PORTS SSAB

Portsmouth EM Site Specific Advisory Board

SITE OPTIMIZATION AND FUTURE LAND USE SUBCOMMITTEE

TUESDAY, MARCH 12, 2013 @ 6:30 P.M.

THE PURPOSE OF THIS MEETING IS TO PROVIDE THE SSAB SUBCOMMITTEE WITH A REPORT ON THE OHIO UNIVERSITY HABITAT REPORTS

AGENDA

- REVIEW OF THE FEBRUARY MEETING
- OHIO UNIVERSITY HABITAT REPORTS - GARY CONLEY, OHIO UNIVERSITY
- DISCUSSION

ADJOURN

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SITE OPTIMIZATION AND FUTURE LAND USE SUBCOMMITTEE

MEETING SUMMARY
MARCH 12, 2013 • 6:30 P.M.
THE OHIO STATE UNIVERSITY ENDEAVOR CENTER
1862 SHYVILLE ROAD, PIKETON, OH 45661

Subcommittee Members Present: Brian Huber, subcommittee chair; Al Don Cisco, Ervin Craft, Frank Halstead, Sharon Manson; Michael Payton

SSAB Subcommittee Members Absent: Brandon Wooldridge, subcommittee vice chair; Adrian Harrison; Kathy Zimmerman-Woodburn

Other SSAB Members Present: Will Henderson, board chair; Val Francis, board vice chair; Carl Hartley, Gene Brushart

U.S. Department of Energy (DOE) and contractors: Joel Bradburne, Johnny Reising, Greg Simonton, DOE; Rick Greene, Restoration Services, Inc. (RSI); Jeff Wagner, Fluor-B&W Portsmouth (FBP)

Liaisons: Maria Galanti, Ohio Environmental Protection Agency (EPA); Mike Rudadue, Ohio Department of Health (ODH)

Support Staff: Eric Roberts, Julie Galloway, Cindy Lewis, EHI Consultants (EHI)

Public: Geoffrey Sea, Neighbors for the Ohio Valley Alternative (NOVA)

Huber opened the meeting at 6:06 p.m.

1. **Review of the February Meeting:**

2. **Ohio University Habitat Reports –** Gary Conley, Ohio University

   - Study Area
   - Habitat Delineation Concepts
   - Ecosystem Characterization Using GIS
   - Annual Precipitation 2012
   - Ecoregion Characteristics
   - Regional Elevation Characteristics
   - Dominant Bedrock Geology
   - Dominant Surface Geology

- Regional Subsurface Characteristics
- Quantitative Field Sampling Plots
- Data Collected in Quantitative Plots
- Translating Plant Species Occurrences and Field Data into Categorized Habitat Coverage
- Palustrine Habitat
- Upland Habitats
- Successional Habitats and Anthropogenic Features
- Uncommon Plants
- Weeds!
- Big Trees
- Insects
- Plant Species
- Species Nativity Summary
- Species List
- Species Coefficient of Conservatism (C of C) Summary
- Habitat Delineation Process
- Forest Cover by Habitat
- Dominance by Non-native Species
- Field Observations of Wildlife
- Species-Based Evidence of Deer Browsing
- HIS Analysis: Timber Rattlesnake *Crotalus horridus*
- HIS Analysis: Wood Thrush *Hylcichla mustelina*
- HIS Analysis: Northern Bobwhite *Colinus virginianus*
- HIS Analysis: Henslow's Sparrow *Ammodramus henslowii*
- HIS Analysis: Indiana Bat *Myotis sodalist*
- Questions?

3. **Discussion:**

Question/Comment:	***Answer:***
Roberts: What is a Palustrine Habitat?	***Conley:*** It would be a Wetland Habitat.
Payton: What is a noninvasive Alien?	***Conley:*** That's a good question, we have very few of those, some of those would be a planted species, like an iris, Princess trees, daffodils because there were a lot of old abandon homestead's around.
Halstead: Did you see any bats? There were many bats in the 333 building and since the buildings will be torn down, will there be places for the bats to go?	***Conley:*** No, we did not see any bats; we were here mostly in the day, and mostly looking down. There are many standing dead trees, which bats like. Therefore, there will be places for them to go.
Huber: People that do Rattlesnake studies take boards and cover them with leaves; did you do anything like that?	***Conley:*** No, we did not.

Where is the highest quality of habitat located?	The northeast section, which they are staying away from, a cell, will affect some of the area but not much. The habitat around site D is already isolated. I think that overall it is not a bad spot for a waste cell.
If you did not core the larger trees, do you have any idea what age they are?	The oldest is about 274 years old, it was only about 16 inches around, while the bigger trees were not as old, they are about 100-120 years old.
Would you like to work with a management plan?	I think it is entirely necessary. I would definitely want to be involved with it.
Francis: Is the area that Brian Huber is talking about is that somewhere you could tour/visit or not? Could the area still be kept intact if we have industrial development on the site?	***Conley:*** Yes, trees of giants are in the western side. The biggest threat to that area is the substation. Yes, it could.
Roberts: Did the subcommittee want Conley to come present to the full board?	***Huber:*** Most defiantly. ***Henderson:*** You could cut this presentation down to about half of these slides.

Huber: Meeting adjourned at 7:16 p.m.

4. **Action Items:**

1. OU will present the Habitat Report presentation to the Full Board.

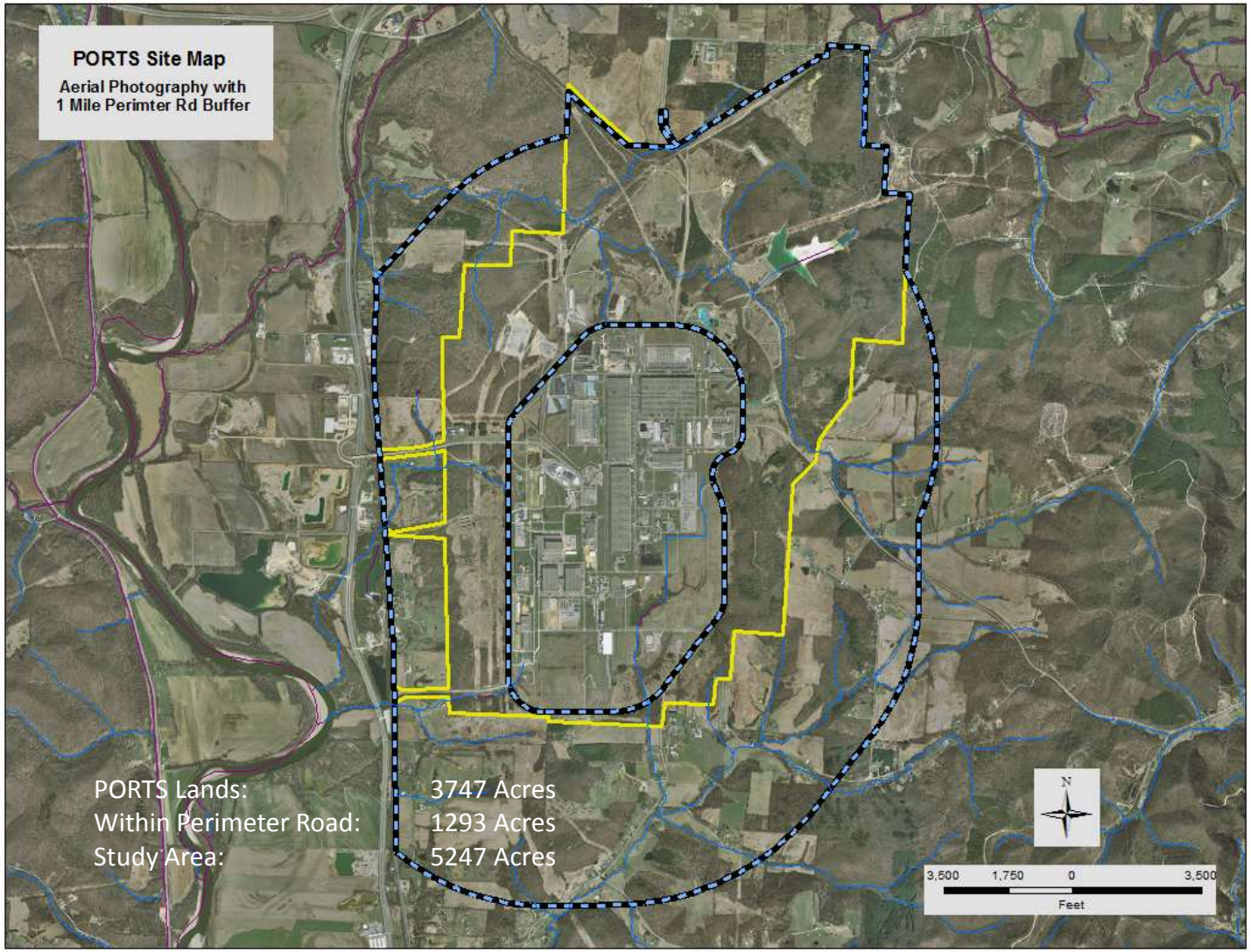
PORTS Habitat Resource Inventory

Summary of Field Work, Data Collection, and Analysis

Voinovich School of Leadership and Public Affairs

Gary Conley

Study Area



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Habitat Delineation Concepts

