Photograph 10:

Wetland 16-1 (Emergent/Forested Wetland)

Direction of view: South

Location of camera: Central portion of wetland

Date: October 22, 2013



Photograph 11:

Wetland 17-1 (Emergent Wetland)

<u>Direction of view:</u> West

Location of camera: Central portion of wetland

<u>Date:</u> October 22, 2013

Wetland 17-2 (Emergent/Forested Wetland)

Photograph 12:

Direction of view: West

Location of camera: Northern portion of wetland

<u>Date:</u> October 22, 2013

Photograph 13:

Wetland 18-1 (Forested Wetland)

Direction of view: West

Location of camera: Central portion of wetland

<u>Date:</u> October 22, 2013



Photograph 14:

Wetland 19-1 (Unconsolidated Bottom Wetland)

Direction of view: South

Location of camera: Central portion of wetland

Date: October 22, 2013

Photograph 15:

Wetland 20-1 (Emergent/Forested Wetland)

Direction of view: North

Location of camera: Central portion of wetland

<u>Date:</u> October 22, 2013

APPENDIX B ORAM FORMS

			Date.	October 22, 2013
etlands:	Wetland 16-1		Rater:	Dave Bell, Jim Brinson
1 1 ubtotal Points	Metric 1. Wetland Area (size). (m. Select one size class and assign score. >50 acres (>20.2ha) (6 pts) 25 to <50 acres (10.1 to <20.2h	ax 6 pts) na) (5 pts) (4 pts) pts) a) (2pts) 2ha) (1 pt)		
13 12 ptotal Points	Metric 2. Upland buffers and surr 2a. Calculate average buffer width (select or	ounding land use. (m	ax 14 pts)	
	X WIDE. Buffers average 50m (1 MEDIUM. Buffers average 25m NARROW. Buffers average 10 VERY NARROW. Buffers aver	64ft) or more around wetlar n to <50m (82 to <164ft) aro)m to <25m (32ft to <82ft) a 'age <10m (<32ft) around w	nd perimeter (7) und wetland perimeter (round wetland perimete etland perimeter (0)	4) (1)
	2b. Intensity of surrounding land use (select VERY LOW. 2nd growth or old X LOW. Old field (>10 years), sh MODERATELY HIGH. Residen HIGH. Urban, industrial, open	one or double check & aver ler forest, prairie, savannah, rubland, young second grow ntial, fenced pasture, park, c pasture, row cropping, minin	<u>age)</u> wildlife area, etc. (7) <i>i</i> th forest. (5) onservation tillage, new g, construction. (1)	fallow field. (3)
30 17	Metric 3. Hydrology. (max 30 pts)	30	l. Duration inundation/sa	aturation.
ototal Points	3a. Sources of Water. Score all that apply. High pH groundwater (5) Other groundwater (3) X Precipitation (1) Seasonal/Intermittent surface w X Perennial surface water (lake o 3b. Connectivity. Score all that apply. X 100 year floodplain (1) X Between stream/lake and other X Part of wetland/upland (e.g. form Part of riparian or upland corrid	vater (3) r stream) (5) - human use (1) est), complex (1) or (1)	(select one or double Semi- to perma Regularly inund X Seasonally inur Seasonally satu e. Modifications to nature (select one or double None or none a X Recovered (7) X Recovering (3) Recent or no re	check & average) nently inundated/saturated (4) lated/saturated (3) indated (2) irrated in upper 30cm (12in) (1) al hydrologic regime. check & average) apparent (12)
	3c. Maximum water depth. Select only 1. >0.7 (27.6in) (3) 0.4 to 0.7m (15.7 to 27.6in) (2) X <0.4m (<15.7in) (1)		Check all disturbar ditch [dike [tile [weir [stormwater input [nces observed point source (nonstormwater) filling/grading road bed/RR track dredging other- list
40 10	Metric 4. Habitat Alteration and E	Development. (max 2	0 pts.)	
uuuuai FUIIIIS	None or none apparent (4) X Recovered (3) X Recovering (2) Recent or no recovery (1)	аыне спеск али average. 4(Habitat alteration. Sco None or none a X Recovered (6) X Recovering (3) 	pre one or double check and average. apparent (9)
	4b. Habitat development. Select one. Excellent (7) Very good (6)	Check all disturban	Recent or no re	covery (1)
	Moderately good (4) X Fair (3)	grazing clearcutting	herb	paceous/aquatic bed removal

Site: AEP Bix	by-Groves Rebuild	Date:	
Wetland:	Wetland 16-1	Rater:	Dave Bell, Jim Brinson

40	subtotal first page
40	Subiolal mist page

40	0	Metric 5. Special Wetlands. (max 10 pts.)
Subtotal	Points	Check all that apply and score as indicated

Check	all tha	t app	ly and	d score	as	indicated
		Bog (10 pt	s)		

- Fen (10 pts)
- Old Growth Forest (10 pts)
- Mature forested wetland (5 pts)
- Lake Erie coastal/tributary wetland-unrestricted hydrology (10 pts)
- Lake Erie coastal/tributary wetland-restricted hydrology (5 pts)
- Lake Plain Sand Prairies (Oak Openings) (10 pts)
 - Relict Wet Prairies (10 pts)
- Known occurrence state/federal threatened or endangered species (10)
- Significant migatory songbird/waterfowl habitat or usage (10 pts)
- Category 1 Wetland. See Question 1 of Qualitative Rating. (-10 pts)



Metric 6. Plant Communities, interspersion, microtopography. (max 20 pts.)

6a. Wetland Vegetation Communities Score all present using 0 to 3 scale

1

Vegetation Community Cover Scale

0	Absent or comprises <0.1 ha (0.2471 acres) contiguous area		
1	Present and either comprises small part of wetland's vegetation and is of moderate quality, or comprises a significant part but is of low quality		
2	Present and either comprises significant part of wetland's vegetation and is of moderate quality or comprises a small part and is of high quality		
3	Present and comprises significant part, or more, of wetland's vegetation and is of high quality		

6b. Horizontal (plan view) interspersion

Aquatic bed

Emergent Shrub Forest 1

> Mudflats Open water Other (list)



6c. Coverage of invasive plants. Refer to Table 1 ORAM long form for list.

Add or deduct points for coverage

X Absent (1)

Score all present using 0 to 3 scale

Narrative Description of Vegetation Quality

low	Low spp diversity and/or predominance of nonnative or disturbance tolerant native species
moderate	Native spp are dominant component of the vegetation, although nonnative and/or disturbance tolerant native spp can also be present, and species diversity moderate to moderately high, but generally w/o presence of rare threatened or endangered spp
high	A predominance of native species, with nonnative spp and/or disturbance tolerant native spp absent or virtually absent, and high spp diversity and often, but not always, the presence of rare, threatened, or endangered spp

Mudflat and Open Water Class Quality

0	Absent <0.1 ha (0.2471 acres)
1	Low 0.1 ha to <1 ha (0.2471 acres to 2.47 acres)
2	Moderate 1 ha to <4 ha (2.47 acres 9.88 acres)
3	High 4 ha (9.88 acres) or more

Microtopography Cover Scale

0	Absent
1	Present very small amounts or if more common of marginal quality
2	Present in moderate amounts, but not of highest quality or in small amounts of highest quality
3	Present in moderate or greater amounts and of highest quality

Vegetated hummocks/tussocks

6d. Microtopography

1	Coarse woody debris >15 cm (6")
	Standing dead > 25 cm (10") dbh
	Amphibian breeding pools

Extensive >75 % cover (-5) Moderate 25-75% cover (-3)

Sparse 5-25% cover (-1) Nearly Absent <5% cover (0)

