

## Case Background

### **Embarras River Bottoms State Habitat Area - The Former Indian Refinery**

<https://www.dnr.illinois.gov/programs/NRDA/Pages/ERBSHA.aspx>

The injury site was listed on the National Priorities List, or Superfund, in 2000, due to contamination from various hazardous substances resulting from decades of operation as a refinery. The contamination affected wetlands that are hydraulically connected to the nearby Embarras River.

In 2011, the IDNR and IEPA, represented by the Illinois Attorney General, reached a settlement agreement with Texaco Inc., a former owner of the refinery. The State of Illinois entered into a Consent Order with Texaco in U.S. District Court that will preserve and enhance ecological features in the area south and east of the former refinery.

The Consent Order includes provisions for the transfer by Texaco to IDNR of approximately 2,300 acres of land south of the former refinery, and for the IDNR and IEPA to restore and enhance habitat on those tracts, which are located in the Embarras River watershed. The settlement includes funding for the IDNR and IEPA to undertake ecological restoration activities, groundwater management assistance, and related expenses as compensation for releases of oil and hazardous substances into the environment at and near the 990-acre former refinery, which ceased operation in 1995. Environmental cleanup activities on the refinery property - directed by the U.S. EPA and IEPA - have been ongoing since the mid 1990s.

Much of the area targeted for restoration work will provide habitat for songbirds, marsh birds and migratory birds as well as a number of other wetland-dependent animals. A number of animal and plant species of conservation concern, including several on the state list of threatened or endangered species, have been documented in the area.

In June 2011, approximately 2000 acres were transferred to the state with an additional 160 received in May 2012. The remaining acres are awaiting transfer. The restoration property has been named: Embarras River Bottoms State Habitat Area (ERBSHA). Restoration funds for the property were received August 2011 and planning activities are following the Federal Natural Resource Damage Assessment guidelines set forth in 43 CFR Part 11.

Stratus Consulting

Executive Summary (12/19/2008)

**Table S.1. Proposed settlement between the State Trustees and Texaco to compensate for natural resource injuries at the Refinery**

Project Description		Cost/property
Siddens acquisition	Provide Siddens property to the State for permanent habitat conservation	160 acres <sup>a</sup>
AWR acquisition	Provide AWR property to the State for permanent habitat conservation 20	0 acres <sup>a</sup>
White Farm acquisition	Provide White Farm property to the State for permanent habitat conservation 1,9	54 acres
<b>Land acquisition and conservation subtotal</b>		<b>2,314 acres</b>
Habitat restoration and additional land acquisition <sup>b</sup>	Restoration of floodplain forest habitat on Siddens, AWR, and White Farm properties; restoration of aquatic habitat in oxbow ponds; additional restoration/acquisition/preservation to cover uncertainty in the restoration benefits and cost analyses	\$1,362,000
<b>Restoration and/or additional acquisition subtotal</b>		<b>\$1,362,000</b>
SCADA and BMP	Purchase SCADA system for City of Lawrenceville and provide funding for University of Illinois Extension to conduct BMP seminars for Lawrence County farmers	\$115,000
Assessment costs	Future costs for the State Trustees, including the Restoration Plan, restoration oversight, and administrative costs associated with land transfers	\$250,000
<b>SCADA, BMP, and assessment cost subtotal</b>		<b>\$365,000</b>
<b>Total Habitat</b>	<b>restoration, floodplain forest acquisition, groundwater conservation, groundwater quality improvement, and project administration</b>	<b>2,314 acres + \$1,727,000</b>

a. The exact acreage of the Siddens and AWR parcels will be verified in a final survey.

b. The proposed settlement between the State Trustees and Texaco includes a lump sum payment for the habitat restoration as presented in this document as well as for supplemental acquisition and restoration. A forthcoming Restoration Plan will include more details about the proposed restoration projects, including project-specific cost estimates.