- What is Habitat?
  - Physical Environment
  - Biotic Resources
- Ecological Setting
  - Patchwork Mosaic
  - Ecosystem Services and Functionality
- Disturbance Legacy
- Climatic Climax Vegetation

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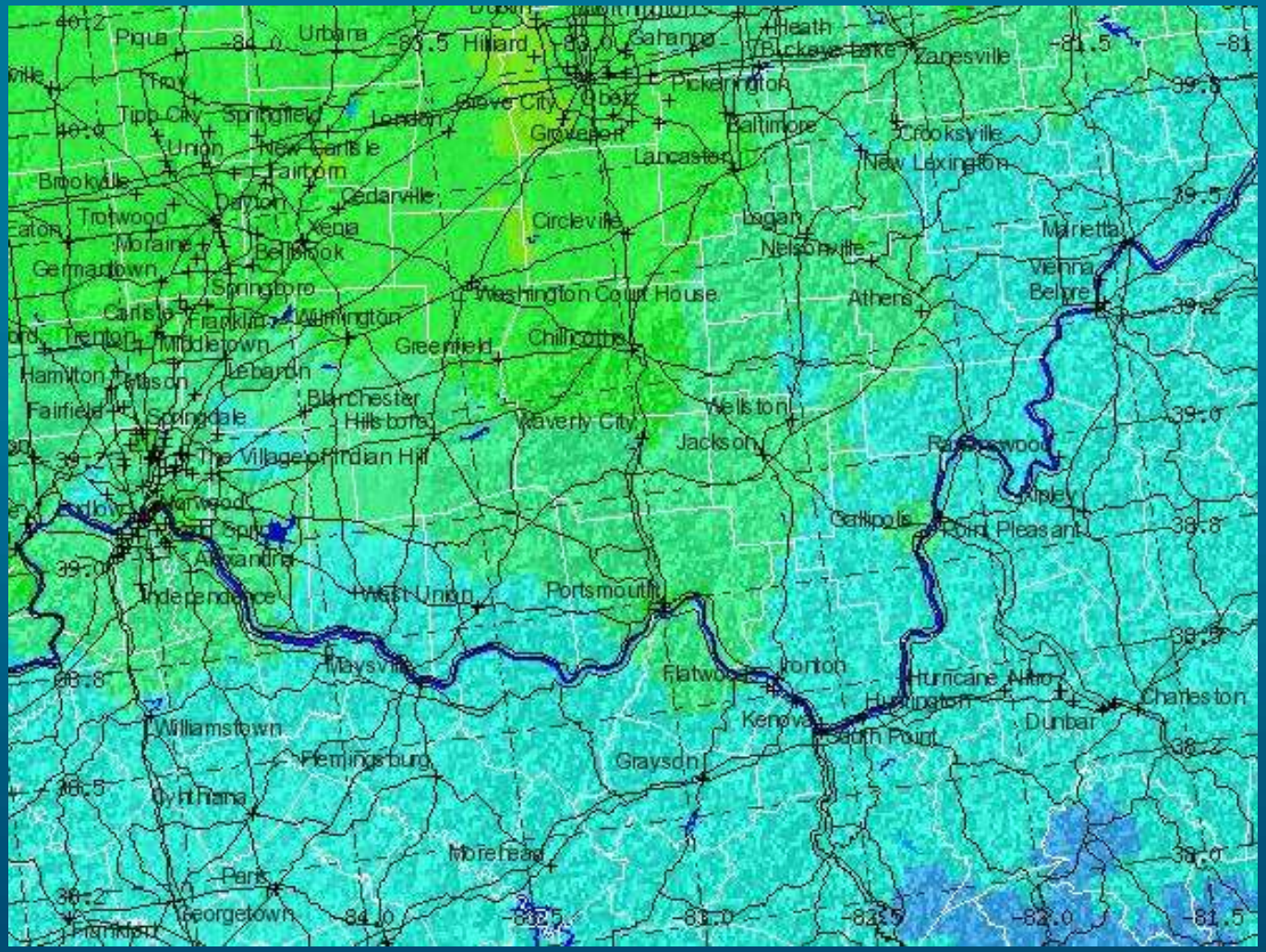
Ecosystem Characterization Using GIS

- Using existing data to comprehensively characterize the regional physical, climatic, and chemical setting
- Provides a basis for understanding, analyzing, and evaluating ecosystem qualities
- Allows for collection and storage of quality spatial data to inform decision-making

Annual Precipitation 2012



Prism, 2012

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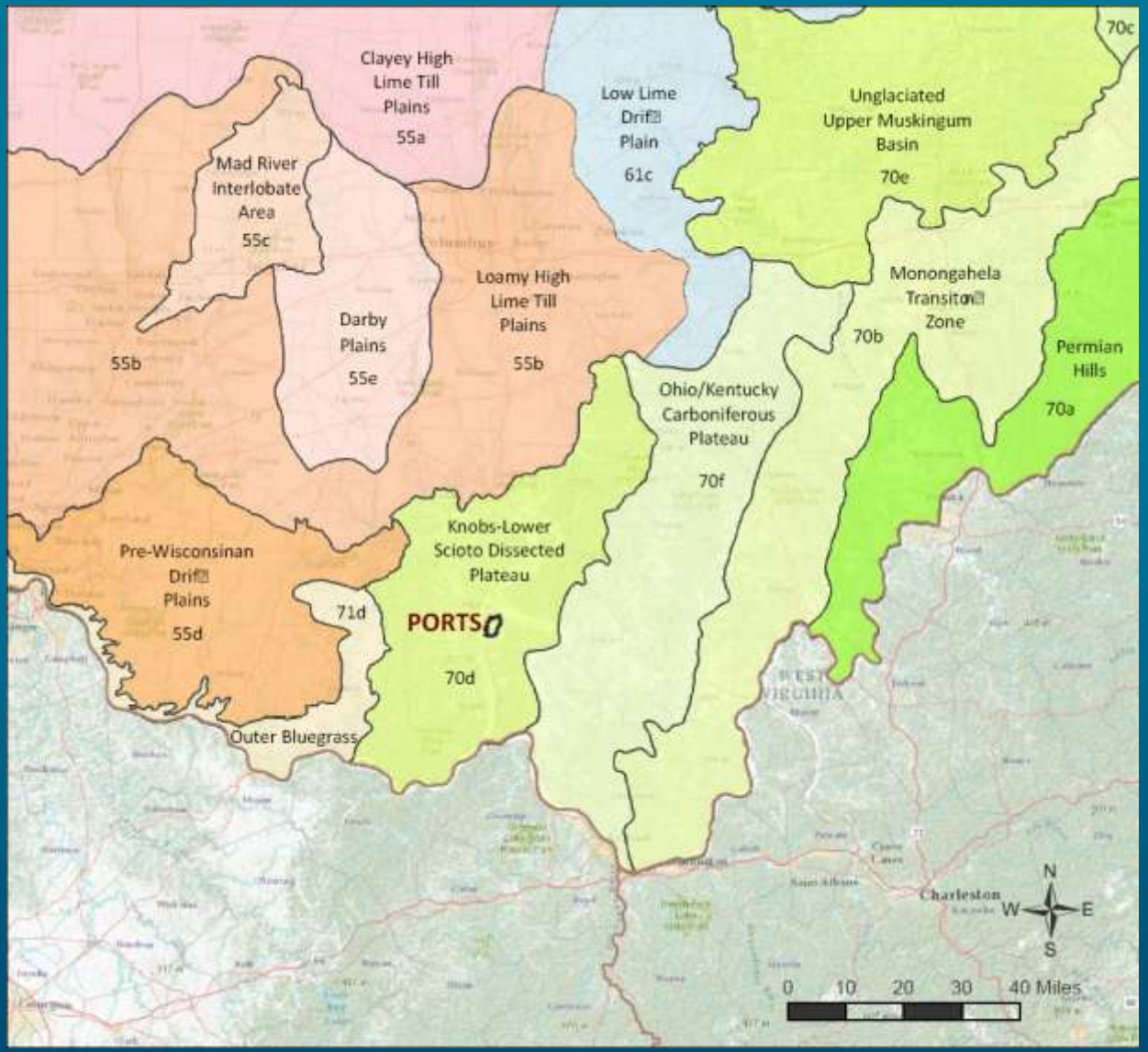
Ecoregion Characteristics