Ite: AEP Bix	oy-Groves Rebuild	Date	Ctober 22, 2013
etlands:	Wetland 17-1	Rate	r: Dave Bell, Jim Brinson
2 2 btotal Points	Metric 1. Wetland Area (size). (max Select one size class and assign score. >50 acres (>20.2ha) (6 pts) 25 to <50 acres (10.1 to <20.2ha)	6 pts) (5 pts) pts)) 2pts)) (1 pt)	
4 <u>12</u>	Metric 2. Upland buffers and surrou	Inding land use. (max 14 p	its)
Iotal Points	Za. Calculate average buller width (select one, width (select one, width)) X WIDE. Buffers average 50m (164 MEDIUM. Buffers average 25m to NARROW. Buffers average 10m VERY NARROW. Buffers average 10m	tt) or more around wetland perime > <50m (82 to <164ft) around wetla to <25m (32ft to <82ft) around wetla e <10m (<32ft) around wetland per	ter (7) ind perimeter (4) tland perimeter (1) imeter (0)
	2b. Intensity of surrounding land use (select on VERY LOW. 2nd growth or older X LOW. Old field (>10 years), shrub MODERATELY HIGH. Residentia HIGH. Urban, industrial, open pase	e or double check & average) forest, prairie, savannah, wildlife ar land, young second growth forest. I, fenced pasture, park, conservati ture, row cropping, mining, constru	rea, etc. (7) (5) on tillage, new fallow field. (3) uction. (1)
2.5 18.5	Metric 3. Hydrology. (max 30 pts)	3d. Duration	n inundation/saturation.
btotal Points	3a. Sources of Water. Score all that apply. High pH groundwater (5) Other groundwater (3) X Precipitation (1) Seasonal/Intermittent surface water X Perennial surface water (lake or state)	(select X S X F er (3) S ream) (5)	one or double check & average) Semi- to permanently inundated/saturated (4) Regularly inundated/saturated (3) Seasonally inundated (2) Seasonally saturated in upper 30cm (12in) (1)
	3b. Connectivity. Score all that apply. X 100 year floodplain (1) X Between stream/lake and other hu X Part of wetland/upland (e.g. forest Part of riparian or upland corridor	3e. Modifica (select Iman use (1)), complex (1) (1)	ations to natural hydrologic regime. one or double check & average) None or none apparent (12) Recovered (7) Recovering (3) Recent or no recovery (1)
	3c. Maximum water depth. Select only 1. >0.7 (27.6in) (3) 0.4 to 0.7m (15.7 to 27.6in) (2) X <0.4m (<15.7in) (1)	Check ditch dike tile weir storm	all disturbances observed point source (nonstormwater) filling/grading road bed/RR track dredging vater input other- list
14.5 12 ubtotal Points	Metric 4. Habitat Alteration and Dev 4a. Substrate disturbance. Score one or doub None or none apparent (4) X Boomyored (2)	velopment. (max 20 pts.) le check and average.	alteration. Scorp and ar double aback and average
	X Recovering (2) Recent or no recovery (1)		None or none apparent (9) Recovered (6) Recovering (3)
	4b. Habitat development. Select one.	٩	Recent or no recovery (1)
	Very good (6) X Good (5) Moderately good (4)	Check all disturbances ob mowing grazing grazing	served shrub/sapling removal herbaceous/aquatic bed removal
	Poor to fair (2)	clearcutting selective cutting	sedimentation dredging

Site: AEP Bi	xby-Groves Rebuild	Date:	
Wetland:	Wetland 17-1	Rater:	Dave Bell, Jim Brinson

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44.5	0	Metric 5. Special Wetlands. (max 10 pts.)
Subtotal	Points	Check all that apply and score as indicated

K	all the	at apply and score as indicated
		Bog (10 pts)
		Fen (10 pts)
		Old Growth Forest (10 pts)
		Mature forested wetland (5 pts)
		Lake Erie coastal/tributary wetland-unrestricted hydrology (10 pts)

Lake Erie coastal/tributary wetland-restricted hydrology (5 pts)

Lake Plain Sand Prairies (Oak Openings) (10 pts)

Relict Wet Prairies (10 pts)

Known occurrence state/federal threatened or endangered species (10)

- Significant migatory songbird/waterfowl habitat or usage (10 pts)
- Category 1 Wetland. See Question 1 of Qualitative Rating. (-10 pts)

50.5	6	
Subtotal	Points	

Metric 6. Plant Communities, interspersion, microtopography. (max 20 pts.)

6a. Wetland Vegetation Communities Score all present using 0 to 3 scale

1

Vegetation Community Cover Scale

0	Absent or comprises <0.1 ha (0.2471 acres) contiguous area		
1	Present and either comprises small part of wetland's vegetation and is of moderate quality, or comprises a significant part but is of low quality		
2	Present and either comprises significant part of wetland's vegetation and is of moderate quality or comprises a small part and is of high quality		
3	Present and comprises significant part, or more, of wetland's vegetation and is of high quality		

6b. Horizontal (plan view) interspersion

Aquatic bed Emergent

Shrub 1 Forest

> Mudflats Open water Other (list)



<u>6c. Coverage of invasive plants.</u> Refer to Table 1 ORAM long form for list.

Add or deduct points for coverage

Absent (1)

6d. Microtopography

Narrative Description of Vegetation Quality

low	Low spp diversity and/or predominance of nonnative or disturbance tolerant native species		
moderate	Native spp are dominant component of the vegetation, although nonnative and/or disturbance tolerant native spp can also be present, and species diversity moderate to moderately high, but generally w/o presence of rare threatened or endangered spp		
high	A predominance of native species, with nonnative spp and/or disturbance tolerant native spp absent or virtually absent, and high spp diversity and often, but not always, the presence of rare, threatened, or endangered spp		

Mudflat and Open Water Class Quality

0	Absent <0.1 ha (0.2471 acres)
1	Low 0.1 ha to <1 ha (0.2471 acres to 2.47 acres)
2	Moderate 1 ha to <4 ha (2.47 acres 9.88 acres)
3	High 4 ha (9.88 acres) or more

Score all present using 0 to 3 scale

2	Vegetated hummocks/tussocks
	Coarse woody debris >15 cm (6")
2	Standing dood > $25 \text{ cm}(10^{\circ}) \text{ dbb}$

Extensive >75 % cover (-5) X Moderate 25-75% cover (-3)

> Sparse 5-25% cover (-1) Nearly Absent <5% cover (0)

2	Standing dead > 25 cm (10) dbi
	Amphibian breeding pools

Microtopography Cover Scale 0 Absent 1 Present very small amounts or if more common

1	Present very small amounts or if more common of marginal quality
2	Present in moderate amounts, but not of highest quality or in small amounts of highest quality
3	Present in moderate or greater amounts and of highest quality

Site: AEP Bix	by-Groves Rebuild		Date:	October 22, 2013
Wetlands:	Wetland 17-2		Rater:	Dave Bell, Jim Brinson
00 Subtotal Points	Metric 1. Wetland Area (size). (m Select one size class and assign score. >50 acres (>20.2ha) (6 pts) 25 to <50 acres (10.1 to <20.2l 10 to <25 acres (4 to <10.1ha) 3 to <10 acres (1.2 to <4ha) (3 0.3 to <3 acres (0.12 to <1.2ha) 0.1 to <0.3 acres (0.04 to <0.12) X	hax 6 pts) ha) (5 pts) (4 pts) pts) a) (2pts) 2ha) (1 pt)		
12 12 Subtotal Points	Metric 2. Upland buffers and surr 2a. Calculate average buffer width (select or X WIDE. Buffers average 50m (MEDIUM. Buffers average 25n NARROW. Buffers average 10 VERY LOW. 2nd growth or old X LOW. Old field (>10 years), sh MODERATELY HIGH. Reside HIGH. Urban, industrial, open	rounding land use. (r ne, do not double check) 164ft) or more around wetta m to <50m (82 to <164ft) ar 0m to <25m (32ft to <82ft) rage <10m (<32ft) around w to ne or double check & ave der forest, prairie, savannah brubland, young second gro intial, fenced pasture, park, pasture, row cropping, min	max 14 pts) and perimeter (7) round wetland perimeter (4 around wetland perimeter wetland perimeter (0) <u>erage)</u> n, wildlife area, etc. (7) with forest. (5) conservation tillage, new f ing, construction. (1)	.) (1) allow field. (3)
29 17 Subtotal Points	Metric 3. Hydrology. (max 30 pts) 3a. Sources of Water. Score all that apply. High pH groundwater (5) Other groundwater (3) X Precipitation (1) Seasonal/Intermittent surface with the surface with	water (3) or stream) (5) or human use (1) rest), complex (1) dor (1)	ad. Duration inundation/sati (select one or double of Semi- to perman Regularly inunda X Seasonally inunda Seasonally satur Be. Modifications to natural (select one or double of None or none a X Recovered (7) X Recovering (3) Recent or no re- Check all disturban ditch dike tile	uration. check & average) tently inundated/saturated (4) ted/saturated (3) dated (2) rated in upper 30cm (12in) (1) <i>hydrologic regime.</i> check & average) pparent (12) covery (1) ces observed point source (nonstormwater) filling/grading road bed/RR track dredging
38 9 Subtotal Points	Metric 4. Habitat Alteration and I 4a. Substrate disturbance. Score one or de None or none apparent (4) X Recovered (3) X Recovering (2) Recent or no recovery (1) 4b. Habitat development. Select one. Excellent (7) Very good (6) Good (5) Moderately good (4) Fair (3) X Poor to fair (2) Poor (1)	Development. (max 2 Double check and average. Check all disturba grazing clearcutting selective cutting woody debris rem toxic pollutants	20 pts.) 20 pts.) 4c. Habitat alteration. Scol None or none a X Recovered (6) X Recovering (3) Recent or no rec ances observed ances obser	g other- list re one or double check and average. pparent (9) every (1) b/sapling removal aceous/aquatic bed removal nentation ging ing ent emrichment

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Site: AEP Bi	xby-Groves Rebuild	Date:		
Wetland:	Wetland 17-2	Rater:	Dave Bell, Jim Brinson	

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38	0	Metric 5. Special Wetlands. (max 10 pts.)
Subtotal	Points	Check all that apply and score as indicated

ch all life	at apply and score
	Bog (10 pts)

- Fen (10 pts) Old Growth Forest (10 pts) Mature forested wetland (5 pts) Lake Erie coastal/tributary wetland-unrestricted hydrology (10 pts) Lake Erie coastal/tributary wetland-restricted hydrology (5 pts)
- Lake Plain Sand Prairies (Oak Openings) (10 pts)
 - Relict Wet Prairies (10 pts)
- Known occurrence state/federal threatened or endangered species (10)
- Significant migatory songbird/waterfowl habitat or usage (10 pts)
- Category 1 Wetland. See Question 1 of Qualitative Rating. (-10 pts)

36	-2	
Subtotal	Points	

Metric 6. Plant Communities, interspersion, microtopography. (max 20 pts.)

