



Bat Survey Guidance Update

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OVERVIEW

- How it Applies to Coal Projects?
- 2015 Summer Survey Guidance
- Next Steps for Survey Guidance

Application to Coal Projects

- The Indiana Bat Summer Survey Guidance only applies to coal projects when you are in suitable habitat with no previous occurrence records for Indiana bat &/or NLEB.
- If you are in known habitat for either species, you are required to enter into a Protection and Enhancement Plan (PEP).

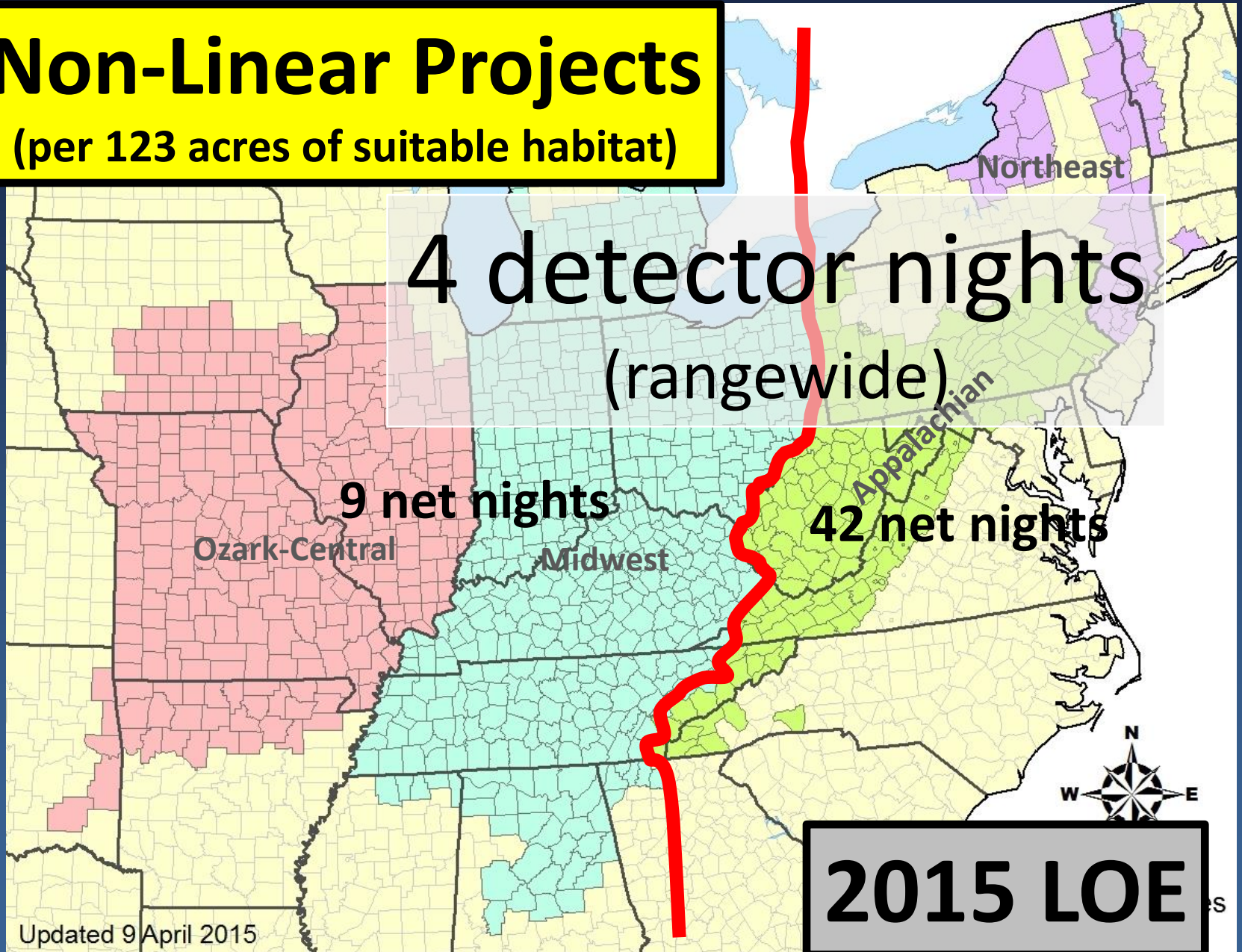
- ✓ In 2015, use Indiana bat summer protocols for NLEB surveys based on initial review of detection/occupancy rate data.

2015 Indiana Bat Summer Survey Guidelines: Same Phased Approach

1. **Initial Project Screening**
 - existing records search and habitat assessment
2. **Presence-Absence Surveys**
 - conduct mist netting **OR** acoustic surveys
3. **Follow-up Mist-netting Surveys (optional)** to capture any bats initially detected in Phase 2 surveys.
4. **Radio-tracking & Emergence Surveys**

Non-Linear Projects

(per 123 acres of suitable habitat)