## Abstract

The following pages contain a detailed, comprehensive summary of the management, restoration, and monitoring activities that have been completed at the Embarras River Bottoms State Habitat Area (ERBSHA) Natural Resource Damage Assessment (NRDA) settlement site. Management of the site began in 2012, primarily with gate construction and installations, with more intensive management actions as well as monitoring efforts, beginning in 2013 after an extensive covermapping exercise to document existing site conditions in 2012. Much of the boundary was posted in 2013. In an effort to get a better understanding of the created wetlands onsite, grinding of invasive woody species began along the berms and within the low areas of these wetlands. Controlled burns ensued in the sand prairie. Monitoring efforts also began in 2013 and included herp and fish surveys. In addition, several monitoring efforts have occurred every year since 2013, including vegetation, photo station, coverboard, and swamp rabbit latrine surveys. In 2014, other activities included bird & insect surveys; grinding for sedge meadow restoration; herbiciding & mowing in the sand prairie; and controlled burns. Controlled burns occurred in 2015, in addition to prairie seed plantings; plant reintroductions; and herp and insect surveys. In 2016, giant cane was planted, as well as more prairie seeds. TSI and grinding was conducted throughout various portions of the site, and insect surveys and controlled burns continued. Highlights from 2017 included tree and giant cane plantings; continued insect surveys; and additional controlled burns. In 2018, much of the site received an INAI designation. In addition, bat surveys began and more TSI and grinding was completed. The bat surveys continued in 2019, as well as more controlled burns and additional TSI and grinding activities.

For additional information, contact the Contaminant Assessment Section:

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ERBSHA Year-To-Date Site Overview (2012-Present)

Restoration Unit	Targeted Community Types	Burn Unit	Year	Management Actions	Restoration Actions	Monitoring			Burning	Notes
						Surveys	Routine Inspections	Periodic Inspections		

R1 (Siddens)	mesic floodplain forest; vernal ponds; cane	4	2012	Gate construction & installation						Covermapping effort completed	
			2013			Herps; Vegetation					
			2014			Birds; Insects; Vegetation	Photo Stations; Trail Cameras				
			2015	Boundary posting		Herps; Insects		Coverboards			
			2016	Grinding	Cane Planting	Bats; Insects; Vegetation	Photo Stations				
			2017			Vegetation	Photo Stations; Trail Cameras	Coverboards; Latrines			
			2018	Access lane maintenance		Bats; Vegetation					INAI Designation
			2019			Bats; Birds; Insects; Vegetation					"No Action" areas identified - see map for details
			2020								

R2* (AWR)	mesic floodplain forest; vernal ponds; cane		2012							Covermapping effort completed
			2013			Herps				
			2014							
			2015			Herps				
			2016	Grinding						
			2017							
			2018							INAI Designation - 3/4 RU
			2019			Insects				"No Action" areas identified - see map for details
			2020							

\* property (~180 acres) not transferred to IDNR yet

R3 (Triangle Woods)	mesic floodplain forest	4	2012							Covermapping effort completed
			2013							
			2014				Photo Stations			
			2015			Herps				
			2016							
			2017							
			2018							INAI Designation
			2019							"No Action" areas identified - see map for details
			2020							

ERBSHA Year-To-Date Site Overview (2012-Present)

Restoration Unit	Targeted Community Types	Burn Unit	Year	Management Actions	Restoration Actions	Monitoring			Burning	Notes
						Surveys	Routine Inspections	Periodic Inspections		
R4	mesic floodplain forest; old field; created wetland	4	2012							Covermapping effort completed
			2013			Herps; Vegetation				
			2014			Birds; Insects	Photo Stations			
			2015					Coverboards		
			2016	Grinding						
			2017							
			2018				Photo Stations; Trail Cameras	Coverboards; Latrines		INAI Designation
			2019				Trail Cameras			"No Action" areas identified - see map for details
			2020							