<u>6a. Wetland Vegetation Communities</u> Score all present using 0 to 3 scale

1

Vegetation Community Cover Scale

0	Absent or comprises <0.1 ha (0.2471 acres) contiguous area		
1	Present and either comprises small part of wetland's vegetation and is of moderate quality, or comprises a significant part but is of low quality		
2	Present and either comprises significant part of wetland's vegetation and is of moderate quality or comprises a small part and is of high quality		
3	Present and comprises significant part, or more, of wetland's vegetation and is of high quality		

6b. Horizontal (plan view) interspersion

Aquatic bed

Emergent Shrub Forest Mudflats Open water Other (list)

Select	only c	ne		
		High (5)		
		Moderately high (4)		
		Moderate (3)		
		Moderately low (2)		
	Х	Low (1)		
		None (0)		

<u>6c. Coverage of invasive plants.</u> Refer to Table 1 ORAM long form for list.

Add or deduct points for coverage

Absent (1)

X Extensive >75 % cover (-5) Moderate 25-75% cover (-3)

> Sparse 5-25% cover (-1) Nearly Absent <5% cover (0)

Narrative Description of Vegetation Quality

low	W Low spp diversity and/or predominance of nonnative or disturbance tolerant native species			
moderate	Native spp are dominant component of the vegetation, although nonnative and/or disturbance tolerant native spp can also be present, and species diversity moderate to moderately high, but generally w/o presence of rare threatened or endangered spp			
high	A predominance of native species, with nonnative spp and/or disturbance tolerant native spp absent or virtually absent, and high spp diversity and often, but not always, the presence of rare, threatened, or endangered spp			

Mudflat and Open Water Class Quality

0	Absent <0.1 ha (0.2471 acres)
1	Low 0.1 ha to <1 ha (0.2471 acres to 2.47 acres)
2	Moderate 1 ha to <4 ha (2.47 acres 9.88 acres)
3	High 4 ha (9.88 acres) or more

Microtopography Cover Scale

0	Absent
1	Present very small amounts or if more common of marginal quality
2	Present in moderate amounts, but not of highest quality or in small amounts of highest quality
3	Present in moderate or greater amounts and of highest quality

6d. Microtopography Score all present using 0 to 3 scale

1	Vegetated hummocks/tussocks			
Coarse woody debris >15 cm (6				
	Standing dead > 25 cm (10") dbh			
	Amphibian breeding pools			

e: AEP Bixb	y-Groves Rebuild		Date:	October 22, 2013
etlands:	Wetland 18-1		Rater:	Dave Bell, Jim Brinson
D 0 total Points	Metric 1. Wetland Area (size). (ma Select one size class and assign score. >50 acres (>20.2ha) (6 pts) 25 to <50 acres (10.1 to <20.2ha)	ax 6 pts) (4 pts) (4 pts) pts)) (2pts) (ha) (1 pt)		
12 12 ototal Points	X <0.1 acres (0.04ha) (0 pts)	ounding land use. (max be, <u>do not double check)</u> 64ft) or more around wetland n to <50m (82 to <164ft) aroun im to <25m (32ft to <82ft) arou age <10m (<32ft) around wetk	x 14 pts) perimeter (7) id wetland perimeter (4 und wetland perimeter and perimeter (0)	.) (1)
	2b. Intensity of surrounding land use (select VERY LOW. 2nd growth or old X LOW. Old field (>10 years), shi MODERATELY HIGH. Resider HIGH. Urban, industrial, open p	one or double check & average er forest, prairie, savannah, wi rubland, young second growth ntial, fenced pasture, park, com pasture, row cropping, mining,	<u>re)</u> ildlife area, etc. (7) forest. (5) iservation tillage, new f construction. (1)	allow field. (3)
29 17 ubtotal Points	Metric 3. Hydrology. (max 30 pts) 3a. Sources of Water. Score all that apply. High pH groundwater (5) Other groundwater (3) X Precipitation (1) Seasonal/Intermittent surface w X Perennial surface water (lake or	3d. 1	Duration inundation/sai (select one or double of Semi- to permar Regularly inunda X Seasonally inunda Seasonally satu	uration. check & average) iently inundated/saturated (4) ited/saturated (3) Jated (2) rated in upper 30cm (12in) (1)
	3b. Connectivity. Score all that apply. X 100 year floodplain (1) X Between stream/lake and other X Part of wetland/upland (e.g. fore Part of riparian or upland corrido	3e. / human use (1) est), complex (1) or (1)	Modifications to natura (select one or double of None or none a X Recovered (7) X Recovering (3) Recent or no re	l hydrologic regime. check & average) pparent (12) covery (1)
	3c. Maximum water depth. Select only 1. >0.7 (27.6in) (3) 0.4 to 0.7m (15.7 to 27.6in) (2) X <0.4m (<15.7in) (1)		heck all disturban ditch dike tile weir stormwater input	ces observed point source (nonstormwater) filling/grading road bed/RR track dredging other- list
40 11 Ibtotal Points	Metric 4. Habitat Alteration and D 4a. Substrate disturbance. Score one or do None or none apparent (4) X Recovered (3) X Recovering (2) Recent or no recovery (1)	Development. (max 20 uble check and average. 4c.	Habitat alteration. Sco None or none a X Recovered (6)	re one or double check and average. pparent (9)
	4b. Habitat development. Select one. Excellent (7) Very good (6) Good (5) X Moderately good (4) Fair (3) Poor to fair (2) Poor (1)	Check all disturbanc mowing grazing clearcutting selective cutting woody debris removal toxic pollutants	Kecovering (3) Recent or no rec ses observed shrul herb: sedir dred farm nutri	overy (1) o/sapling removal accous/aquatic bed removal nentation ging ing ent emrichment

Site: AEP Bi	xby-Groves Rebuild	Date:		
Wetland:	Wetland 18-1	Rater:	Dave Bell, Jim Brinson	

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40	Subiolal mist page

40	0	Metric 5. Special Wetlands. (max 10 pts.)
Subtotal	Points	Check all that apply and score as indicated

un	unu	i upp	JIY '	unu	30010	
		Bog	(10) nts	:)	
		Dog	(/ pic	''	

- Fen (10 pts)
- Old Growth Forest (10 pts)
- Mature forested wetland (5 pts)
- Lake Erie coastal/tributary wetland-unrestricted hydrology (10 pts)
- Lake Erie coastal/tributary wetland-restricted hydrology (5 pts)
- Lake Plain Sand Prairies (Oak Openings) (10 pts)
- Relict Wet Prairies (10 pts)
- Known occurrence state/federal threatened or endangered species (10)
- Significant migatory songbird/waterfowl habitat or usage (10 pts)
- Category 1 Wetland. See Question 1 of Qualitative Rating. (-10 pts)



Metric 6. Plant Communities, interspersion, microtopography. (max 20 pts.)

6a. Wetland Vegetation Communities Score all present using 0 to 3 scale

2 Forest Mudflats Open water Other (list)

Vegetation Community Cover Scale

0	Absent or comprises <0.1 ha (0.2471 acres) contiguous area
1	Present and either comprises small part of wetland's vegetation and is of moderate quality, or comprises a significant part but is of low quality
2	Present and either comprises significant part of wetland's vegetation and is of moderate quality or comprises a small part and is of high quality
3	Present and comprises significant part, or more, of wetland's vegetation and is of high quality

6b. Horizontal (plan view) interspersion

Aquatic bed Emergent Shrub



<u>6c. Coverage of invasive plants.</u> Refer to Table 1 ORAM long form for list.

