



# LESSONS LEARNED

Headwaters Wind Farm  
Habitat Conservation Plan

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July 19, 2019





# AGENDA

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- Headwaters Wind Farm Overview
- Habitat Conservation Plan Timeline
- Lessons Learned



HEADWATERS  
WIND FARM

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A photograph of a wind turbine in a cornfield at sunset. The turbine is the central focus, with its three blades extending upwards. The foreground is filled with tall, golden-brown corn stalks. The sky is a mix of blue and orange, with wispy clouds. A dark grey horizontal band is overlaid across the middle of the image, containing the title text.

# HEADWATERS WIND FARM

*Overview*

# Headwaters Wind Farm

*Project and HCP Overview*

## INDIANA: Headwaters



Headwaters Wind Farm is located 70 miles east of Indianapolis along the Ohio border. Located entirely in Randolph County, the wind farm complements the area's sprawling corn and soybean fields, providing local farmers with a stable, drought-resistant cash crop in the form of landowner lease payments. Headwaters II Wind Farm is expected to be operational in 2020.

### Project Basics

Location: Randolph County, IN  
Capacity: 200 MW  
Turbines: 100 turbines, Vestas V110  
Commercial Operation: Dec 2014



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# Headwaters Wind Farm

## Project and HCP Overview

### HCP Basics:

#### Minimization

- Spring (April 1 – May 15) – 3.5 m/s
- Summer (May 16 – July 31) – 10 turbines at 5.0 m/s, remainder feathering below cut-in speed
- Fall (August 1 – October 15) – 5.0 m/s

*\*All from ½ hour before sunset to ½ hour after sunrise when temperatures are over 50F\**

#### Mitigation

- Amount based on Resource Equivalency Analysis (REA) model
- 10% stacking discount
- Cover 100% upfront

#### Monitoring

- First 3 years then every 6th year
- Design monitoring plan using Evidence of Absence,  $g = 0.25$