USEPA, 2011

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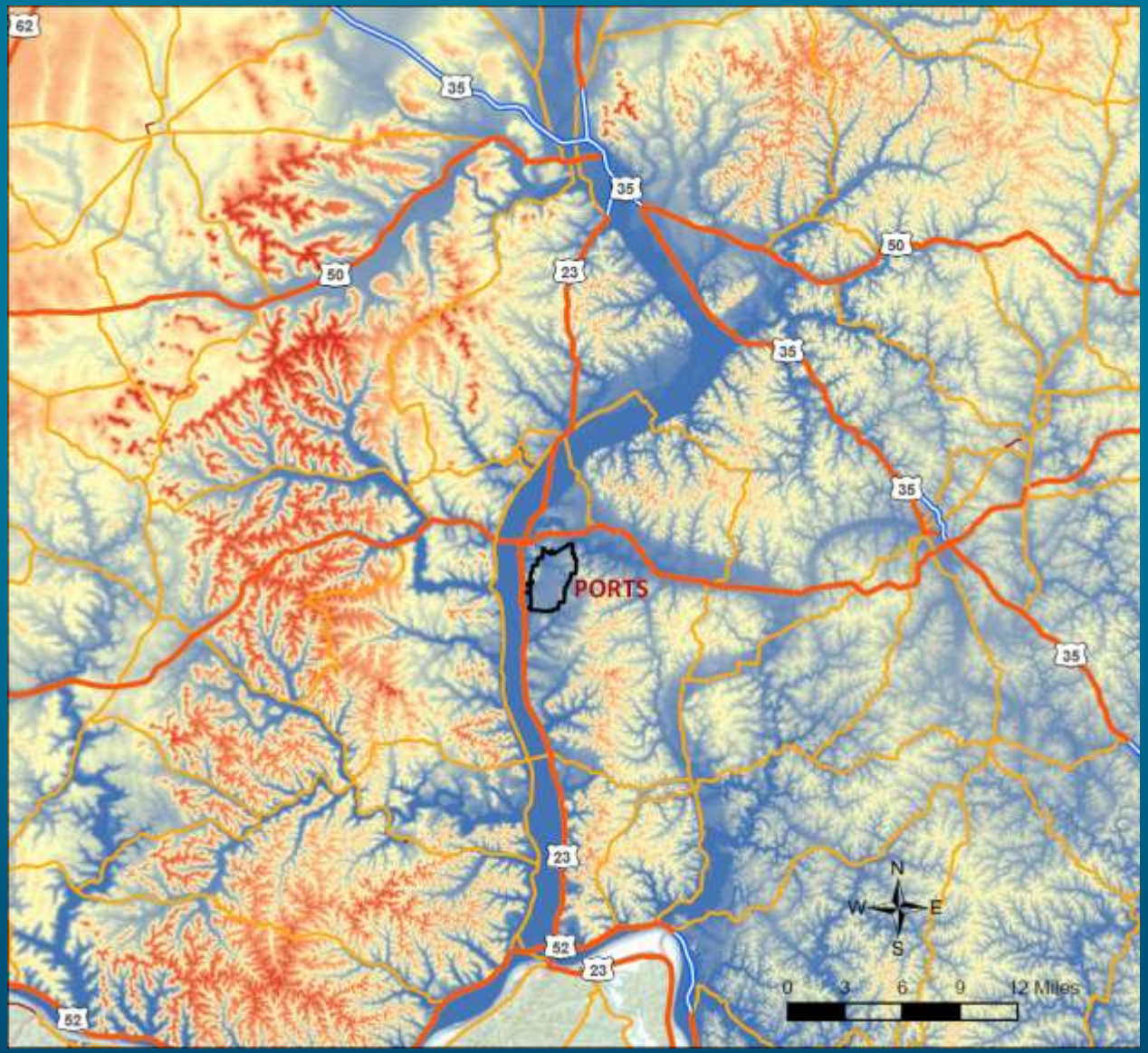
Regional Elevation Characteristics



OSIP, 2007

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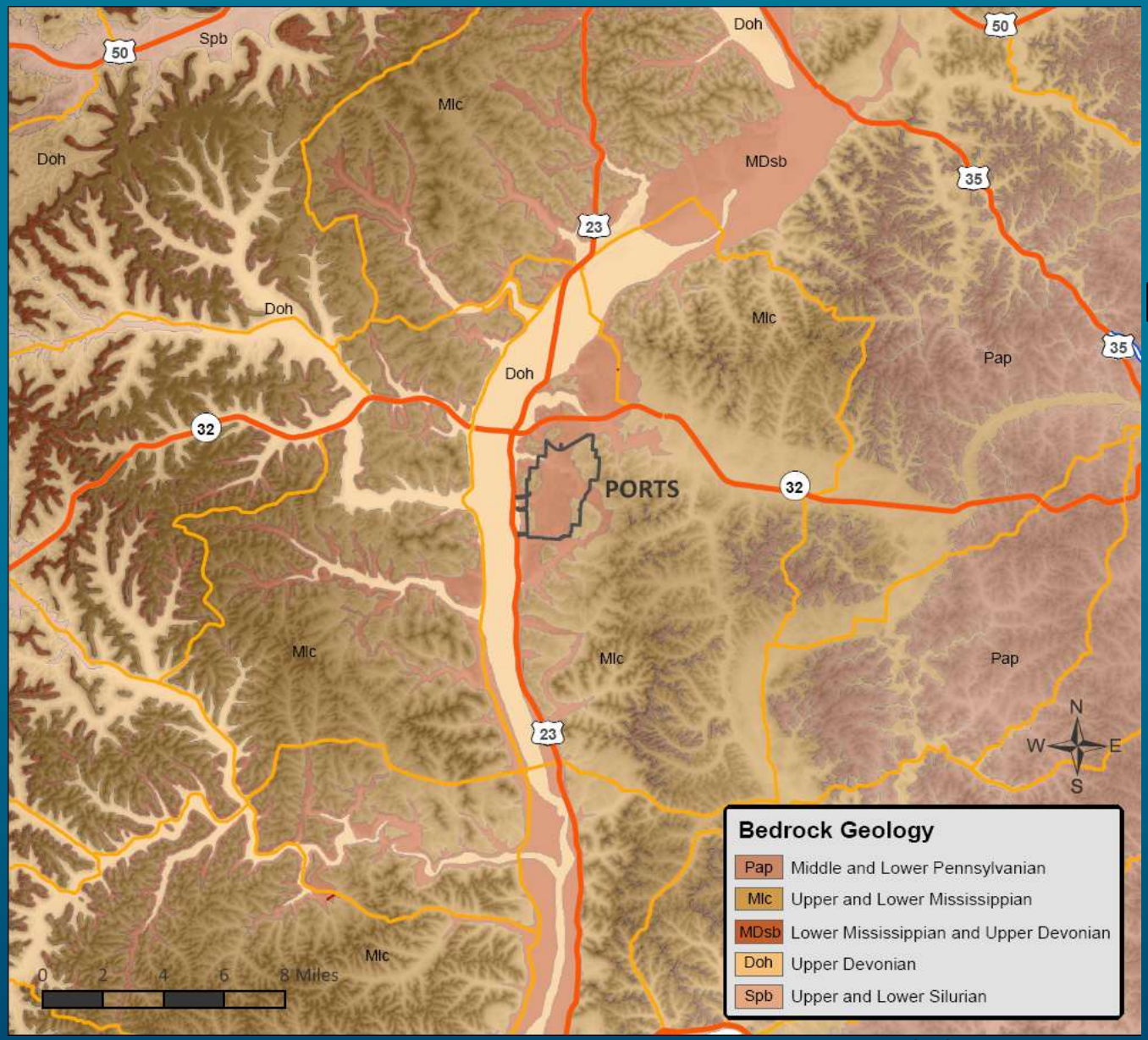
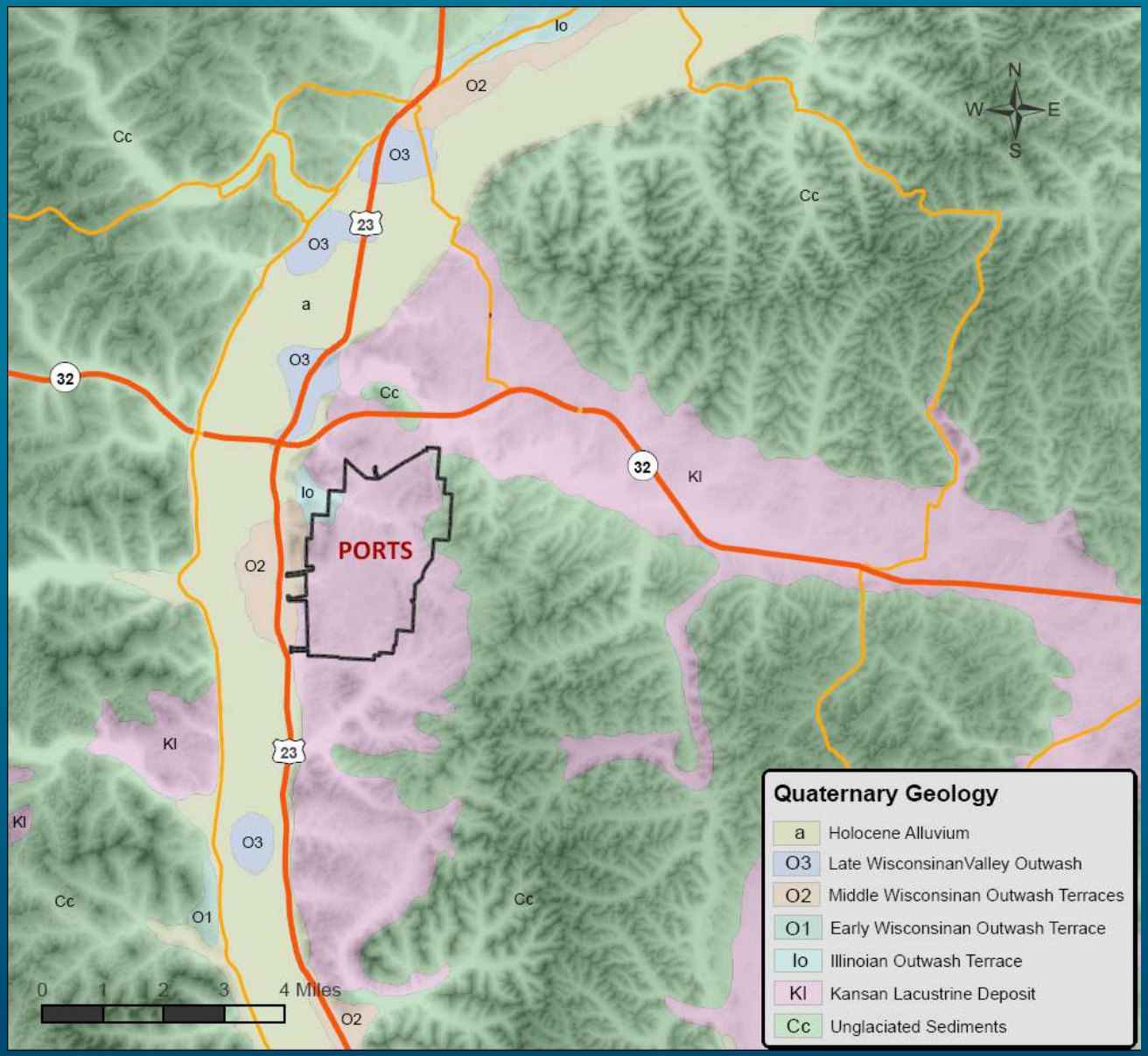
Dominant Bedrock Geology