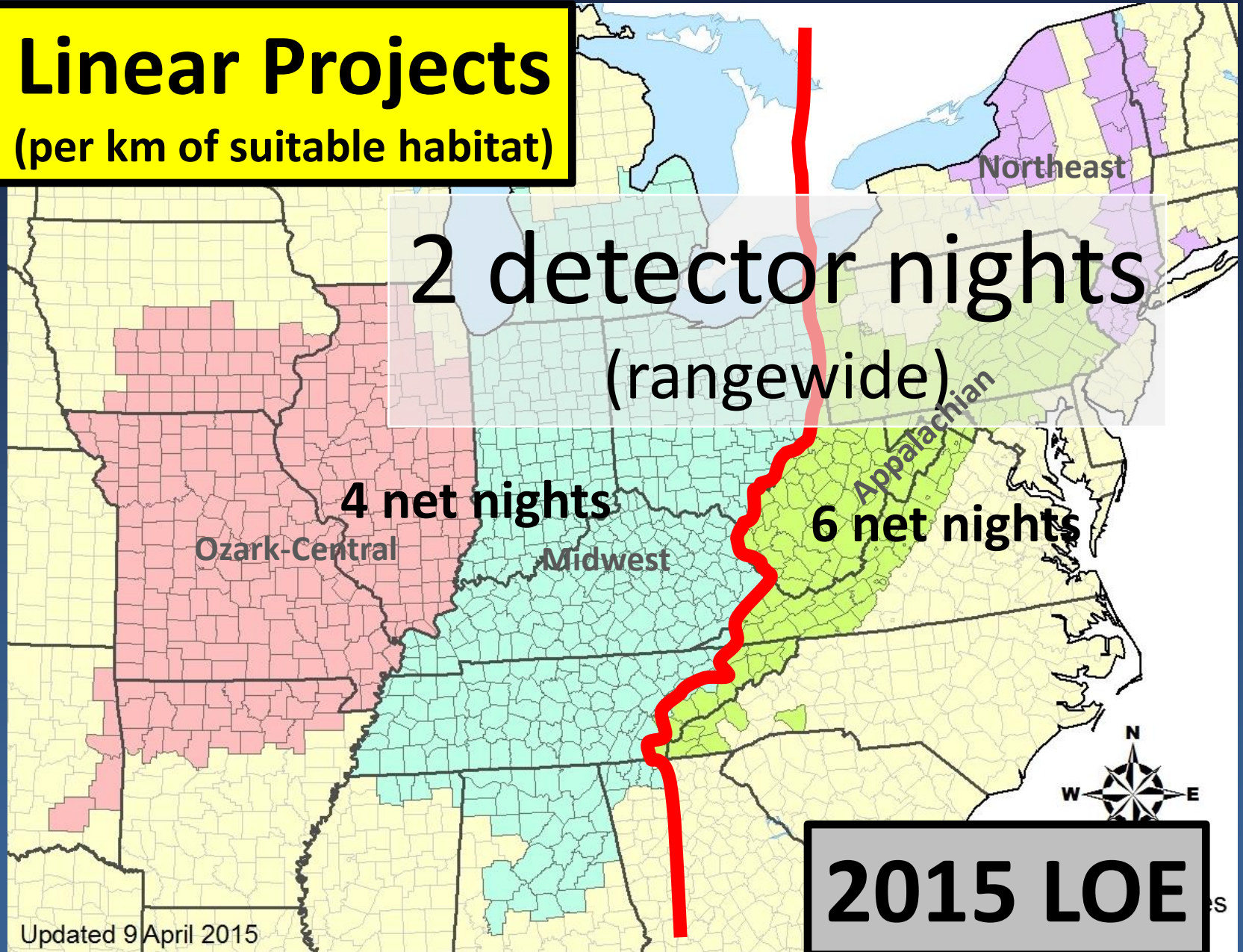


2015 LOE

Updated 9 April 2015

Linear Projects

(per km of suitable habitat)



Updated 9 April 2015

2015 LOE

Purpose of Survey Guidance

- To determine the presence or **likely** absence of focal species within a defined area.
 - Can be accomplished by using mist-netting or acoustics following the survey guidance provided
- Bats are not easy to capture/detect, thus no survey technique is going to give 100% accurate results on presence/absence.
 - The Service's evaluation of these two techniques along with analysis of data collected using each within known maternity colonies, documented that we can accurately determine presence/absence 90% of the time so long as the guidance is followed (E.g., quality sites are selected, LOE is adequate, and identification by qualified individuals or approved software versions).

Acoustic ID Software Testing

- USGS finalized development of standardized 3rd party test to assess the programs' ability to accurately identify MYSO & MYSE calls when included (and excluded) among a variety of other eastern bat species' calls (Dr. Mark Ford-lead)
- 3 software programs tested and approved for use:
 - BCID
 - Echoclass
 - Kaleidoscope Pro

Acoustic ID Software Testing

- 4th Program has been submitted for testing:
 - Sonobat (full-spectrum calls only)
 - Currently working with USGS and acoustic community to further develop and define full-spectrum call library
 - Will be testing Sonobat as soon as library and test datasets are ready
- Funding USGS to allow for testing of new versions of programs (annually)

Next Steps for Survey Guidance

- 2015:
 - Complete full-spectrum call library, test datasets, and test Sonobat
- Continue work with USGS on NLEB
 - Gather additional data (acoustic/netting)
 - Request and analyze survey reports
 - Estimate detection/occupancy rates (MYSO White Paper)
 - Calculate LOE and determine if NLEB Survey Guidance Team is needed based on results
- Only expect minor clarifications to MYSO guidance from now on
- Annual review of LOE triggers to switch MYSO RUs

Next Steps for Survey Guidance

- 2016 and Beyond:
 - Determine if current MYSO guidance is adequate for NLEB
 - Development of Post-WNS “Absence” Survey LOE
 - Areas where species was known but may no longer persist
 - Continue to evaluate other ways to improve detection of bats
 - Acoustic lures

For More Information on Summer Survey Guidance

<http://www.fws.gov/midwest/Endangered/mammals/inba/inbasummersurveyguidance.html>