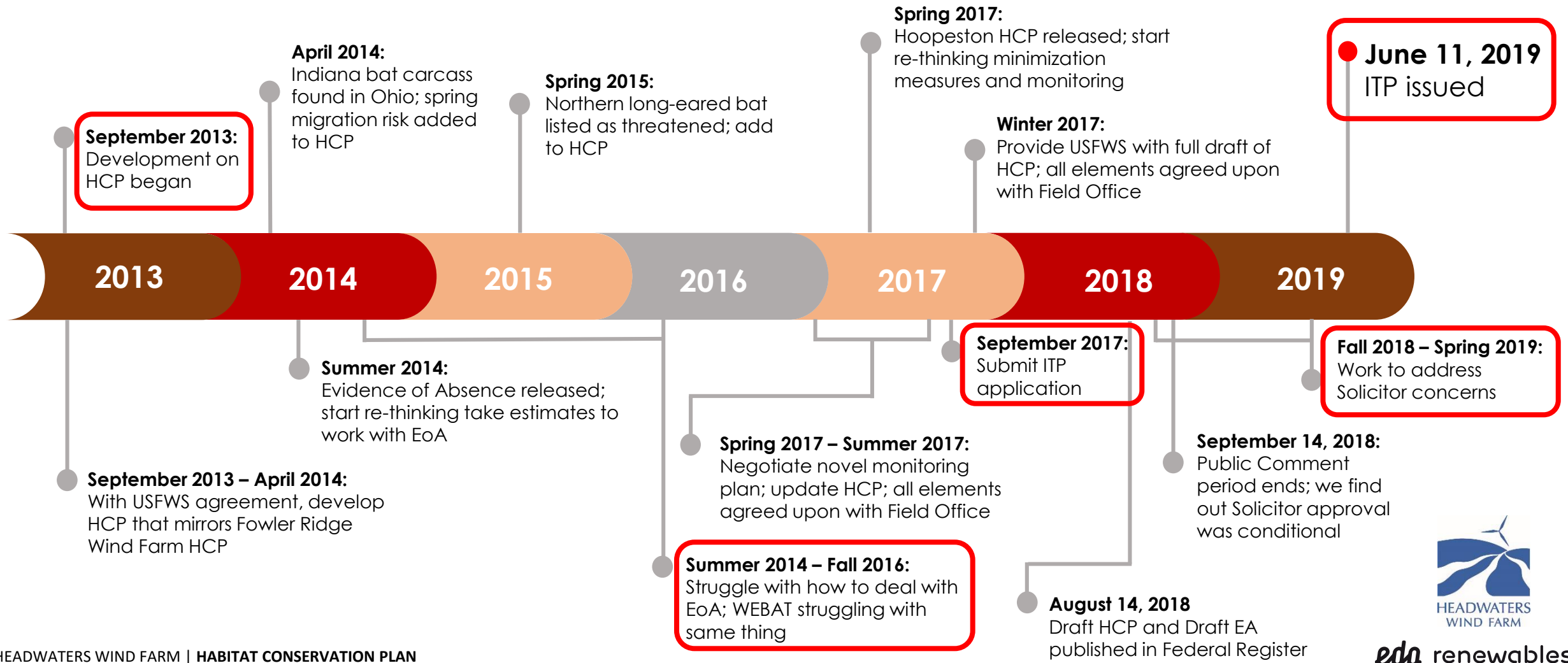


# HABITAT CONSERVATION PLAN

*Timeline*

# Habitat Conservation Plan

## Timeline



A photograph of an offshore wind farm with several white wind turbines in a row over the ocean. The sky is clear and blue. A dark horizontal band is overlaid across the middle of the image, containing the text.

# TOP 5 LESSONS LEARNED



# Lessons Learned

## #1 Communication with USFWS early and often



- Have kick-off call(s) with USFWS Field Office to establish working relationship
  - For example:  
Present expected schedule...  
... and know it will probably change  
Set up regular calls (bi-weekly worked well for us)
- Agree on Habitat Conservation Plan major items
  - For example: minimization
- Provide HCP to USFWS for review in chunks
  - Some sections aren't contentious  
Some sections require a lot of USFWS review and feedback
- Still working on how to engage USFWS Regional Office and Solicitor earlier/more effectively (see lesson #5)

# Lessons Learned

#2 Everything will take way longer than anticipated

Important to have a schedule to keep Applicant and USFWS on task...

... but Applicant can't control all timelines



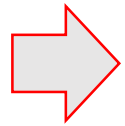
## Efforts to keep schedule on track:

- 1) Agree on review timelines (typically 30-45 days)
- 2) As the Applicant, set the example and be responsive, stick to timelines
- 3) Present/discuss novel ideas prior to presenting in HCP
- 4) COMMUNICATION!

# Lessons Learned

## #3 Think outside the box

- Things change through the development of an HCP that can increase the cost of the HCP or extend timelines
- Our Successes – Monitoring plan and using Evidence of Absence to predict take



*How did we achieve this?*

Need to understand what elements of the HCP the USFWS is willing to compromise on

- Be prepared to “bring a lot of rocks”



# Lessons Learned

## #4 Devil is in the details



- Major elements (minimization, adaptive management, monitoring, etc.) mostly agreed upon early in the process for Headwaters
- Process got held up with smaller items, for example:
  - Mitigation – how much detail to provide, timeline to implement after receipt of ITP
  - Funding assurances amount – how much detail to provide
  - Funding assurances mechanism – what type, duration to put in place after receipt of ITP
  - Changed circumstances – how much detail to provide
- Concerns came from Regional Office and/or Solicitor

# Lessons Learned

## #5 Solicitor/Regional Review



- Still working on this...
- We did not work with Region/Solicitor until HCP was “finalized” with Field Office
  - For other HCPS, we are trying to work with Region/Solicitor earlier in the process
- Underestimated number of comments from Solicitor- comments not all of a legal nature
- Elevating issues and lawyer-to-Solicitor conversations very important

# Contact Information



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# Questions?

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