R5	mesic floodplain forest; old field; created wetland	5	2012							Covermapping effort completed
			2013			Herps				
			2014			Vegetation	Photo Stations			
			2015			Herps		Coverboards		
			2016							
			2017							
			2018	Minor berm maintenance						INAI Designation
			2019	Grinding	Grinding	Vegetation				"No Action" areas identified - see map for details
			2020							

R6	sedge meadow; old field; created wetland	5	2012							Covermapping effort completed
			2013			Herps; Vegetation				
			2014			Birds; Insects	Photo Stations			
			2015					Coverboards		
			2016							
			2017							
			2018							INAI Designation
			2019							"No Action" areas identified - see map for details
			2020							

**ERBSHA Year-To-Date Site Overview (2012-Present)**

Restoration Unit	Targeted Community Types	Burn Unit	Year	Management Actions	Restoration Actions	Monitoring			Burning	Notes
						Surveys	Routine Inspections	Periodic Inspections		
R7 (Fishtail)	mesic floodplain forest; sedge meadow; swales; old field; created wetland	1	2012							Covermapping effort completed
			2013			Fish; Herps; Vegetation				
			2014		Grinding	Birds; Insects	Photo Stations		Burn	
			2015	Boundary Posting		Herps; Insects				
			2016		Grinding	Insects; Vegetation	Photo Stations; Trail Cameras	Coverboards; Latrines		
			2017	Sandbag placement	Cane planting				Burn	
			2018	Herbicide treatment	Grinding; Crop tree release	Bats; Vegetation				INAI Designation
			2019	Sandbag placement; Aerial spraying				Coverboards		"No Action" areas identified - see map for details
			2020							

R8	mesic floodplain forest with swales	1	2012							Covermapping effort completed
			2013							
			2014			Vegetation				
			2015							
			2016		TSI	Vegetation				
			2017		Sandbag placement		Trail Cameras	Burn		
			2018		TSI			Eagle Nest		INAI Designation
			2019							
			2020							

R9	mesic floodplain forest; vernal ponds; sedge meadow; created wetland; old field; cane	3	2012							Covermapping effort completed	
			2013	Boundary Posting		Vegetation					
			2014	Boundary Posting		Birds; Insects	Photo Stations				
			2015								
			2016		TSI	Vegetation	Photo Stations; Trail Cameras				
			2017								
			2018		Grinding		Photo Stations				INAI Designation - 5/6 RU
			2019		TSI; Grinding	Vegetation					"No Action" areas identified - see map for details
			2020								

**ERBSHA Year-To-Date Site Overview (2012-Present)**

Restoration Unit	Targeted Community Types	Burn Unit	Year	Management Actions	Restoration Actions	Monitoring			Burning	Notes	
						Surveys	Routine Inspections	Periodic Inspections			
R10	mesic floodplain forest	1	2012							Covermapping effort completed	
			2013								
			2014								
			2015				Photo Stations				
			2016								
			2017								
			2018								INAI Designation - 1/2 RU
			2019								"No Action" areas identified - see map for details
			2020								

R11	mesic floodplain forest; wet savanna; old field; vernal ponds; created wetland	3	2012							Covermapping effort completed
			2013			Vegetation				
			2014		Grinding	Birds; Insects	Photo Stations	Barn Owl Box		
			2015						Burn	
			2016							
			2017		Cane Planting	Vegetation	Photo Stations; Trail Cameras	Barn Owl Box; Latrines	Burn	
			2018							INAI Designation
			2019			Birds; Vegetation	Photo Stations	Latrines		"No Action" areas identified - see map for details
			2020							

R12	mesic floodplain forest		2012	No other activity to date						Covermapping effort completed	
			2015	Boundary Posting	No other activity to date						Difficult to access, wooded, active management not an immediate concern
			2019	No other activity to date						"No Action" areas identified - see map for details	