Slucher, 2006

Dominant Surface Geology



Powers, 2004

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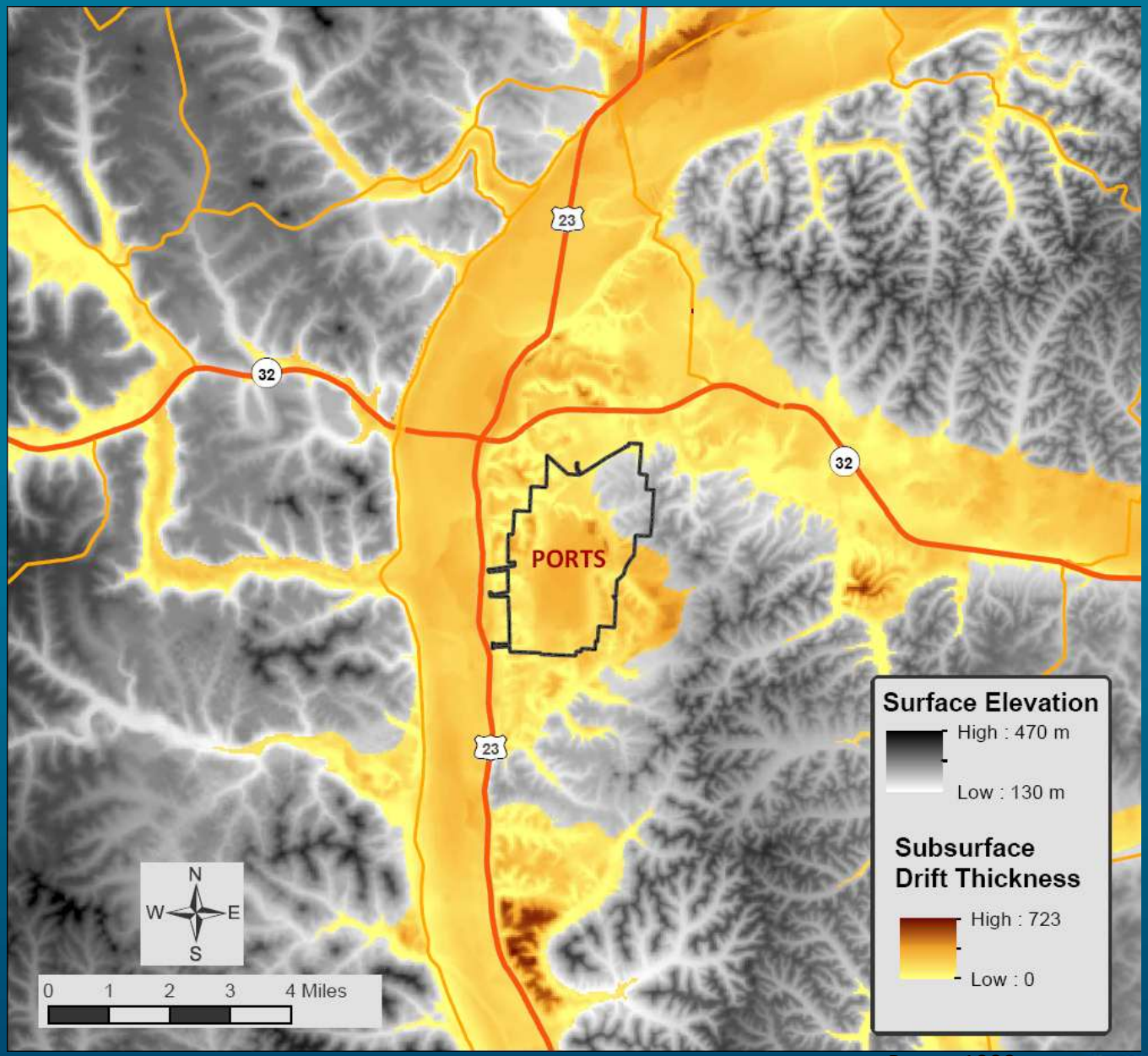
Regional Subsurface Characteristics