Add or deduct points for coverage

X Absent (1)

6d. Microtopography

Narrative Description of Vegetation Quality

low	low Low spp diversity and/or predominance of nonnative or disturbance tolerant native species	
moderate	Native spp are dominant component of the vegetation, although nonnative and/or disturbance tolerant native spp can also be present, and species diversity moderate to moderately high, but generally w/o presence of rare threatened or endangered spp	
high	A predominance of native species, with nonnative spp and/or disturbance tolerant native spp absent or virtually absent, and high spp diversity and often, but not always, the presence of rare, threatened, or endangered spp	

Mudflat and Open Water Class Quality

0	Absent <0.1 ha (0.2471 acres)
1	Low 0.1 ha to <1 ha (0.2471 acres to 2.47 acres)
2	Moderate 1 ha to <4 ha (2.47 acres 9.88 acres)
3	High 4 ha (9.88 acres) or more

Score all present using 0 to 3 scale

	Vegetated hummocks/tussocks
	Coarse woody debris >15 cm (6")
	Standing dead > 25 cm (10") dbh
	Amphibian breeding pools

Extensive >75 % cover (-5) Moderate 25-75% cover (-3)

Sparse 5-25% cover (-1) Nearly Absent <5% cover (0)

Microtopography Cover Scale

0	Absent
1	Present very small amounts or if more common of marginal quality
2	Present in moderate amounts, but not of highest quality or in small amounts of highest quality
3	Present in moderate or greater amounts and of highest quality

Site: AEP Bixt	oy-Groves Rebuild		Date:	October 22, 2013
Wetlands:	Wetland 19-1		Rater:	Dave Bell, Jim Brinson
I				-
2 2	Metric 1. Wetland Area (size). (ma	ax 6 pts)		
Subtotal Points	Select one size class and assign score.	• /		
	>50 acres (>20.2ha) (6 pts)			
	25 to <50 acres (10.1 to <20.2h	a) (5 pts)		
	10 to <25 acres (4 to <10.1ha) (4 pts)		
	3 to <10 acres (1.2 to <4ha) (3 p	ots)		
	X 0.3 to <3 acres (0.12 to <1.2ha) (2pts)		
	0.1 to <0.3 acres (0.04 to <0.12	ha) (1 pt)		
	<0.1 acres (0.04na) (0 pts)			
5 3	Metric 2. Upland buffers and surro	ounding land use. (m	nax 14 pts)	
Subtotal Points	2a. Calculate average buffer width (select on	e, do not double check)		
	WIDE. Buffers average 50m (1	64ft) or more around wetla	nd perimeter (7)	
	MEDIUM. Buffers average 25m	to <50m (82 to <164ft) arc	ound wetland perimeter	(4)
	NARROW. Buffers average 10	m to <25m (32ft to <82ft) a	around wetland perimet	er (1)
	X VERY NARROW. Buffers avera	age <10m (<32ft) around w	etland perimeter (0)	
	2b. Intensity of surrounding land use (select of	one or double check & ave	rage)	
	VERY LOW. 2nd growth or olde	er forest, prairie, savannah,	, wildlife area, etc. (7)	
	LOW. Old field (>10 years), shr	ubland, young second grow	wth forest. (5)	
	X MODERATELY HIGH. Residen	tial, fenced pasture, park, o	conservation tillage, ner	w fallow field. (3)
		asture, row cropping, mini		
15 10	Metric 3. Hydrology. (max 30 pts)	30	d. Duration inundation/s	saturation.
Subtotal Points	3a. Sources of Water. Score all that apply.		(select one or doubl	le check & average)
	High pH groundwater (5)		X Semi- to perm	anently inundated/saturated (4)
	Other groundwater (3)		Regularly inun	ndated/saturated (3)
	X Precipitation (1)		Seasonally in	undated (2)
	Seasonal/Intermittent surface w	ater (3)	Seasonally sa	turated in upper 30cm (12in) (1)
	Perennial surface water (lake or	stream) (5)	. Madifications to not	
	3b Connectivity Score all that apply	اک	e. Modifications to natu (select one or doubl	rai nydrologic regime. le check & average)
	100 year floodplain (1)		None or none	apparent (12)
	X Between stream/lake and other	human use (1)	Recovered (7))
	Part of wetland/upland (e.g. fore	st), complex (1)	Recovering (3))
	Part of riparian or upland corrido	or (1)	X Recent or no	recovery (1)
	3c Maximum water depth Select only 1		Check all disturbs	ances observed
	X >0.7 (27.6in) (3)		ditch	point source (nonstormwater)
	0.4 to 0.7m (15.7 to 27.6in) (2)		dike	
	<0.4m (<15.7in) (1)		tile	road bed/RR track
			weir	dredging
			stormwater input	other-list
18 2	Metric / Habitat Alteration and D	evelonment (max 2	20 nts)	
10 3 Subtotal Bointe	42 Substrate disturbance Score and or de		ω μισ.)	
Subiolai i Olilis	None or none apparent (4)	able check and average.		
	Recovered (3)	4	c Habitat alteration Sc	core one or double check and average
	Recovering (2)		None or none	annarent (9)
	X Recent or no recovery (1)		Recovered (6	
			Recovering (3	
	4b. Habitat development. Select one.		X Recent or no	recoverv (1)
	Excellent (7)			
	Very good (6)	Check all disturba	nces observed	
	Good (5)	mowing	Shi	rub/sapling removal
	Moderately good (4)		□ he	rbaceous/aguatic bed removal
	Fair (3)	clearcutting	□ se	dimentation
	Poor to fair (2)	selective cutting		edging
	X Poor (1)	woodv debris remo	oval 🗌 far	rming
		toxic pollutants	□ nu	trient emrichment
18 subtotal thi	s page			

Site: AEP Bi	xby-Groves Rebuild	Date:		
Wetland:	Wetland 19-1	Rater:	Dave Bell, Jim Brinson	

18	subtotal first page
10	Subiolal mist page

18	0	Metric 5. Special Wetlands. (max 10 pts.)
Subtotal	Points	Check all that apply and score as indicated

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		Bor	1 (1	() nte	2)	
				\mathbf{v} $\mathbf{v}_{\mathbf{v}}$	21	

- Fen (10 pts)
- Old Growth Forest (10 pts)
- Mature forested wetland (5 pts)
- Lake Erie coastal/tributary wetland-unrestricted hydrology (10 pts)
- Lake Erie coastal/tributary wetland-restricted hydrology (5 pts)
- Lake Plain Sand Prairies (Oak Openings) (10 pts)
 - Relict Wet Prairies (10 pts)
- Known occurrence state/federal threatened or endangered species (10)
- Significant migatory songbird/waterfowl habitat or usage (10 pts)
- Category 1 Wetland. See Question 1 of Qualitative Rating. (-10 pts)

20	2	
Subtotal	Points	

Metric 6. Plant Communities, interspersion, microtopography. (max 20 pts.)

0

1

2

3

6a. Wetland Vegetation Communities

Score all present using 0 to 3 scale Aquatic bed Emergent Shrub Forest Mudflats 1 Open water Other (list)

6b. Horizontal (plan view) interspersion



<u>6c. Coverage of invasive plants.</u> Refer to Table 1 ORAM long form for list.

Add or deduct points for coverage

Absent (1)

Score all present using 0 to 3 scale

Х

6d. Microtopography

Extensive >75 % cover (-5) Moderate 25-75% cover (-3)

Sparse 5-25% cover (-1) Nearly Absent <5% cover (0)

Vegetated hummocks/tussocks Coarse woody debris >15 cm (6") Standing dead > 25 cm (10") dbh Amphibian breeding pools

Narrative Description of Vegetation Quality

part and is of high quality

vegetation and is of high quality

Vegetation Community Cover Scale

low	Low spp diversity and/or predominance of nonnative or disturbance tolerant native species
moderate	Native spp are dominant component of the vegetation, although nonnative and/or disturbance tolerant native spp can also be present, and species diversity moderate to moderately high, but generally w/o presence of rare threatened or endangered spp
high	A predominance of native species, with nonnative spp and/or disturbance tolerant native spp absent or virtually absent, and high spp diversity and often, but not always, the presence of rare, threatened, or endangered spp

Absent or comprises <0.1 ha (0.2471 acres) contiguous area

vegetation and is of moderate quality, or comprises a

Present and either comprises significant part of wetland's

vegetation and is of moderate quality or comprises a small

Present and comprises significant part, or more, of wetland's

Present and either comprises small part of wetland's

significant part but is of low quality

Mudflat and Open Water Class Quality

0	Absent <0.1 ha (0.2471 acres)
1	Low 0.1 ha to <1 ha (0.2471 acres to 2.47 acres)
2	Moderate 1 ha to <4 ha (2.47 acres 9.88 acres)
3	High 4 ha (9.88 acres) or more

Microtopography Cover Scale

0	Absent
1	Present very small amounts or if more common of marginal quality
2	Present in moderate amounts, but not of highest quality or in small amounts of highest quality
3	Present in moderate or greater amounts and of highest quality