**ERBSHA Year-To-Date Site Overview (2012-Present)**

Restoration Unit	Targeted Community Types	Burn Unit	Year	Management Actions	Restoration Actions	Monitoring			Burning	Notes	
						Surveys	Routine Inspections	Periodic Inspections			
R13	mesic floodplain forest; old field; created wetland	6	2012							Covermapping effort completed	
			2013	Boundary Posting		Fish; Herps					
			2014		Grinding			Photo Stations	Coverboards; Latrines		
			2015			Herps					
			2016	Gate Construction & installation							
			2017	Berm repairs			Photo Stations; Trail Cameras				
			2018								INAI Designation
			2019				Bats	Photo Stations	Coverboards		"No Action" areas identified - see map for details
			2020								

R14	mesic floodplain forest; created wetland; currently with old field component	6	2012							Covermapping effort completed
			2013	Boundary Posting	Grinding	Vegetation				
			2014	Boundary Posting	Grinding	Birds; Insects	Photo Stations; Trail Cameras	Latrines		
			2015	Boundary Posting		Insects				
			2016	Gate Construction & installation; Grinding						
			2017	Aerial Spraying; Berm relocation; Berm repair/wcs removal	Grinding; Cane Planting	Vegetation			Burn	
			2018	Sandbag placement		Bats; Vegetation				INAI Designation - 1/5 RU
			2019	Aerial Spraying		Birds; Vegetation				"No Action" areas identified - see map for details
			2020							

R15	mesic floodplain forest; created wetland	6	2012							Covermapping effort completed	
			2013	Boundary Posting		Fish; Herps					
			2014				Photo Stations	Latrines			
			2015								
			2016								
			2017								
			2018				Photo Stations; Trail cameras				INAI Designation
			2019							"No Action" areas identified - see map for details	
			2020								



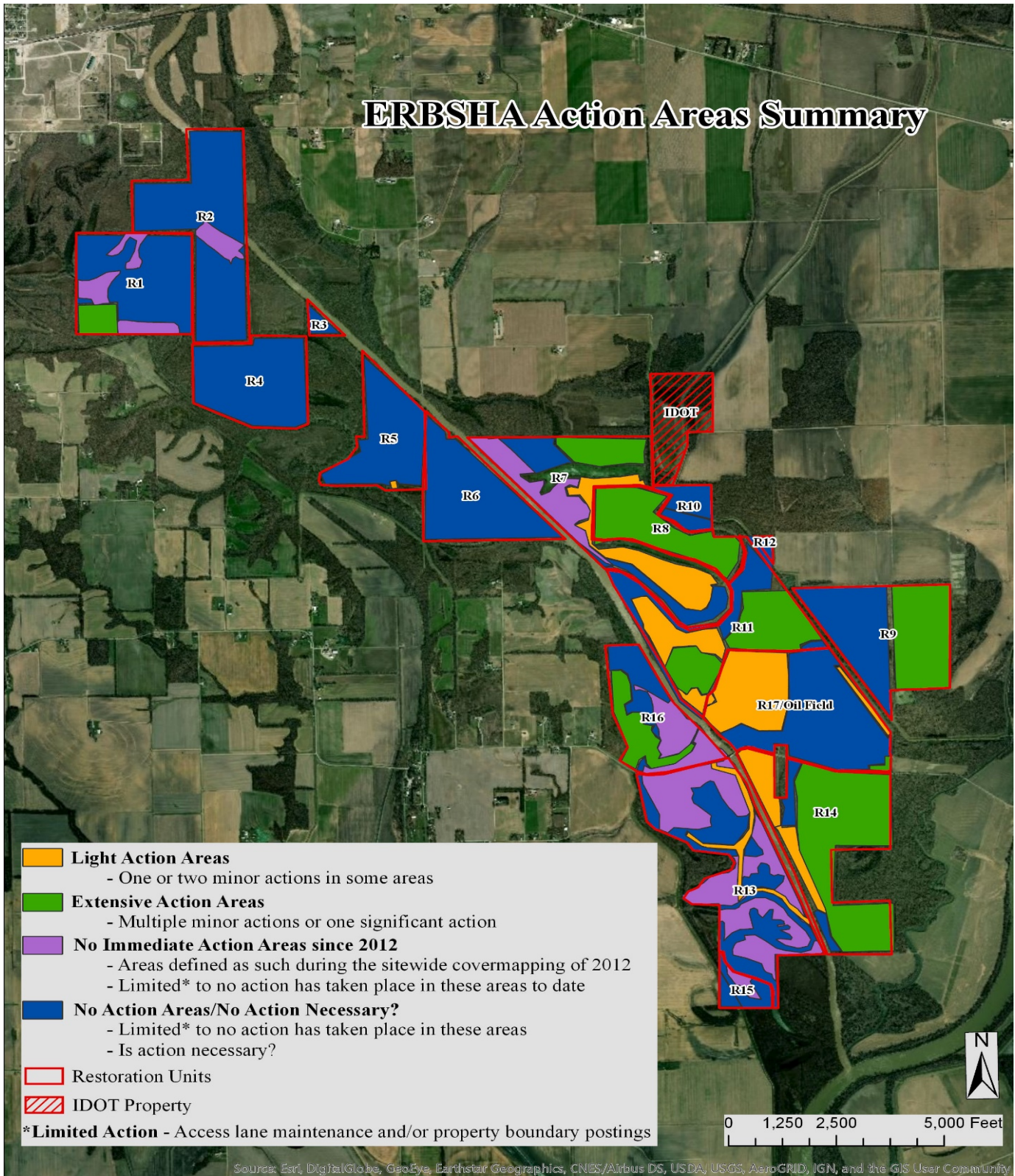
**ERBSHA Year-To-Date Site Overview (2012-Present)**