Pavey, 1999

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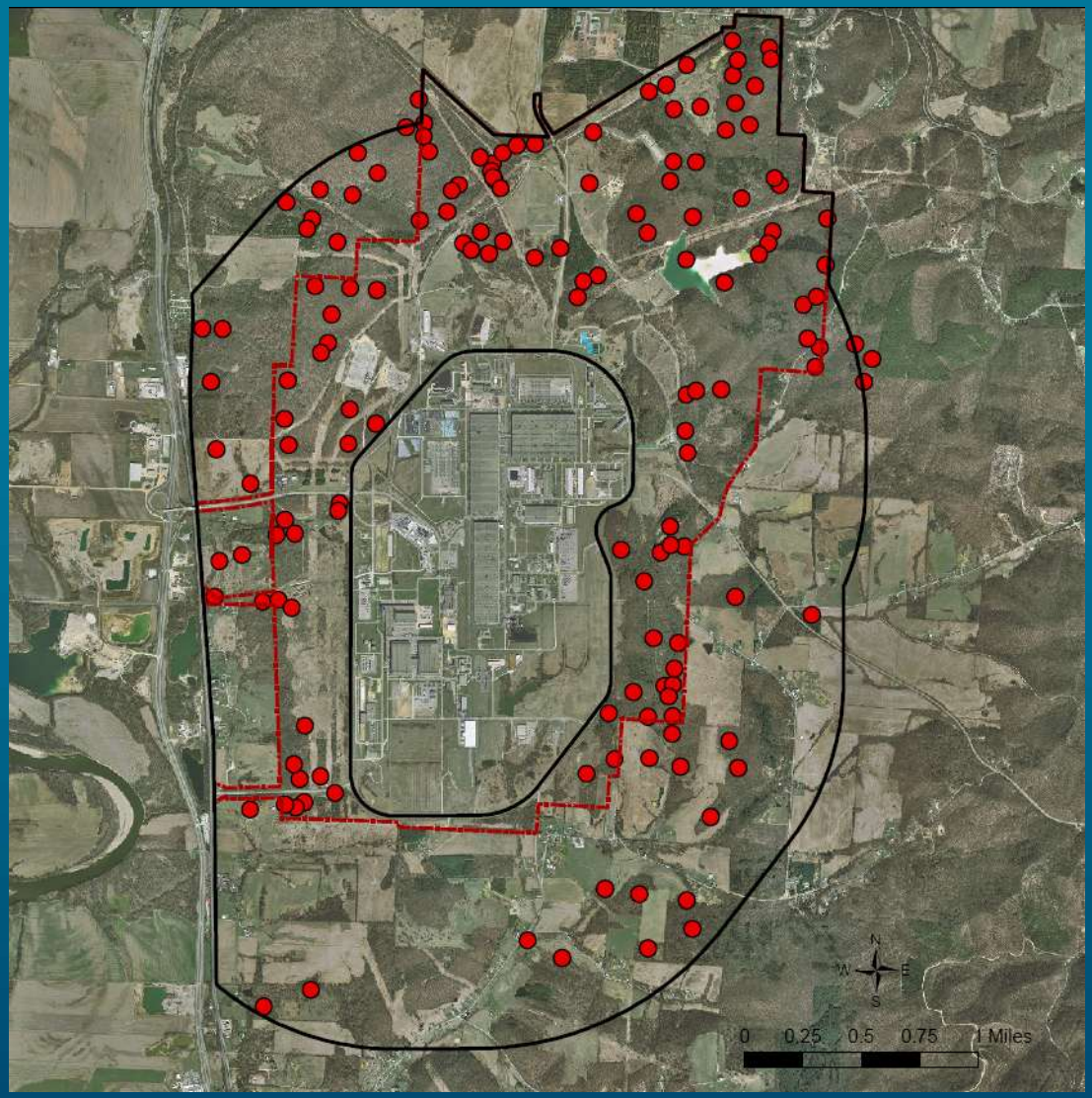
Quantitative Field Sampling Plots



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Data Collected in Quantitative Plots

- Tree species by name, diameter, count, age, vigor
- Vines, shrubs and saplings by name, count, height, age
- Herbs and grasses by name, % cover
- Shallow soil characterization by layer characteristics, drainage
- Forest floor by organic thickness, % and size of woody debris
- Slope, aspect, disturbance, fauna sign/nests

Translating Plant Species Occurrences and Field Data into Categorized Habitat Coverage

- 33 Cover Classes
- 152 Vegetation Plots
- 239 Tree Cores
- 122 Wood Cookies
- 361 Field Points
  - Unique plants
  - Animal signs
  - Field truthing points
- ~100 pressed plant vouchers

Palustrine Habitat

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Upland Habitats

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Successional Habitats and Anthropogenic Features

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Uncommon Plants

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WEEDS!

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Big Trees

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Insects


Spiny Oak-slug Moth


Great Spangled Fritillary


Bee-mimic Robber Fly


Protean Shieldback Katydid Nymph


Hercules Beetle


Larger Empty Oak Apple Gall Wasp

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Plant Species

- Nearly 600 vascular plant species field identified during this study
- Several are listed on State RTE list, but none from the Federal list were discovered
- Species List is the basis for habitat valuations, polygon classification, comparisons, wildlife habitat modeling and land planning recommendations

Species Nativity Summary

Nativity Status	Count	Percent
Noninvasive Native	474	81%
Invasive Native	33	6%
Planted or Naturalized Hybrid	9	2%
Noninvasive Alien	7	1%
Invasive Alien	65	11%
Grand Total	**588**	

Species List

	A	B	C	D	E	F	G	H	I	J	K	L
1	Date	Sample #	*Taxon*	Author	Common Name	Synonomy	Family	CODE	Nativity	Tolerance	Wetland Indicator	C of C
2	6/7/11	207E	*Achillea millefolium*	L.	Common Yarrow		Asteraceae	ACMI2	native	tolerant	FACU	1
3	6/5/11	RLW1	*Acer negundo*	L.	Boxelder		Aceraceae	ACNE2	native	midrange	FAC+	3
4	9/27/11	331A	*Actaea pachypoda*	Elliot	White Baneberry		Ranunuculaceae	ACPA	native	sensitive	UPL	7
5	5/13/11	274B	*Acer rubrum*	L.	Red Maple		Aceraceae	ACRU	native	tolerant	FAC	2
6	9/29/11	350A	*Acer saccharinum*	L.	Silver Maple		Aceraceae	ACSA2	native	midrange	FACW	3
7	5/13/11	274A	*Acer saccharum*	Marsh.	Sugar Maple		Aceraceae	ACSA3	native	midrange	FACU-	5
8	7/15/11	279A	*Acalypha virginica*	L.	Virginia Threeseed Mercury		Euphorbiaceae	ACVI	native	tolerant	FACU-	0
9	6/17/11	*210A*	*Aesculus glabra*	Willd.	Ohio Buckeye		Hippocastanacea	AEGL	native	sensitive	FACU+	6
10	5/25/11	207C	*Ageratina altissima*	(L.) King & H. R	White Snakeroot	Eupatorium rugos	Asteraceae	AGAL5	native	midrange	FACU	3
11	8/19/11	RLW_Field	*Agrostis gigantea*	L.	Redtop-grass	Agrostis alba	Poaceae	AGGI2	adventive	tolerant	FACW	0
12	6/5/11	RLW2	*Agrostis hyemalis*	(Walter) Britto	Winter Bentgrass		Poaceae	AGHY	native	midrange	FAC	3
13	9/9/11	RWL	*Agalinis linifolia*	Nutt.	Flaxleaf False foxglove		Scrophulariaceae	AGLI2				
14	9/27/11	GDC	*Agastache nepetoides*	(L.) Kuntze	Yellow Giant Hyssop		Lamiaceae	AGNE2	native	midrange	FACU	4
15	8/26/11	220A	*Agimonia parviflora*	Aiton	Harvestlice		Rosaceae	AGPA6	native	tolerant	FAC	2
16	6/15/11	230A	*Agrostis perennans*	(Walter) Tuck.	Autumn Bentgrass		Poaceae	AGPE	native	midrange	FACU	4
17	9/13/11		*Agalinis purpurea*	(L.) Pennell	Purple False Foxglove	Gerardia purpure	Scrophulariaceae	AGPU5	native	sensitive	FACW-	6
18	9/15/11	213A	*Agrimonia rostellata*	Wallr.	Beaked Agrimony		Rosaceae	AGRO3	native	midrange	FACU	5
19	9/29/11	GDC	*Agastache scrophulariifolia*	(Willd.) Kuntze	Purple Giant Hyssop		Lamiaceae	AGSC	native	midrange	UPL	4
20	9/13/11	246A	*Agalinis tenuifolia*	(Vahl) Raf.	Slenderleaf False Foxg	Gerardia tenuifol	Scrophulariaceae	AGTE3	native	midrange	FAC	4
21	9/27/11	GDC	*Ailanthus altissima*	(Mill.) Swingle	Tree-of-Heaven		Simaroubaceae	AIAL	adventive	tolerant	FACU-	0
22	8/26/11	220A	*Alopecurus pratensis*	L.	Meadow Foxtail		Poaceae	ALPR3	adventive	tolerant	FACW	0
23	8/26/11	221B	*Alisma subcordatum*	Raf.	American Water Plantain		Alismataceae	ALSU	native	tolerant	OBL	2
24	5/25/11	207B	*Allium vineale*	L.	Wild Garlic		Liliaceae	ALVI	adventive	tolerant	FACU-	0
25	8/26/11	220A	*Ambrosia artemisiifolia*	L.	Annual Ragweed		Asteraceae	AMAR2	native	tolerant	FACU	0
26	5/13/11	274A	*Amelanchier arborea*	(Michx.f.) Fern	Eastern Serviceberry		Rosaceae	AMAR3	native	midrange	FAC-	5
27	5/25/11	207B	*Amphicarpaea bracteata*	(L.) Fernald	American Hogpeanut		Fabaceae	AMBR2	native	midrange	FAC	4
28	10/5/11	349A	*Ampelopsis cordata*	Michx.	Heartleaf Peppervine		Vitaceae	AMCO2	native	sensitive	FAC+	7
29	8/10/11	251A	*Antennaria plantaginifolia*	(L.) Richardson	Women's Tobacco		Asteraceae	ANPL	native	tolerant	UPL	1
30	6/7/11	207E	*Antennaria solitaria*	Rydb.	Singlehead Pussytoes		Asteraceae	ANSO	native	midrange	UPL	3
31	8/26/11	230B	*Andropogon virginicus*	L.	Broomsedge Bluestem		Poaceae	ANVI2	native	midrange	FACU	3
32	8/19/11	RLW_Field	*Apios americana*	Medik.	Groundnut		Fabaceae	APAM	native	midrange	FACW	3
33	6/7/11	207E	*Apocynum cannabinum*	L.	Indianhemp		Apocynaceae	APCA	native	tolerant	FACU	1
34	9/27/11	GDC	*Aplectrum hyemale*	(Muhl. Ex Willd	Puttyroot		Orchidaceae	APHY	native	sensitive	FAC	7
35	6/5/11	RLW1	*Arnoglossum atriplicifolium*	(L.) H. Rob.	Pale Indian Plantain		Asteraceae	ARAT	native	sensitive	UPL	6
36	10/5/11	GDC	*Arabis canadensis*	L.	Sicklepod		Brassicaceae	ARCA	native	midrange	UPL	5
37	9/29/11	350A	*Arctium minus*	Bernh.	Lesser Burdock		Asteraceae	ARMI2	adventive	tolerant	FACU-	0
38	8/29/11	211B	*Aristolochia tomentosa*	Sims	Wooly Dutchman's Pipe		Aristolochiaceae	ARTO3	adventive	tolerant	FAC	0
39	6/17/11	*265B*	*Asclepias hirtella*	(Pennell) Woo	Green Milkweed		Asclepiadaceae	ASHI	native	sensitive	UPL	8
40	8/19/11	RLW_Field	*Asclepias incarnata*	L.	Swamp Milkweed		Asclepiadaceae	ASIN	native	midrange	OBL	4
41	9/28/11	331C	*Asplenium montanum*	Willd.	Mountain Spleenwort		Aspleniaceae	ASMO2	native	sensitive	UPL	7
42	5/13/11	None	*Asplenium platyneuron*	(L.) Britton, Ste	Ebony Spleenwort		Aspleniaceae	ASPL	native	midrange	FACU	3