20 GRAND TOTAL (max 100 pts)

			Buto	
Wetlands:	Wetland 20-1		Rater:	Dave Bell, Jim Brinson
22 Subtotal Points	Metric 1. Wetland Area (size). (ma Select one size class and assign score. >50 acres (>20.2ha) (6 pts) 25 to <50 acres (10.1 to <20.2h 10 to <25 acres (4 to <10.1ha) (3 to <10 acres (1.2 to <4ha) (3 p X 0.3 to <3 acres (0.12 to <1.2ha) 0.1 to <0.3 acres (0.04 to <0.12) <0.1 acres (0.04ha) (0 pts)	a) (5 pts) (4 pts) pts)) (2pts) ha) (1 pt)		
13 11 Subtotal Points	Metric 2. Upland buffers and surro 2a. Calculate average buffer width (select on X WIDE. Buffers average 50m (1) MEDIUM. Buffers average 25m NARROW. Buffers average 100 VERY LOW. 2nd growth or olde X NODERATELY HIGH. Residen HIGH. Urban, industrial, open p	bunding land use. te, do not double check) 64ft) or more around we to <50m (82 to <164ft) m to <25m (32ft to <82ft age <10m (<32ft) around one or double check & a er forest, prairie, savann rubland, young second g tital, fenced pasture, par pasture, row cropping, m	(max 14 pts) etland perimeter (7) around wetland perimeter (1) around wetland perimeter d wetland perimeter (0) average) pah, wildlife area, etc. (7) growth forest. (5) rk, conservation tillage, new ining, construction. (1)	(4) er (1) v fallow field. (3)
23 10 Subtotal Points	Metric 3. Hydrology. (max 30 pts) 3a. Sources of Water. Score all that apply. High pH groundwater (5) Other groundwater (3) X Precipitation (1) Seasonal/Intermittent surface w Perennial surface water (lake or 3b. Connectivity. Score all that apply. 100 year floodplain (1) Between stream/lake and other X Part of wetland/upland (e.g. fore Part of riparian or upland corrido 3c. Maximum water depth. Select only 1. >0.7 (27.6in) (3) 0.4 to 0.7m (15.7 to 27.6in) (2) X <0.4m (<15.7in) (1)	rater (3) r stream) (5) human use (1) est), complex (1) or (1)	3d. Duration inundation/size (select one or double Semi- to permat Regularly inund X Seasonally inund Seasonally inund Seasonally sature 3e. Modifications to nature (select one or double None or none X Recovering (3) Recent or nor Check all disturbat ditch ditch tile uile	aturation. a check & average) anently inundated/saturated (4) dated/saturated (3) indated (2) urated in upper 30cm (12in) (1) al hydrologic regime. a check & average) apparent (12) recovery (1) mces observed point source (nonstormwater) filling/grading road bed/RR track dredoing
35 12 Subtotal Points	Metric 4. Habitat Alteration and D 4a. Substrate disturbance. Score one or dot None or none apparent (4) X Recovered (3) X Recovering (2) Recent or no recovery (1) 4b. Habitat development. Select one. Excellent (7) Very good (6) X Good (5) Moderately good (4) Fair (3) Poor to fair (2) Poor (1)	Check all distur Check all distur Grazing Clearcutting Selective cutting Woody debris re toxic pollutants	Ac. Habitat alteration. Sco Ac. Habitat alteration. Sco None or none X Recovered (6) X Recovering (3) Recent or no re bances observed bances observed are permoval	ore one or double check and average. apparent (9) ecovery (1) ub/sapling removal baceous/aquatic bed removal limentation dging ming rient emrichment

Site: AEP Bi	xby-Groves Rebuild	Date:		
Wetland:	Wetland 20-1	Rater:	Dave Bell, Jim Brinson	

35	subtotal first nade
00	Subtotal mot page

35	0	Metric 5. Special Wetlands. (max 10 pts.)
Subtotal	Points	Check all that apply and score as indicated

Check	all that apply and score as indicate	d
	Bog (10 pts)	

- Fen (10 pts)
- Old Growth For
- Old Growth Forest (10 pts) Mature forested wetland (5 pts)
- Lake Erie coastal/tributary wetland-unrestricted hydrology (10 pts)
- Lake Erie coastal/tributary wetland-restricted hydrology (5 pts)
- Lake Plain Sand Prairies (Oak Openings) (10 pts)
 - Relict Wet Prairies (10 pts)
- Known occurrence state/federal threatened or endangered species (10)
- Significant migatory songbird/waterfowl habitat or usage (10 pts)
- Category 1 Wetland. See Question 1 of Qualitative Rating. (-10 pts)

42	7	
Subtotal	Points	

Metric 6. Plant Communities, interspersion, microtopography. (max 20 pts.)

0

1

2

3

6a. Wetland Vegetation Communities

Score all present using 0 to 3 scale Aquatic bed Emergent Shrub 2 Forest Mudflats Open water Other (list)

6b. Horizontal (plan view) interspersion



<u>6c. Coverage of invasive plants.</u> Refer to Table 1 ORAM long form for list.

Add or deduct points for coverage

Absent (1)

Х

6d. Microtopography

Narrative Description of Vegetation Quality

part and is of high quality

vegetation and is of high quality

Vegetation Community Cover Scale

low Low spp diversity and/or predominance of nonnative or disturbance tolerant native species	
moderate	Native spp are dominant component of the vegetation, although nonnative and/or disturbance tolerant native spp can also be present, and species diversity moderate to moderately high, but generally w/o presence of rare threatened or endangered spp
high	A predominance of native species, with nonnative spp and/or disturbance tolerant native spp absent or virtually absent, and high spp diversity and often, but not always, the presence of rare, threatened, or endangered spp

Absent or comprises <0.1 ha (0.2471 acres) contiguous area

vegetation and is of moderate quality, or comprises a

Present and either comprises significant part of wetland's

vegetation and is of moderate quality or comprises a small

Present and comprises significant part, or more, of wetland's

Present and either comprises small part of wetland's

significant part but is of low quality

Mudflat and Open Water Class Quality

0	Absent <0.1 ha (0.2471 acres)
1	Low 0.1 ha to <1 ha (0.2471 acres to 2.47 acres)
2	Moderate 1 ha to <4 ha (2.47 acres 9.88 acres)
3	High 4 ha (9.88 acres) or more

Score all present using 0 to 3 scale

1	Vegetated hummocks/tussocks		
	Coarse woody debris >15 cm (6")		
	Standing dead > 25 cm (10") dbh		
	Amphibian breeding pools		

Extensive >75 % cover (-5) Moderate 25-75% cover (-3)

Sparse 5-25% cover (-1) Nearly Absent <5% cover (0)

Microtopography Cover Scale

0	Absent
1	Present very small amounts or if more common of marginal quality
2	Present in moderate amounts, but not of highest quality or in small amounts of highest quality
3	Present in moderate or greater amounts and of highest quality

January 7, 2014

AMERICAN ELECTRIC POWER COMPANY

Bixby-Groves 138 kV Line Rebuild Project

Threatened and Endangered Species Survey Report



PROJECT NUMBER: 129739.00.05

PROJECT CONTACT: Jaime Newell

EMAIL: jaime.newell@powereng.com

PHONE: 989-745-5577



Bixby-Groves 138 kV Line Rebuild Project

Threatened and Endangered Species Survey Report

PREPARED FOR: AMERICAN ELECTRIC POWER COMPANY PREPARED BY: MIKE BANAITIS 207-869-1263 MIKE.BANAITIS@POWERENG.COM

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ACRONYMS AND ABBREVIATIONS

AEP	American Electric Power Company
GIS	geographic information system
kV	kilovolt
OAC	Ohio Administrative Code
ODNR	Ohio Department of Natural Resources
OPSB	Ohio Power Siting Board
POWER	POWER Engineers, Inc.
ROW	right-of-way
USFWS	United States Fish and Wildlife Service

1.0 **PROJECT DESCRIPTION**

American Electric Power Company (AEP) is proposing to rebuild an existing 138 kilovolt (kV) transmission line between AEP's Bixby and Groves substations, located in Madison and Truro Townships, Franklin County, Ohio (Figures 1 and 2). The line will be built on AEP standard double circuit 138 kV structures. It is anticipated that self-supporting, custom, steel structures with pier foundations will be utilized for all running angle structures and dead ends, while tangent structures will utilize direct embed installation with concrete backfill. The new line will require the installation of 26 new transmission structures and the removal of 37 existing structures. The total length of the 138 kV line is approximately 4.5 miles. The proposed rebuild will be located entirely within existing right-of-way (ROW).

The Ohio Power Siting Board (OPSB) Letter of Notification guidelines require that prior to construction, AEP describe surveys for areas of ecological concern. Ohio Administrative Code (OAC) Rule 4906-15-11-01(E) (1) describes the requirement as such:

(E) Environmental Data. Describe the environmental impacts of the proposed project. This description shall include the following information:

(1) A description of the applicant's investigation concerning the presence or absence of federal and state designated species (including endangered species, threatened species, rare species, species proposed for listing, species under review for listing, and species of special interest) that may be located within the area likely to be disturbed by the project, a statement of the findings of the investigation, and a copy of any document produced as a result of the investigation.