Restoration Unit	Targeted Community Types	Burn Unit	Year	Management Actions	Restoration Actions	Monitoring			Burning	Notes
						Surveys	Routine Inspections	Periodic Inspections		
R16	sand prairie (dry & wet); old field; dry mesic upland forest with seeps; mesic floodplain forest; shrub swamp; canebrake; created wetland	2	2012							Covermapping effort completed
			2013	Boundary Posting	Grinding	Vegetation			Burn	
			2014	Herbiciding & mowing; Boundary Posting	Grinding	Birds; Insects; Vegetation	Photo Stations	Barn Owl Box	Burn	
			2015		Prairie Seed Planting; Plant Reintroductions	Herps; Insects; Vegetation	Photo Stations; Trail Cameras	Barn Owl Box; Coverboards; Latrines		
			2016	Gate Construction & installation	Prairie Seed Planting	Insects; Vegetation			Burn	
			2017		Sandbag placement	Vegetation				
			2018		Grinding	Bats				INAI Designation
			2019		Grinding	Bats; Birds; Insects; Vegetation			Coverboards	Burn
			2020							

R17/Oil Field		3	2012	Gate Construction & Installation						Oil Spill - East	
										Covermapping effort completed	
			2013	Boundary Posting							Oil Spill - East
			2014	Boundary Posting	Grinding		Photo Stations	Latrines			
			2015								
			2016								
			2017		Tree Planting				Burn	Brine Leak - West, Tank Battery	
			2018							INAI Designation	
			2019			Birds			"No Action" areas identified - see map for details		
2020											