PORTS FUTURE

Taxon	Common Name	Ohio State Special Status (2012-13)	On-Site PORTS
Acorus americanus	American Sweetflag	Potentially Threatened	YES
Ailanthus altissima	Tree-of-Heaven	Invasive	YES
Alliaria petiolata	Garlic Mustard	Invasive	YES
Berberis thunbergii	Japanese Barberry	Invasive	YES
Botrychium biternatum	Sparselobe grapefern	Endangered	YES
Bromus inermis	Smooth Brome	Invasive	YES
Calamagrostis porteri	Porter's Reedgrass	Threatened	YES
Carex bebbii	Bebb's Sedge	Potentially Threatened	YES
Celastrus orbiculatus	Oriental bittersweet	Invasive	YES
Conium maculatum	Poison Hemlock	Invasive	NO
Daucus carota	Queen Anne's Lace	Invasive	YES
Dipsacus fullonum	Teasel	Invasive	YES
Elaeagnus angustifolia	Russian Olive	Invasive	YES
Euonymus alatus	Burningbush	Invasive	YES
Eupatorium album	White Thoroughwort	Threatened	YES
Galium palustre	Common Marsh Bedstraw	Endangered	YES
Hesperis matronalis	Dames Rocket	Invasive	YES
Juncus secundus	Lopsided Rush	Potentially Threatened	NO
Krigia dandelion	Potato Dwarfdandelion	Threatened	YES
Ligustrum vulgare	European privet	Invasive	YES
Lonicera japonica	Japenese Honeysuckle	Invasive	YES
Lonicera maackii	Bush/Amur Honeysuckle	Invasive	YES
Luzula bulbosa	Bulbous Woodrush	Threatened	YES
Lysimachia nummularia	Moneywort	Invasive	YES
Melica nitens	Threeflower Melicgrass	Threatened	YES
Melilotus officinalis	Yellow Sweetclover	Invasive	YES
Microstegium vimineum	Asian Microstegium	Invasive	YES
Ornithogalum umbellatum	Star of Bethlehem	Invasive	NO
Packera paupercula	Balsam Groudsel	Threatened	NO
Piptochaetium avenaceum	Blackseed Speargrass	Endangered	NO
Polygala incarnate	Procession Flower	Endangered	YES
Potamogeton natans	Common Pondweed	Potentially Threatened	YES
Quercus marilandica	Blackjack Oak	Potentially Threatened	YES
Rosa blanda	Smooth Rose	Potentially Threatened	YES
Rosa multiflora	Multifloral Rose	Invasive	YES
Salix caroliniana	Coastal Plain Willow	Potentially Threatened	YES
Securigera varia	Crown Vetch	Invasive	YES
Solidago odora	Anisescented Goldenrod	Threatened	YES
Sorghum halepense	Johnsongrass	Invasive	YES
Typha angustifolia	Narrowleaf Cattail	Invasive	YES

Species Coefficient of Conservatism (C of C) Summary

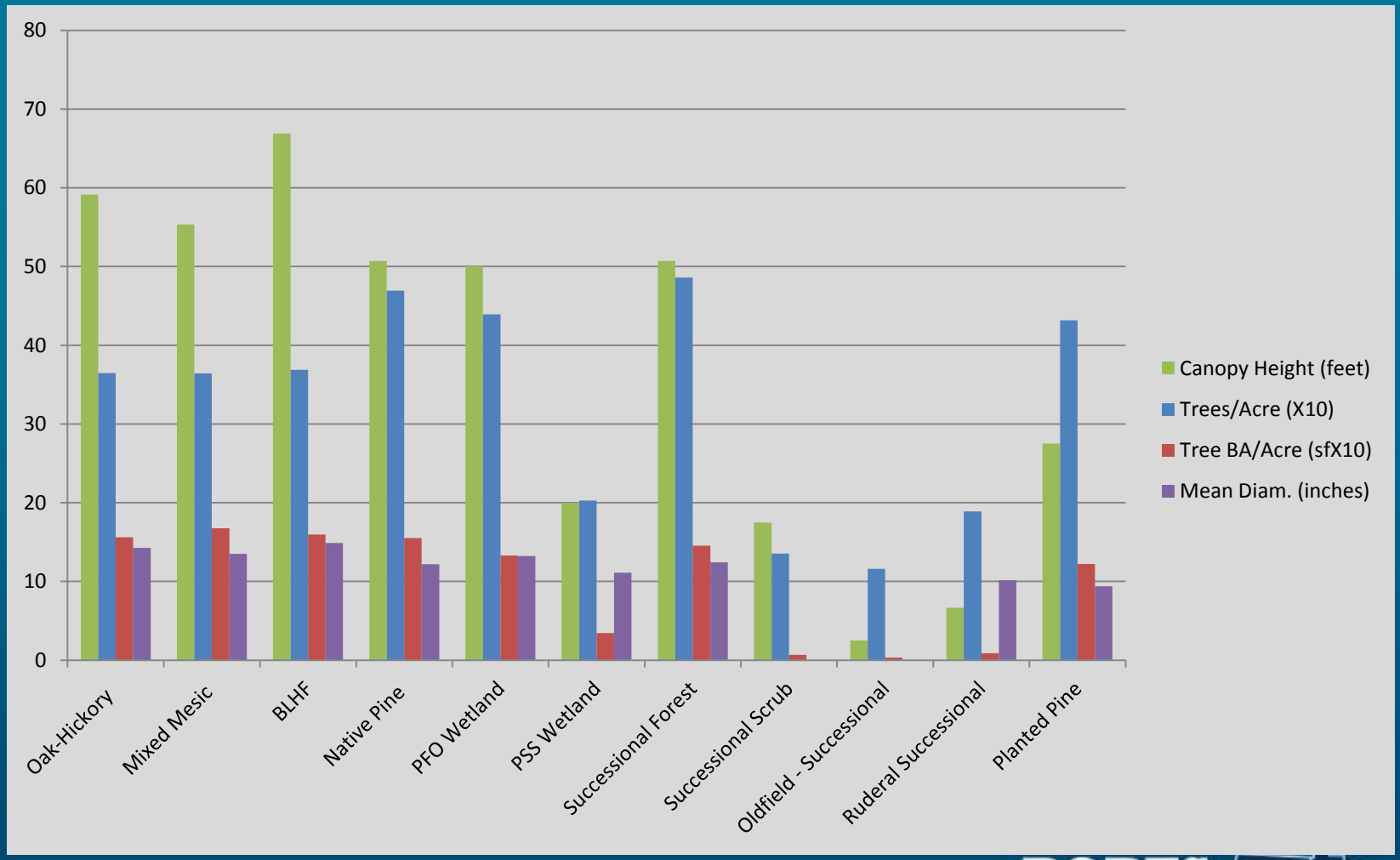
Rating	Description	Count	Percent
0	Plants with a wide range of ecological tolerances. Often these are opportunistic invaders of natural areas or native taxa that are typically part of a ruderal community.	98	17%
1 to 2	Widespread taxa that are not typical of (or only marginally typical of) a particular community.	96	16%
3 to 5	Plants with an intermediate range of ecological tolerances that typify a stable phase of some native community but persist under some disturbance.	259	44%
6 to 8	Plants with a narrow range of ecological tolerances that typify a stable or near "climax" community.	127	22%
9 to 10	Plants with a narrow range of ecological tolerances that exhibit relatively high degrees of fidelity to a narrow range of habitat requirements.	8	1%

