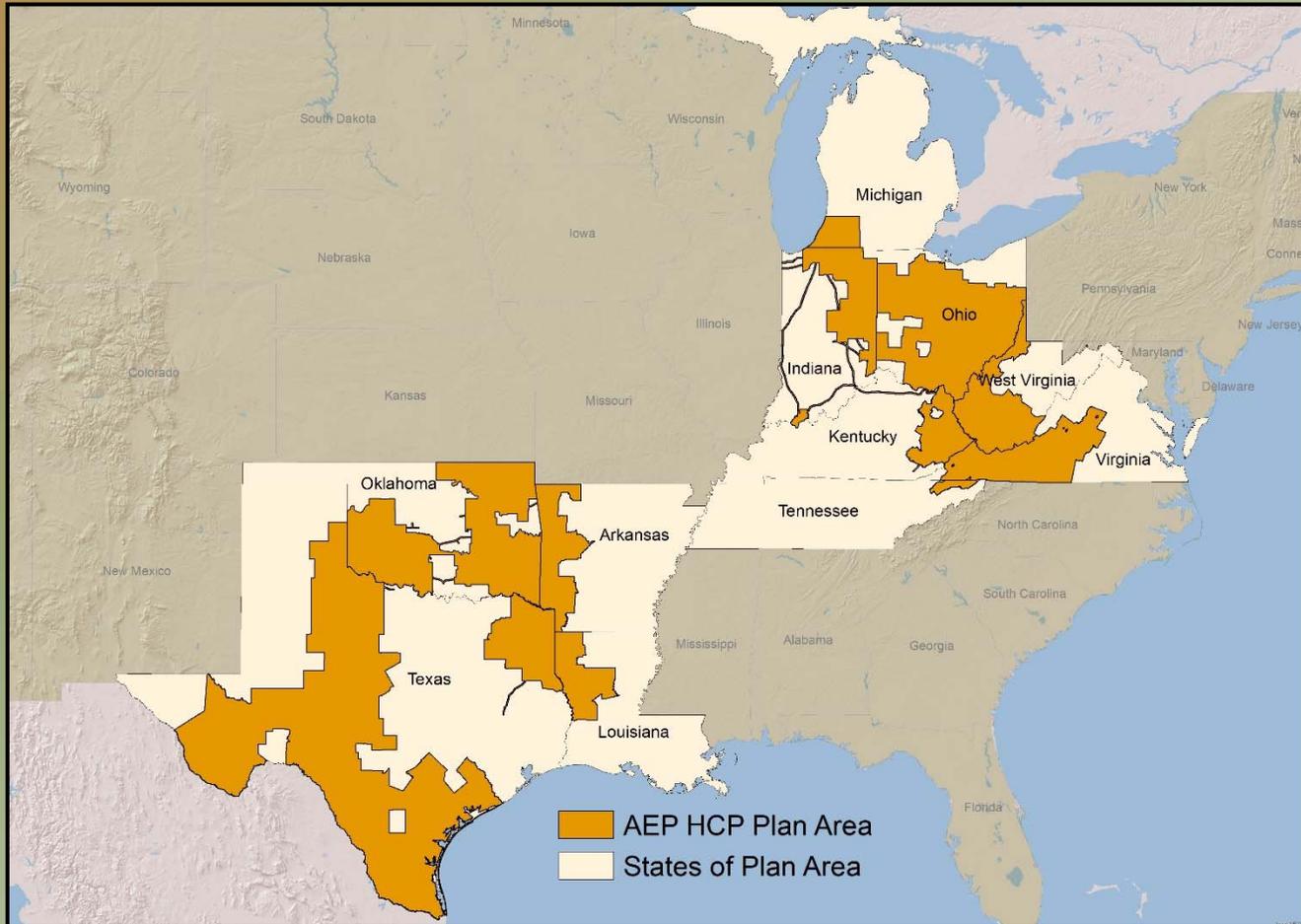


Environmental Solutions & Innovations, Inc.
ENVI.COM



Plan Area

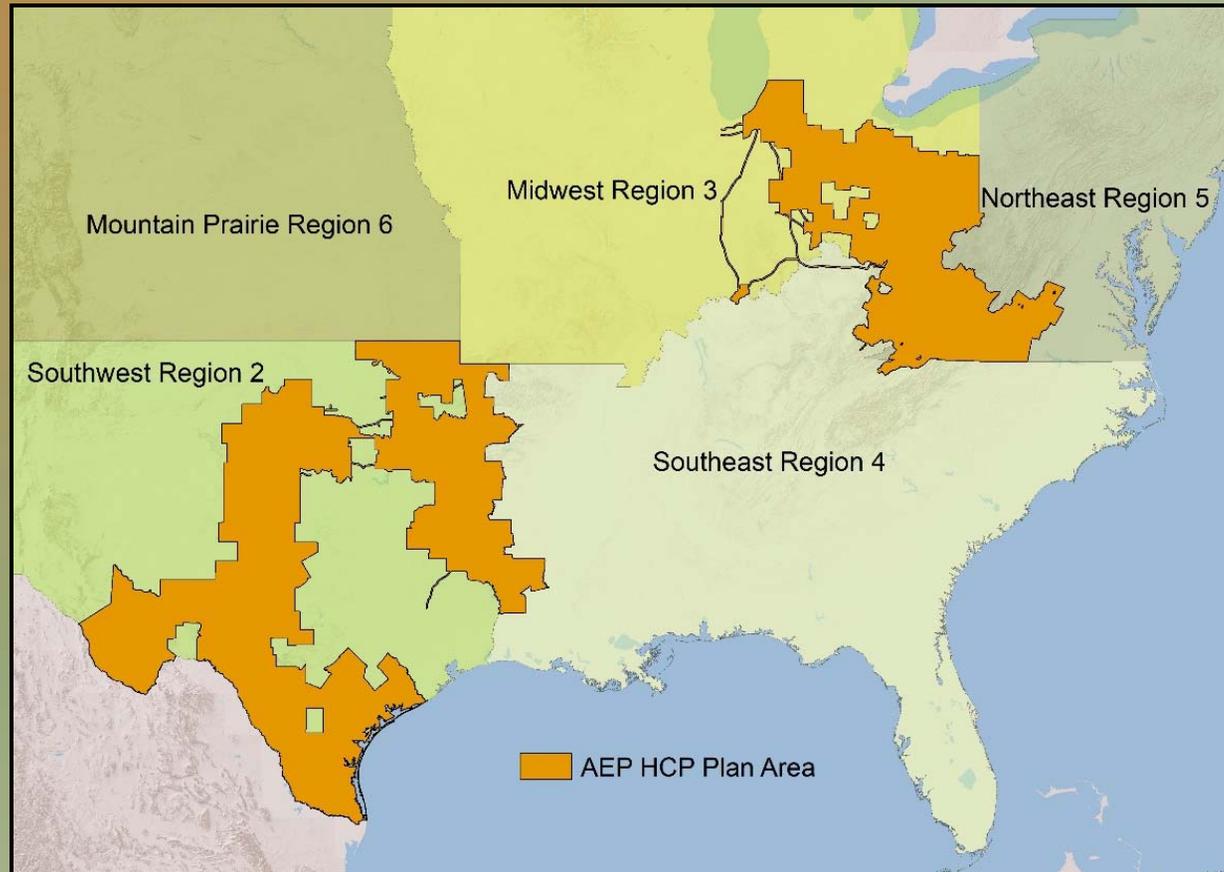
- AEP Works in 11 States



Environmental Solutions & Innovations, Inc.
ENVS.COM



Four FWS Regions



- Regions 2, 3, 4, and 5



Environmental Solutions & Innovations, Inc.
ENVS.COM



12 Covered Species

- Eastern Plan Area species
 - Eastern massasauga rattlesnake
 - Mitchell's satyr
 - Rusty-patched bumblebee



Environmental Solutions & Innovations, Inc.
ENVS.COM



12 Covered Species

- Western Plan Area species
 - Attwater's prairie chicken
 - Golden-cheeked warbler
 - Ozark big-eared bat
 - Red-cockaded woodpecker
 - Whooping crane



Credit: USFWS



Credit: Jim Hanula



Environmental Solutions & Innovations, Inc.
ENVS.COM



12 Covered Species

- Bat species spanning East and West Plan Areas
 - Indiana bat
 - Little brown bat
 - Northern long-eared bat
 - Tri-colored bat



Environmental Solutions & Innovations, Inc.
ENVS.COM



Changes to Covered Species

- Added Mitchell's satyr
- Originally planned on covering American burying beetle (covered by another HCP)
- Additional species considered