AEP retained POWER Engineers, Inc. (POWER) to review the proposed project for threatened and endangered species described in OAC Rule 4906-15-11-01(E) (1). To that end, a review of existing documents and a field habitat assessment within a 200-foot survey corridor centered on the existing 138 kV Bixby-Groves transmission line were conducted. Additionally, habitat assessments using a 30-foot survey corridor were performed along the proposed access roads located outside of the 200-foot survey corridor.

Topography in survey area consists of gently sloping to nearly level terrain. Waters within the survey area drain into Blacklick Creek, Big Walnut Creek, Mason Run, and their tributaries. Blacklick Creek and Mason Run both drain into Big Walnut Creek, which ultimately drains to the Scioto River.

The southern terminus of the survey area is located approximately 1.5 miles northwest of Groveport, Ohio, while the northern terminus of the survey area is located approximately 3.2 miles southeast of Bexley, Ohio. Land use within and adjacent to the project area is heavily developed, and consists of a mix of residential, commercial, woodland, and shrub/scrub vegetative communities.

2.0 METHODS

The survey was initiated by POWER with a review of existing online documents from the Ohio Department of Natural Resources (ODNR) and the United States Fish and Wildlife Service (USFWS). Additionally, POWER submitted a request to the ODNR Natural Heritage database for records of species of concern located near the project. The geographic information system (GIS)

shapefiles received from ODNR were then loaded into the project GIS maps as an overlay to show proximity of each known species record to the project area.

Agency coordination letters requesting comments on the proposed project were submitted to the ODNR and USFWS on January 6, 2014. Copies of these letters are included in Appendix A.

A review of information on each species was utilized to determine habitat types that each species are known to utilize. This information was used to perform a desktop aerial photo review of the project. Additionally, the available habitat information for each species was used as a guide in conducting an in-field habitat suitability assessment for the potential of each species in the project area.

RESULTS 3.0

POWER wildlife biologists David Bell and James Brinson conducted a habitat suitability assessment in conjunction with the access road and wetland/stream field investigations from October 21st to October 23rd, 2013.

3.1 State Listed Species

Review of the ODNR Natural Heritage database did not identify any state listed species known to occur within the project area. The ODNR database search did identify one known bald eagle nesting site within a mile of the project area (Table 1), located approximately 5,000 feet east of the Bixby Substation at the southern terminus of the proposed project (see Figure 3). Due to the nature of the project; the relatively large distance between the nest site and the project; and the implementation of AEP's Avian Protection Plan (AEP 2012), which aims to reduce the incidence of bird interactions as well as prevent a bird take, it is anticipated that there will be no impacts on the bald eagle nesting site.

TABLE 1 STATE LISTED SPECIES IDENTIFIED BY ODNR'S NATURAL HERITAGE DATABASE

SCIENTIFIC NAME	COMMON NAME	CATEGORY	STATUS
Haliaeetus leucocephalus	Bald Eagle	Bird	N/A

To date, no response has been received from ODNR regarding the request for comment letter sent out on January 6, 2014.

3.2 **Federal Listed Species**

Review of the current list of federally listed species identified eight protected species (Table 2) as potentially occurring in Franklin County (USFWS 2013a).

IADLE Z	FEDERAL	LISTED SPECIES FUR FRAM		
SCIENTI	FIC NAME	COMMON NAME	CATEGORY	STATUS
Myotis	s sodalis	Indiana Bat	Mammal	Endangered
Myotis se	otentrionalis	Northern Long-Eared Bat	Mammal	Proposed Endangered
Noturus	trautmani	Scioto Madtom	Mussel	Endangered

EEDEDAL LISTED SPECIES EOD EDANKLIN COUNTY

SCIENTIFIC NAME	COMMON NAME	CATEGORY	STATUS
Pleurobema clava	Clubshell	Mussel	Endangered
Epioblasma torulosa rangiana	Northern Riffleshell	Mussel	Endangered
Quadrula cylindrica cylindrica	Rabbitsfoot	Mussel	Threatened
Villosa fabalis	Rayed Bean	Mussel	Endangered
Epioblasma triquetra	Snuffbox	Mussel	Endangered

(USFWS 2013a)

Six of the eight federally identified species are mussels. There is no in-water work proposed for the project. It is expected that aerial stream crossings will be installed by accessing structure locations on either side of the stream, with no need to physically enter the stream, or cause any disturbance to stream banks. Due to the lack of stream impacts required for project construction, it is unlikely the proposed project would affect protected mussels or other aquatic species.

Both the Indiana bat and the northern long-eared bat utilize dead or dying trees with exfoliating bark for roosts, cover, and breeding activities during the summer months (USFWS 2013b, 2013c). During the colder portion of the year, the bats hibernate in caves and mines (USFWS 2013b, 2013c). The habitat assessment effort surveyed the project area for potential Indiana bat/northern long-eared bat habitat. No caves or mines were identified within the project area, and therefore the proposed project will not impact winter bat habitat. Potential summer roosting trees were noted by POWER biologists in wooded areas adjacent to the cleared ROW corridor. Due to previous maintenance activities conducted on the existing alignment, no trees currently exist within the existing, cleared ROW. Therefore, any minor clearing activities required for project execution would be limited to areas located outside of the ROW, for example on access roads. Any clearing of potential roosting trees that is required for this project would be performed in the winter months between October 1st and March 31st, while bats are hibernating and therefore not in the project area. Therefore, the project is unlikely to negatively affect Indiana bats or northern long-eared bats.

To date, no response has been received from USFWS regarding the request for comment letter sent out on January 6, 2014.

4.0 SUMMARY

AEP retained POWER to conduct a habitat assessment for threatened and endangered species within a 200 foot corridor centered on the existing Bixby-Groves 138 kV transmission line. The habitat assessment will be used to assist AEP's efforts to avoid impacts to threatened and endangered species potentially present in the study area during construction activities. The field survey was conducted by POWER field biologists from October 21st to October 23rd, 2013.

No state listed species, and no unique habitats were observed during the field survey. The ODNR Biodiversity Database revealed no threatened, endangered, special interest or extirpated species within the vicinity of the project area. The ODNR Natural Heritage Database identified one bald eagle nesting site within a mile of the proposed project. However, due to the limited scope and duration of the proposed project in concert with AEP's Avian Protection Plan, no impacts to the bald eagle are anticipated. Therefore, no state listed species are expected to be impacted by the project as proposed. There are eight federally listed species in Franklin County (USFWS 2013a). Six of these species are mussels that inhabit aquatic environments such as perennial streams and rivers. The remaining two species on the federal list are the Indiana bat and the northern long-eared bat. There will be no instream work impacts required for this project, so it is anticipated that there will be no adverse impact to the six federally protected mussel species. All tree clearing activities will take place during the winter months (October 1st to March 31st), so there are no anticipated impacts to the two protected bat species potentially present in the project area. Therefore, due to the limited scope and timing of construction activities, such as tree clearing, it is anticipated that the project will not have an impact on federally endangered, threatened, or candidate species, or their habitats.

5.0 CONCLUSION

Based upon the nature and scope of the proposed project, review of federal and state records of listed species, and the field survey conducted from October 21st to October 23rd, 2013, it is not expected that federal or state listed species will be impacted by the project as currently planned.

6.0 REFERENCES

American Electric Power (AEP). 2012. Avian Protection Plan.

- United States Fish and Wildlife Service (USFWS). 2013a. Endangered Species Act List: Franklin County, Ohio. Available at http://ecos.fws.gov/ipac/. Accessed 12/28/2013.
- . 2013b. Endangered Species Fact Sheet: Indiana Bat (*Myotis sodalis*). Available at http://www.fws.gov/midwest/Endangered/mammals/inba/inbafctsht.html. Accessed 12/28/2013.
- 2013c. Endangered Species Fact Sheet: Northern Long-Eared Bat (Myotis septentrionalis). Available at http://www.fws.gov/midwest/endangered/mammals/nlba/nlbaFactSheet.html. Accessed 12/28/2013.

FIGURE 1 PROJECT OVERVIEW: TOPOGRAPHIC MAP





FIGURE 2 PROJECT OVERVIEW: AERIAL PHOTOGRAPHY MAP





FIGURE 3 ODNR NATURAL HERITAGE DATABASE SPECIES LOCATION MAP





APPENDIX A AGENCY CORRESPONDENCE



Ohio Department of Natural Resources

JOHN R. KASICH, GOVERNOR

JAMES ZEHRINGER, DIRECTOR

Ohio Division of Wildlife Scott Zody, Chief 2045 Morse Rd., Bldg. G Columbus, OH 43229-6693

November 6, 2013

Alison Pruett Power Engineers 9097 Spoonbill Ridge PI. Las Vegas, NV 89143

Dear Ms. Pruett

After reviewing the Natural Heritage Database, I find the Division of Wildlife has no records of state-listed species in the Bixby-Groves project area, including a one mile buffer, in Franklin County Ohio. We do have a record for a Bald Eagle nest within one mile of the project. A shape file showing the location of this nest is included with this letter. The project also occurs adjacent to the Creeks MetroPark. We are unaware of any additional unique ecological sites, geologic features, animal assemblages, scenic rivers, state wildlife areas, nature preserves, parks or forests, national wildlife refuges, parks or forests or other protected natural areas within a one mile radius of the project area.