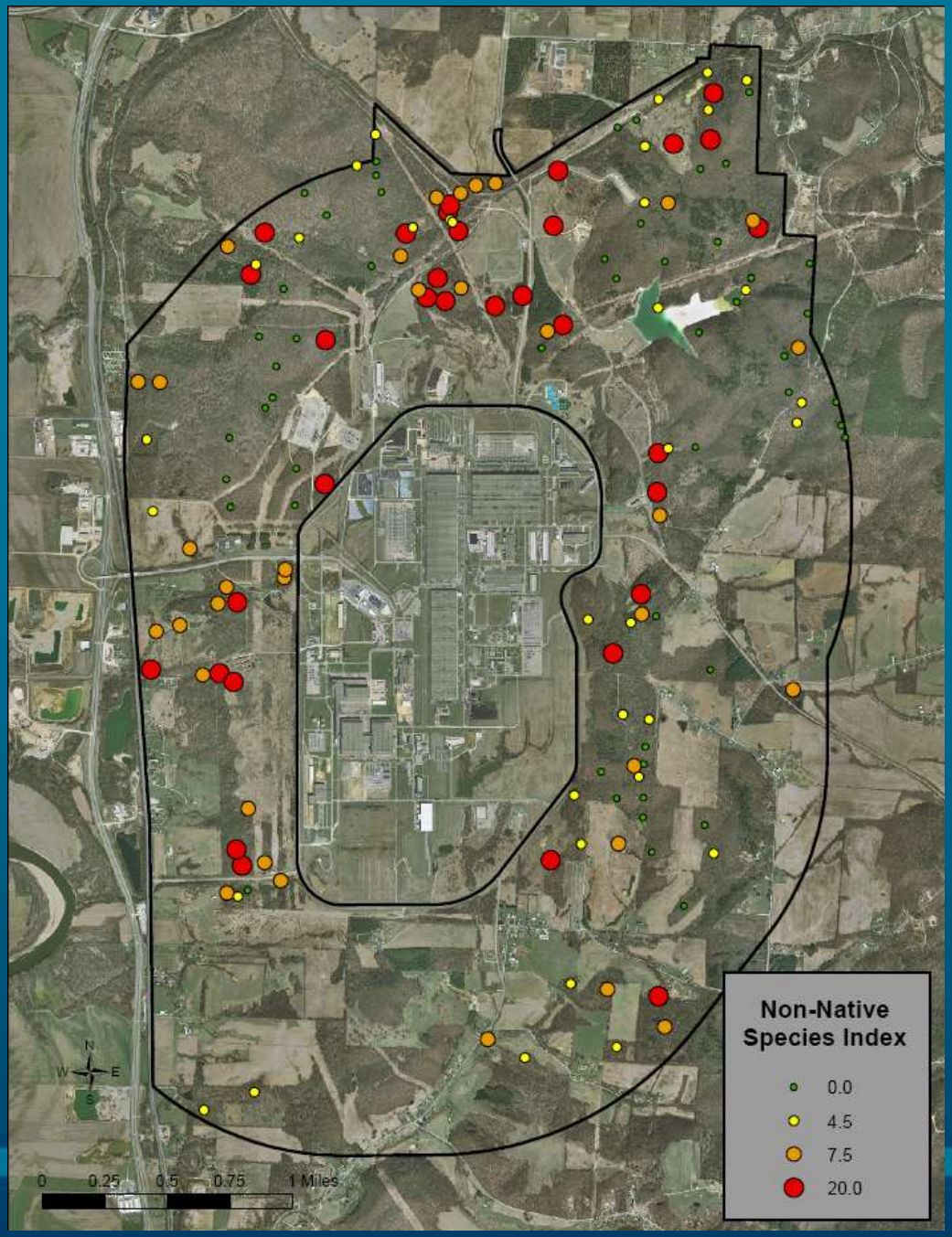
Habitat Delineation Process

- Heads Up Digitization: Bringing together the supporting GIS layers and the Field Data
- Classification of features based upon species composition and physical characteristics
- All land surfaces were considered to be some element of habitat


N
W
E
S
0 0.25 0.5 0.75 1 Miles
Ross
Pike
Jackson
Scioto

Forest Cover by Habitat





Dominance by Non-native Species

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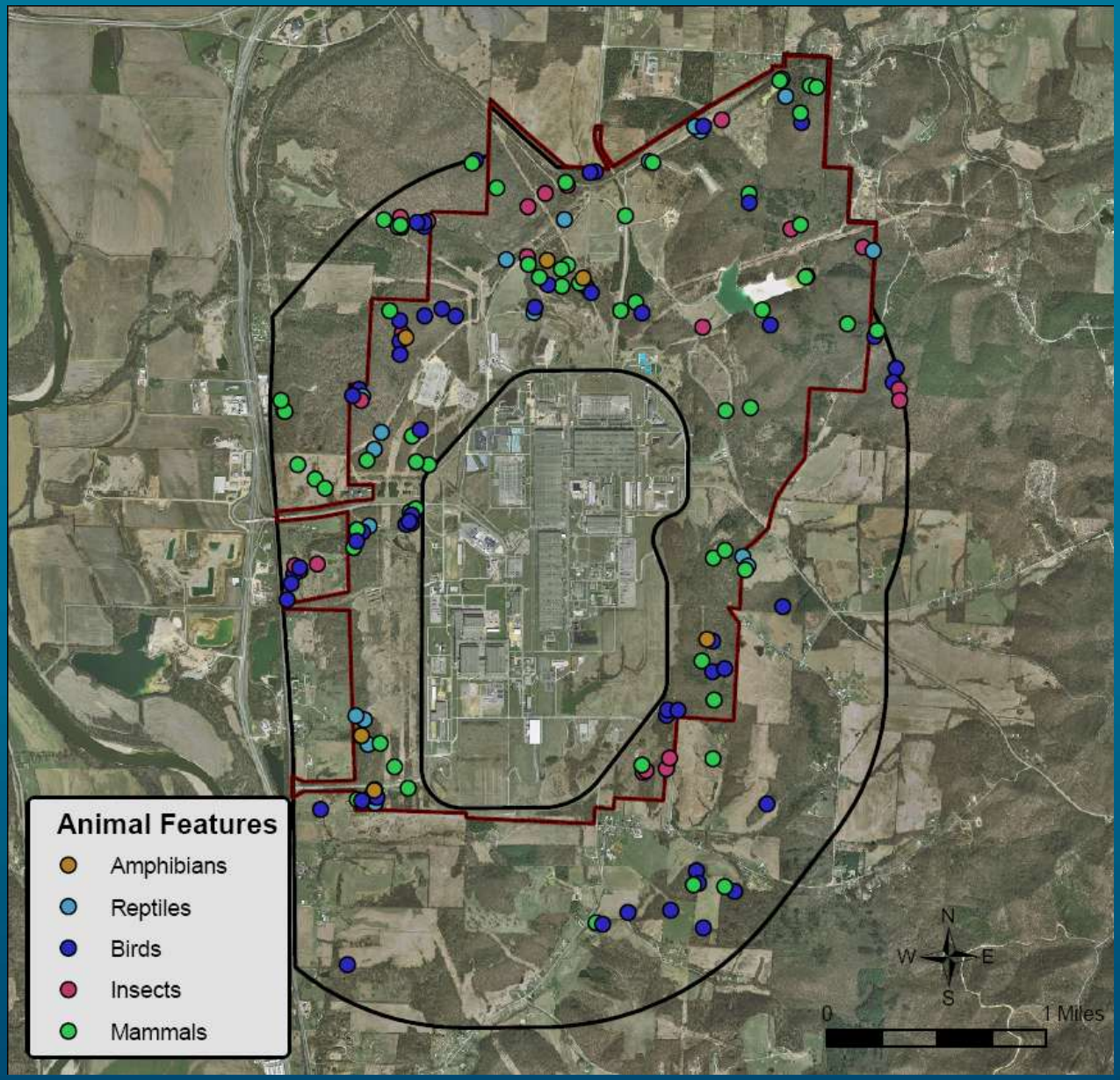
Field Observations of Wildlife