Environmental Solutions & Innovations, Inc.
ENVSI.COM



Species Distributions

- NatureServe species' locations
- FWS and state modeled habitat



- Consultation with species experts



- Internal ESI database and distribution



Environmental Solutions & Innovations, Inc.
ENVSI.COM



Predicting Future Build-Out

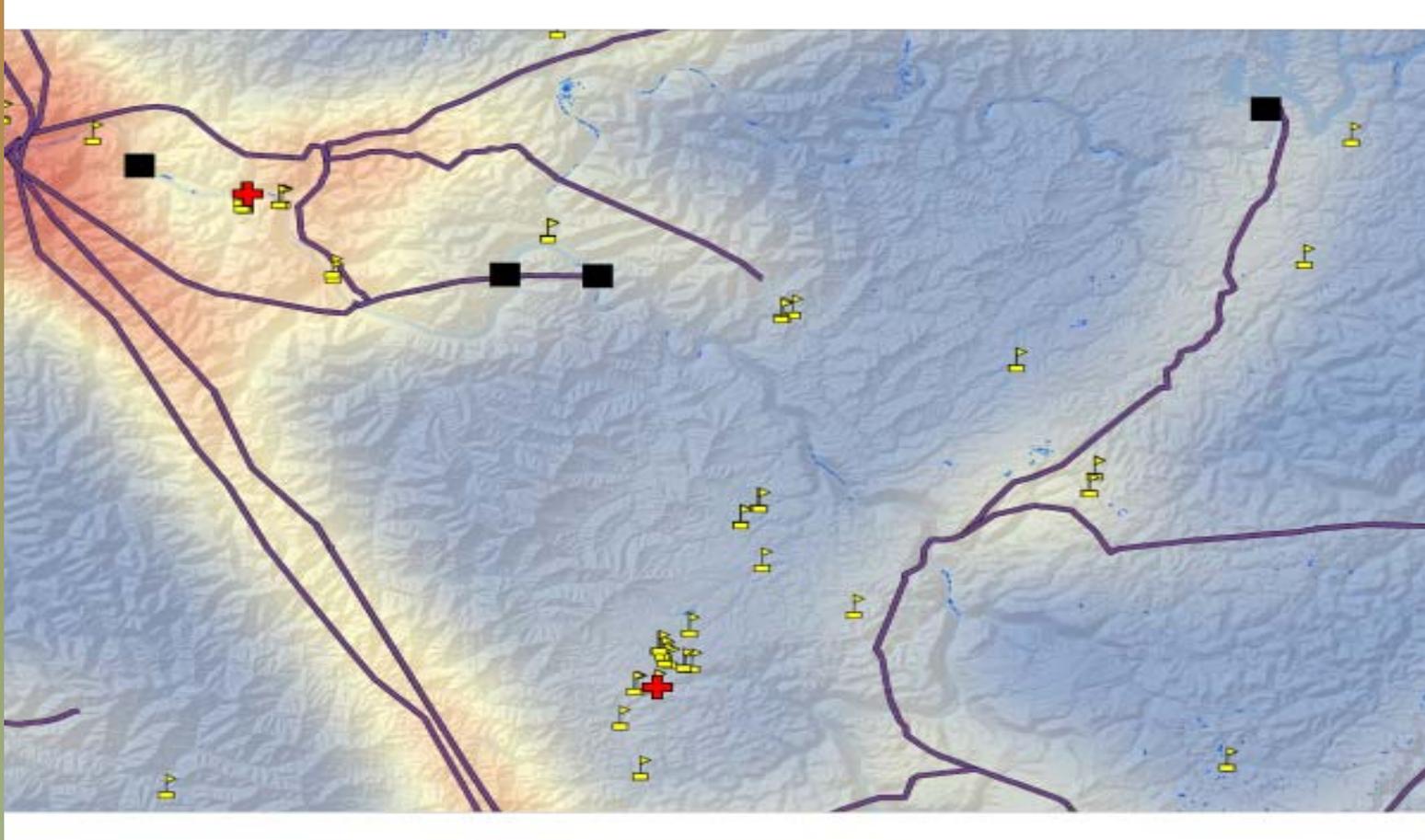
- Predict locations of new transmission lines and substations
- Explanatory variables
 - Environmental, industrial, and social variables
 - Compare to existing power lines to create probability of construction
 - Impact of variables assessed separately for each state
- Select locations for 30 years of construction based on probabilities



Environmental Solutions & Innovations, Inc.
ENVSI.COM



Predicting Future Build-Out



*Theoretical Example



Environmental Solutions & Innovations, Inc.
ENVS.COM