Our inventory program has not completely surveyed Ohio and relies on information supplied by many individuals and organizations. Therefore, a lack of records for any particular area is not a statement that rare species or unique features are absent from that area. Although we inventory all types of plant communities, we only maintain records on the highest quality areas.

This letter only represents a review of rare species and natural features data within the Ohio Natural Heritage Database. It does not fulfill coordination under the National Environmental Policy Act (NEPA) or the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S. C. 661 et seq.) and does not supersede or replace the regulatory authority of any local, state or federal agency nor relieve the applicant of the obligation to comply with any local, state or federal laws or regulations.

Please contact me at 614-265-6452 if I can be of further assistance.

Sincerely,

Greg Schneiden

Greg Schneider, Administrator Ohio Natural Heritage Database Program

303 U.S. ROUTE ONE FREEPORT, ME 04032 USA

рноме 207-869-1200 *FAX* 207-869-1299

January 6, 2014

ENERGY
FACILITIES
COMMUNICATIONS
ENVIRONMENTAL

Ohio Department of Natural Resources Office of Real Estate Attn: John Kessler 2045 Morse Rd, Building E-2 Columbus, Ohio 43229-6693

Subject: Bixby-Groves 138 kV Transmission Line Rebuild, Franklin County, Ohio

Mr. Kessler,

American Electric Power (AEP) is proposing to rebuild the Bixby-Groves 138 kV transmission line. To date, we have requested data from the Ohio Natural Heritage Program and conducted field reviews to assess the potential for habitat suitability within the project area. We are writing to request your concurrence with our findings and request a response for inclusion in our Letter of Notification filings.

The project is located in Franklin County, Ohio on the southeast side of Columbus. The line runs from the Bixby Substation on Bixby Road north for 4.5 miles to the Groves Substation on Groves Rd (see attached map). Plans are to remove 37 existing structures and install 26 new self-supporting steel structures. The laydown yard for this project is expected to be an existing storage and laydown facility located east of the intersection of S. Hamilton Road (Hwy 317) and Kingsland Avenue. It is anticipated that construction would be initiated September 2014.

On November 6, AEP received the results of a request to the Ohio Natural Heritage Program. It was reported that a bald eagle nest had been recorded within 1 mile of our project area. It is located along Blacklick Creek on the east side of Hwy 317. As this site is approximately 0.9 mile from the project area and as construction is to be initiated in September, it is assumed that there will be no impacts to eagles or other raptors utilizing this nest.

Based on a review of ECOS, IPaC, and the Ohio Natural Heritage Database website, it is known that the state and federally endangered Indiana bat (*Myotis sodalis*) and proposed federally endangered northern long-eared bat (*Myotis septentrionalis*) have the potential to occur in vicinity of the project area. Field review by POWER Engineers biologists identified potential roost trees for Indiana bat, but did not detect any suitable winter roosting habitat. Given the anticipated initiation of construction activities in September, it is anticipated that impacts to these species will be avoided.

Based on the review of ECOS, IPaC, and the Ohio Natural Heritage Database website, it is also known that numerous state and federally listed bivalves and other aquatic species have the potential to occur in vicinity of the project area. However, no waterways are to be directly impacted by proposed work. All spoils will be contained to further ensure no waters are impacted by project-related work. With these measures, it is anticipated there will be no impacts to protected aquatic species.



January 6, 2014 Page 2

Based on the above information, AEP does not anticipate the rebuild of the Bixby-Groves transmission line will result in impacts to state or federally protected species. We request you inform us of your concurrence or any guidance you can provide should you not concur with our findings.

Thank you for your assistance in this matter.

Sincerely,

Marthat

Michael Banaitis, PWS, CPESC Environmental Scientist POWER Engineers, Inc.

c: DMS 129739/PER/01

303 U.S. ROUTE ONE FREEPORT, ME 04032 USA

рноме 207-869-1200 *FAX* 207-869-1299

POWER ENGINEERS

January 6, 2014

ENERGY
FACILITIES
COMMUNICATIONS
ENVIRONMENTAL

U.S. Fish and Wildlife Service Attn: Mary Knapp, PhD Field Supervisor 4625 Morse Rd, Suite 104 Columbus, Ohio 43230

Subject: Bixby-Groves 138 kV Transmission Line Rebuild, Franklin County, Ohio

Dr. Knapp,

American Electric Power (AEP) is proposing to rebuild the Bixby-Groves 138 kV transmission line. To date, we have requested data from the Ohio Natural Heritage Program and conducted field reviews to assess the potential for habitat suitability within the project area. We are writing to request your concurrence with our findings and request a response for inclusion in our Letter of Notification filings.

The project is located in Franklin County, Ohio on the southeast side of Columbus. The line runs from the Bixby Substation on Bixby Road north for 4.5 miles to the Groves Substation on Groves Road (see attached map). Plans are to remove 37 existing structures and install 26 new self-supporting steel structures. The laydown yard for this project is expected to be an existing storage and laydown facility located east of the intersection of S. Hamilton Road (Hwy 317) and Kingsland Avenue. It is anticipated that construction would be initiated September 2014.

On November 6, AEP received the results of a request to the Ohio Natural Heritage Program. It was reported that a bald eagle nest had been recorded within 1 mile of our project area. It is located along Blacklick Creek on the east side of Hwy 317. As this site is approximately 0.9 mile from the project area and as construction is to be initiated in September, it is assumed that there will be no impacts to eagles or other raptors utilizing this nest.

Based on a review of ECOS and IPaC, it is known that the federally endangered Indiana bat (*Myotis sodalis*) and proposed endangered northern long-eared bat (*Myotis septentrionalis*) have the potential to occur in vicinity of the project area. Field review by POWER Engineers biologists identified potential roost trees for Indiana bat, but did not detect any suitable winter roosting habitat. Given the anticipated initiation of construction activities in September, it is anticipated that impacts to these species will be avoided.

Based on the review of ECOS and IPaC, it is also known that four endangered and one threatened clam and the endangered Scioto madtom (*Noturus trautmani*) have the potential to occur in vicinity of the project area. However, no waterways are to be directly impacted by proposed work. All spoils will be contained to further ensure no waters are impacted by project-related work. With these measures, it is anticipated there will be no impacts to protected aquatic species.

January 6, 2014 Page 2

Based on the above information, AEP does not anticipate the rebuild of the Bixby-Groves transmission line will result in impacts to federally protected species. We request you inform us of your concurrence or any guidance you can provide should you not concur with our findings.

Thank you for your assistance in this matter.

Sincerely,

MALLE

Michael Banaitis, PWS, CPESC Environmental Scientist POWER Engineers, Inc.

c: DMS 129739/PER/01

Rebekah Hovermale

Subject:

FW: Bixby-Groves 138 kV Transmission Line Rebuild, Franklin Co. OH

From: susan_zimmermann@fws.gov [mailto:susan_zimmermann@fws.gov]
On Behalf Of Ohio, FW3
Sent: Monday, January 27, 2014 9:21 AM
To: Mike Banaitis 1263
Subject: Bixby-Groves 138 kV Transmission Line Rebuild, Franklin Co. OH

TAILS# 03E15000-2014-TA-0508

Dear Mr. Banaitis,

We have received your recent correspondence requesting information about the subject proposal. There are no Federal wilderness areas, wildlife refuges or designated critical habitat within the vicinity of the project area. The following comments and recommendations will assist you in fulfilling the requirements for consultation under section 7 of the Endangered Species Act of 1973, as amended (ESA).

The Service recommends that proposed developments avoid and minimize water quality impacts and impacts to high quality fish and wildlife habitat (e.g., forests, streams, wetlands). Additionally, natural buffers around streams and wetlands should be preserved to enhance beneficial functions. If streams or wetlands will be impacted, the Corps of Engineers should be contacted to determine whether a Clean Water Act section 404 permit is required. Best management practices should be used to minimize erosion, especially on slopes. All disturbed areas should be mulched and revegetated with native plant species. Prevention of non-native, invasive plant establishment is critical in maintaining high quality habitats.