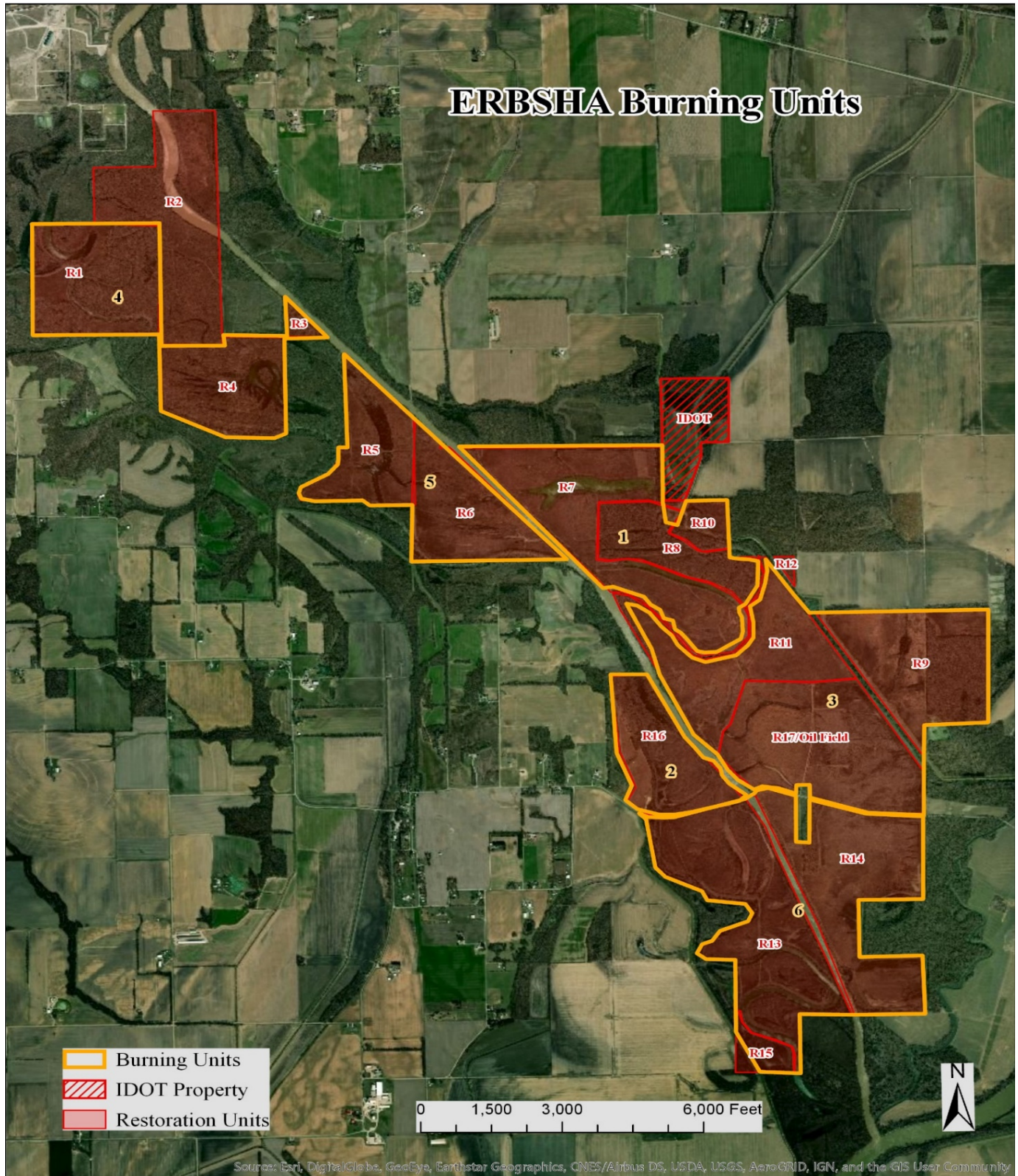
Site Summary Maps

# ERBSHA Action Areas Summary



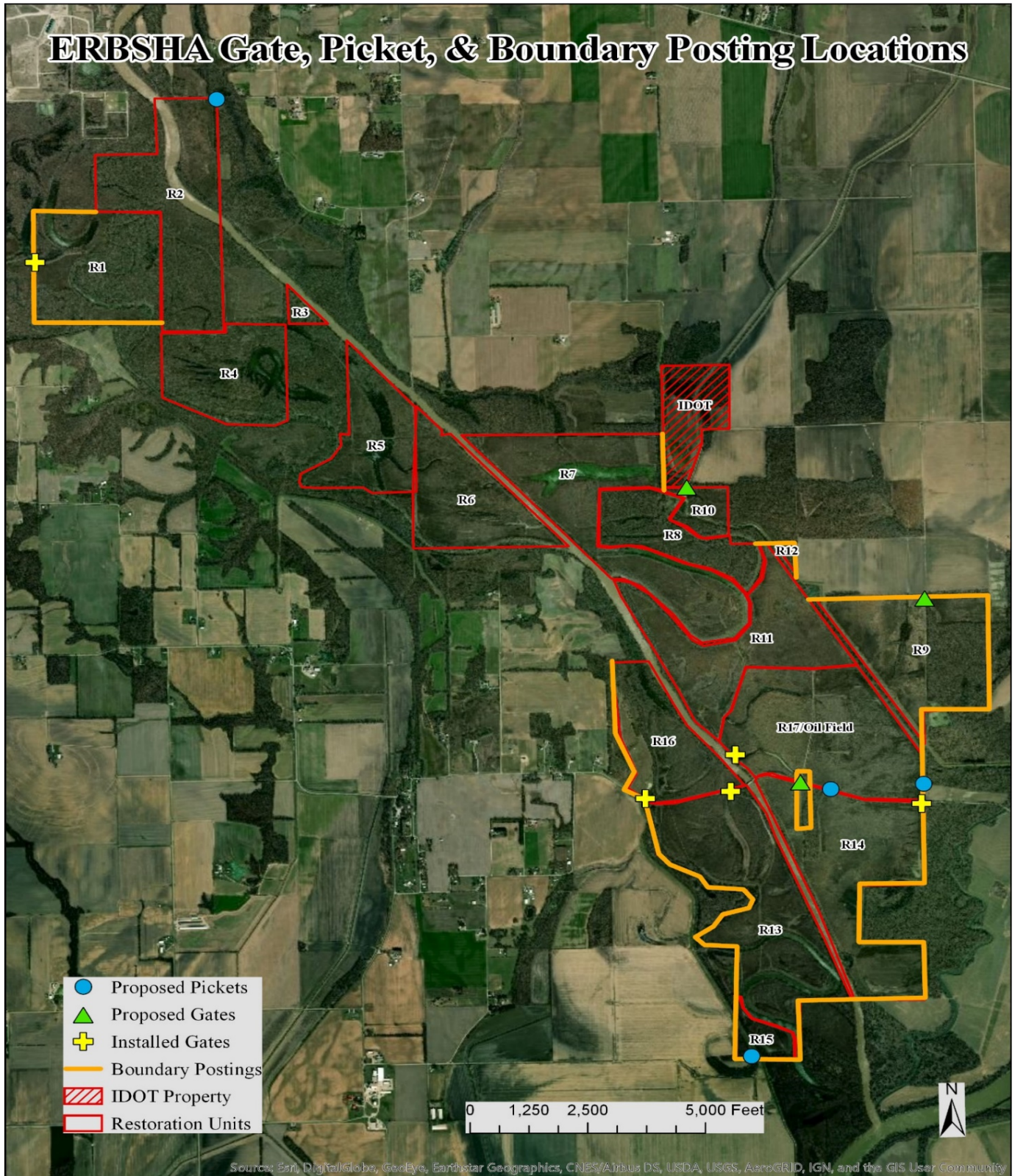