ENDANGERED SPECIES COMMENTS: All projects in the State of Ohio lie within the range of the Indiana bat (Myotis sodalis), a federally listed endangered species. Since first listed as endangered in 1967, their population has declined by nearly 60%. Several factors have contributed to the decline of the Indiana bat, including the loss and degradation of suitable hibernacula, human disturbance during hibernation, pesticides, and the loss and degradation of forested habitat, particularly stands of large, mature trees. Fragmentation of forest habitat may also contribute to declines. During winter, Indiana bats hibernate in caves and abandoned mines. Summer habitat requirements for the species are not well defined but the following are considered important:

(1) dead or live trees and snags with peeling or exfoliating bark, split tree trunk and/or branches, or cavities, which may be used as maternity roost areas;

(2) live trees (such as shagbark hickory and oaks) which have exfoliating bark;

(3) stream corridors, riparian areas, and upland woodlots which provide forage sites.

Should habitat exhibiting the characteristics described above be present at the proposed project site, we recommend that they, as well as surrounding trees, be saved wherever possible. However, if these trees cannot be avoided, they should only be cut between October 1 and March 31. If implementation of the seasonal tree cutting restriction is not possible, summer surveys should be conducted to document the presence or likely absence of the Indiana bat within the project area during the summer. The survey must be conducted by an approved surveyor and be designed and conducted in coordination with the Endangered Species Coordinator for this office.

The proposed project lies within the range of the northern long-eared bat (Myotis septentrionalis), a species that is currently proposed for listing as federally endangered. Recently white-nose syndrome (WNS), a novel fungal pathogen, has caused serious declines in the northern long-eared bat population in the northeastern U.S. WNS has also been documented in Ohio, but the full extent of the impacts from WNS in Ohio are not yet known.

During winter, northern long-eared bats hibernate in caves and abandoned mines. Summer habitat requirements for the species are not well defined but the following are considered important:

(1) Roosting habitat in dead or live trees and snags with cavities, peeling or exfoliating bark, split tree trunk and/or branches, which may be used as maternity roost areas;

(2) Foraging habitat in upland and lowland woodlots and tree lined corridors;

(3) Occasionally they may roost in structures like barns and sheds.

It appears that habitat exhibiting the characteristics described above may be present at the proposed project site. We recommend that trees exhibiting any of the characteristics listed above, as well as any wooded areas or tree lined corridors be saved wherever possible. However, if these areas cannot be avoided, they should only be cut from October 1 through March 31.

If there is a Federal nexus for the project (e.g., Federal funding provided, Federal permits required to construct), no tree clearing on any portion of the parcel should occur until consultation under section 7 of the ESA, between the Service and the Federal action agency, is completed. We recommend that the Federal action agency submit a determination of effects to this office, relative to the Indiana bat, for our review and concurrence.

Due to the project type, size, and location, we do not anticipate adverse effects to any other federally endangered, threatened, proposed, or candidate species. Should the project design change, or during the term of this action, additional information on listed or proposed species or their critical habitat become available, or if new information reveals effects of the action that were not previously considered, consultation with the Service should be initiated to assess any potential impacts.

These comments have been prepared under the authority of the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.), the Endangered Species Act of 1973 (ESA), as amended, and are consistent with the intent of the National Environmental Policy Act of 1969 and the U. S. Fish and Wildlife Service's Mitigation Policy. This letter provides technical assistance only and does not serve as a completed section 7 consultation document. Sincerely,

mary Frapp

Mary Knapp, PhD Field Supervisor

Ohio Department of Natural Resources



JOHN R. KASICH, GOVERNOR

JAMES ZEHRINGER, DIRECTOR

Office of Real Estate Paul R. Baldridge, Chief 2045 Morse Road – Bldg. E-2 Columbus, OH 43229 Phone: (614) 265-6649 Fax: (614) 267-4764

February 20, 2014

Michael Banaitits Power Engineers, Inc. 303 U.S. Route 1 Freeport, ME 04032

Re: 14-036; Bixby Groves 138 kV Transmission Line Rebuild - AEP

Project: The project entails the removal of 37 existing structures and the installation of 26 new self-supporting steel structures.

Location: The project is located the City of Columbus, Franklin County, Ohio.

The Ohio Department of Natural Resources (ODNR) has completed a review of the above referenced project. These comments were generated by an inter-disciplinary review within the Department. These comments have been prepared under the authority of the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.), the National Environmental Policy Act, the Coastal Zone Management Act, Ohio Revised Code and other applicable laws and regulations. These comments are also based on ODNR's experience as the state natural resource management agency and do not supersede or replace the regulatory authority of any local, state or federal agency nor relieve the applicant of the obligation to comply with any local, state or federal laws or regulations.

Fish and Wildlife: The Division of Wildlife (DOW) has the following comments.

The DOW recommends that impacts to wetlands and other water resources be avoided and minimized to the fullest extent possible, and that best management practices be utilized to minimize erosion and sedimentation.

The project is within the range of the Indiana bat (*Myotis sodalis*), a state and federally endangered species. The following species of trees have relatively high value as potential Indiana bat roost trees: Shagbark hickory (*Carya ovata*), Shellbark hickory (*Carya laciniosa*), Bitternut hickory (*Carya cordiformis*), Black ash (*Fraxinus nigra*), Green ash (*Fraxinus pennsylvanica*), White ash (*Fraxinus americana*), Shingle oak (*Quercus imbricaria*), Northern red oak (*Quercus rubra*), Slippery elm (*Ulmus rubra*), American elm (*Ulmus americana*), Eastern cottonwood (*Populus deltoides*), Silver maple (*Acer saccharinum*), Sassafras (*Sassafras albidum*), Post oak (*Quercus stellata*), and White oak (*Quercus alba*). Indiana bat habitat consists of suitable trees that include dead and dying trees with exfoliating bark, crevices, or cavities in upland areas or riparian corridors and living trees with exfoliating bark, cavities, or hollow areas formed from broken branches or tops. If suitable trees occur within the project area, these trees should be conserved. If suitable habitat occurs on the project area and trees must be cut, cutting must occur between October 1 and March 31. If suitable trees must be cut during the summer months, a net survey must be conducted between June 15 and July 31, prior to cutting. Net surveys shall incorporate either two net sites per square kilometer of project area with each net site containing a minimum of two nets used for two consecutive nights, or one net site per kilometer of stream within the project limits with each net site containing a minimum of two nets used for two consecutive nights. If no tree removal is proposed, the project is not likely to impact this species.

The project is within the range of the northern brook lamprey (*Ichthyomyzon fossor*), a state endangered fish, and the Scioto madtom (*Noturus trautmani*), a state and federally endangered fish. Due to the location, and that there is no in-water work planned, this project is not likely to impact these species.

The project is within the range of the clubshell (*Pleurobema clava*), a state endangered and federally endangered mussel, the Northern riffleshell (*Epioblasma torulosa rangiana*), a state endangered and federally endangered mussel, the rayed bean (*Villosa fabalis*), a state endangered and federally endangered mussel, the rabbitsfoot (*Quadrula cylindrica cylindrica*), a state endangered and federal candidate mussel, the snuffbox (*Epioblasma triquetra*), a state endangered and federally endangered mussel, the snuffbox (*Epioblasma triquetra*), a state endangered and federally endangered mussel, and the elephant-ear (*Elliptio crassidens crassidens*), a state endangered mussel. Due to the location, and that there is no in-water work planned, this project is not likely to impact these species.

The project is within the range of the upland sandpiper (*Bartramia longicauda*), a state endangered bird. A statewide survey has not been completed for this species. A lack of records does not indicate the species is absent from the area. Nesting upland sandpipers utilize dry grasslands including native grasslands, seeded grasslands, grazed and ungrazed pasture, hayfields, and grasslands established through the Conservation Reserve Program (CRP). If this type of habitat will be impacted, construction must be avoided in this habitat during the species' nesting period of April 15 to July 31. If this type of habitat will not be impacted, the project is not likely to impact this species.

The ODNR Natural Heritage Database has no records for rare or endangered species at this project site. We are unaware of any other unique ecological sites, geologic features, animal assemblages, scenic rivers, state wildlife areas, nature preserves, parks or forests, national wildlife refuges or other protected natural areas within the project area. Our inventory program does not provide a complete survey of Ohio wildlife, and relies on information supplied by many individuals and organizations. Therefore, a lack of records for any particular area is not a statement that rare species or unique features are absent from that area.

The project corridor crosses a portion of Three Creeks Metro Park, operated by Columbus and Franklin County Metro Parks. If you have not already, please coordinate with the park manager.

ODNR appreciates the opportunity to provide these comments. Please contact John Kessler at (614) 265-6621 if you have questions about these comments or need additional information.

John Kessler ODNR Office of Real Estate 2045 Morse Road, Building E-2 Columbus, Ohio 43229-6693 John.Kessler@dnr.state.oh.us This foregoing document was electronically filed with the Public Utilities

Commission of Ohio Docketing Information System on

3/31/2014 11:57:53 AM

in

Case No(s). 14-0142-EL-BLN

Summary: Letter of Notification (Part 5 of 5) Bixby Groves 138 kV Transmission Line Rebuild Project electronically filed by Mr. Yazen Alami on behalf of AEP Ohio Transmission Company