Site Summary Maps





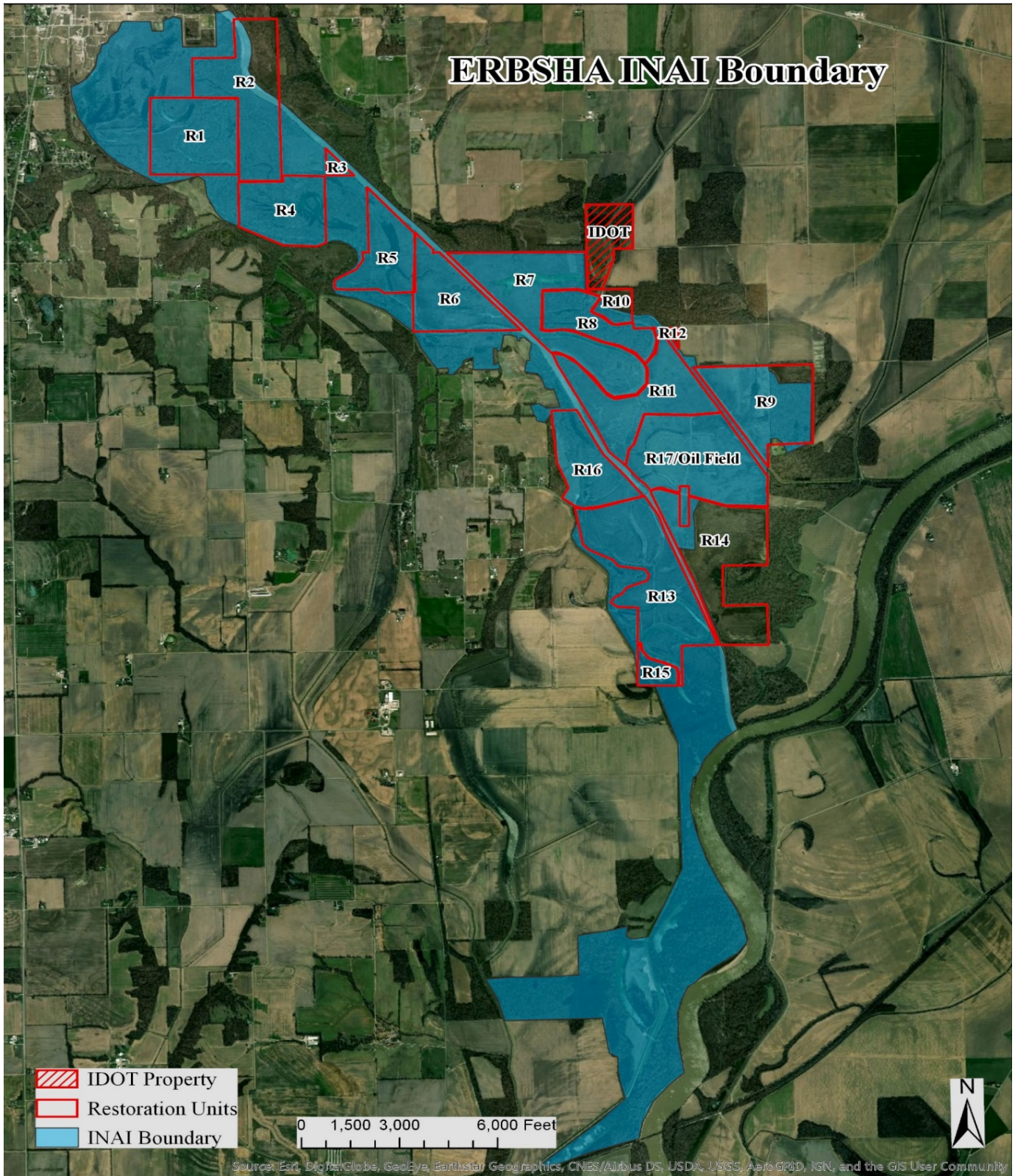
Site Summary Maps





ERBSHA Year-To-Date Site Overview (2012-Present)

Site Summary Maps





Site Summary Maps

# ERBSHA NRCS Restoration Plan & Berm Locations