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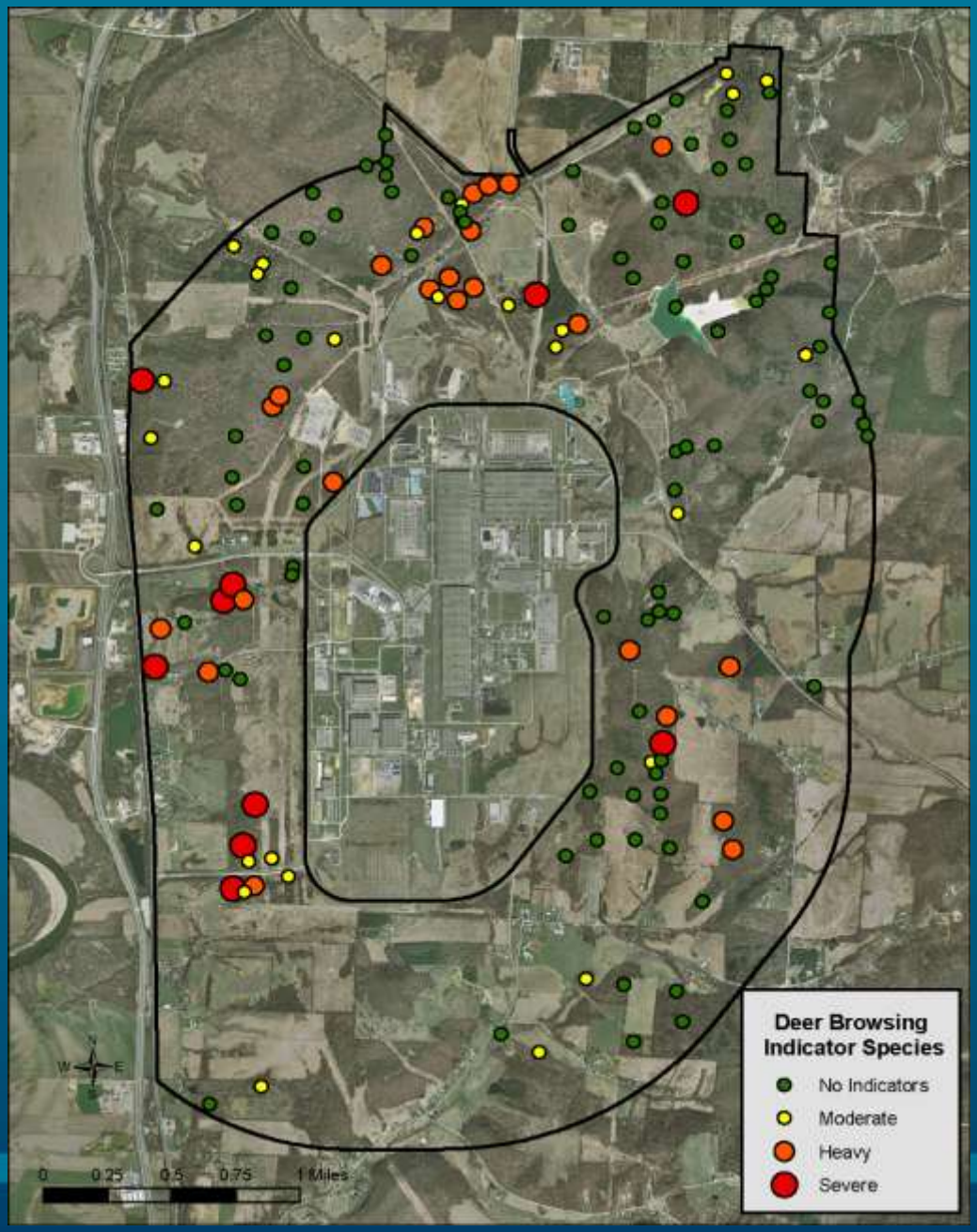
Species-Based Evidence of Deer Browsing



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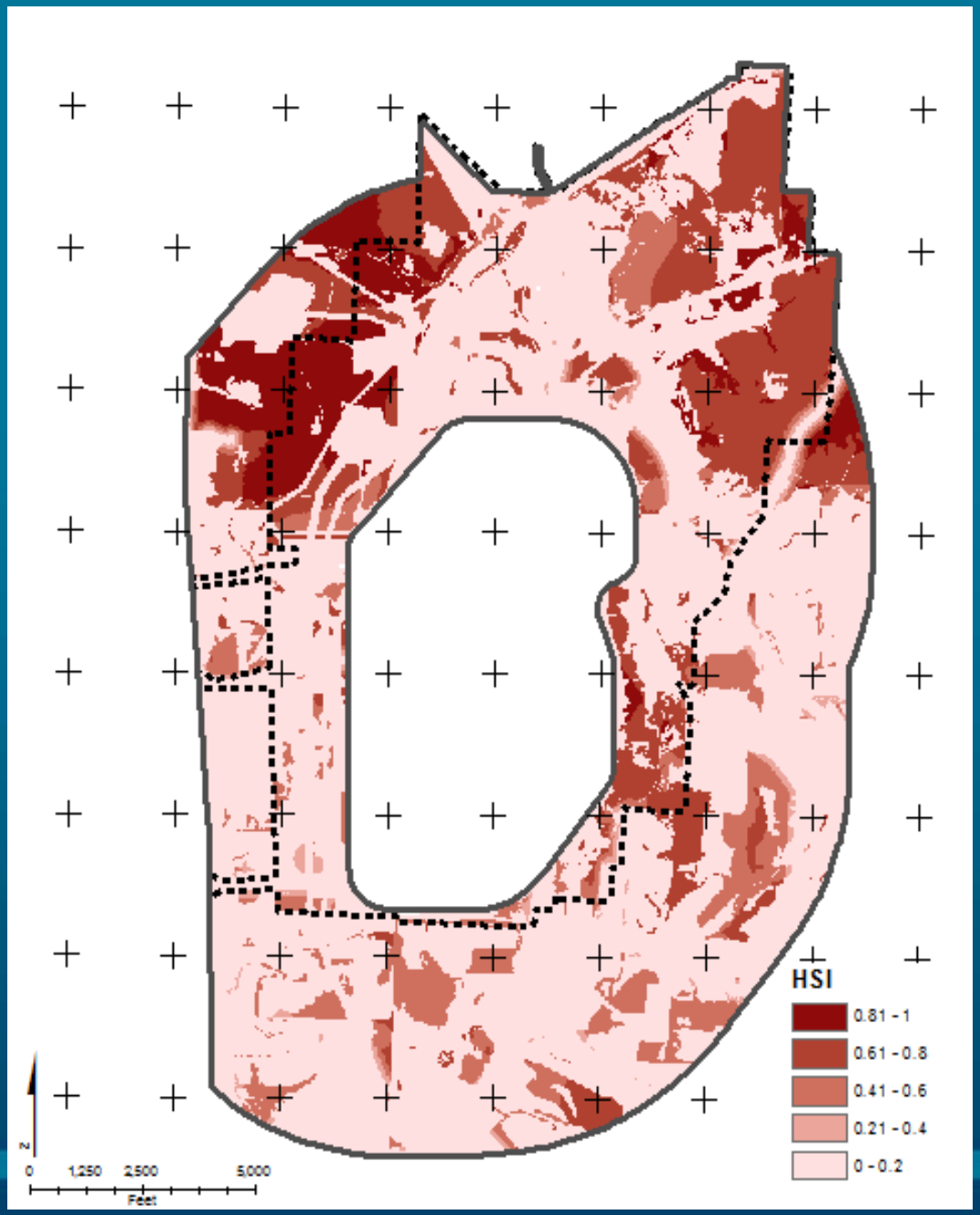
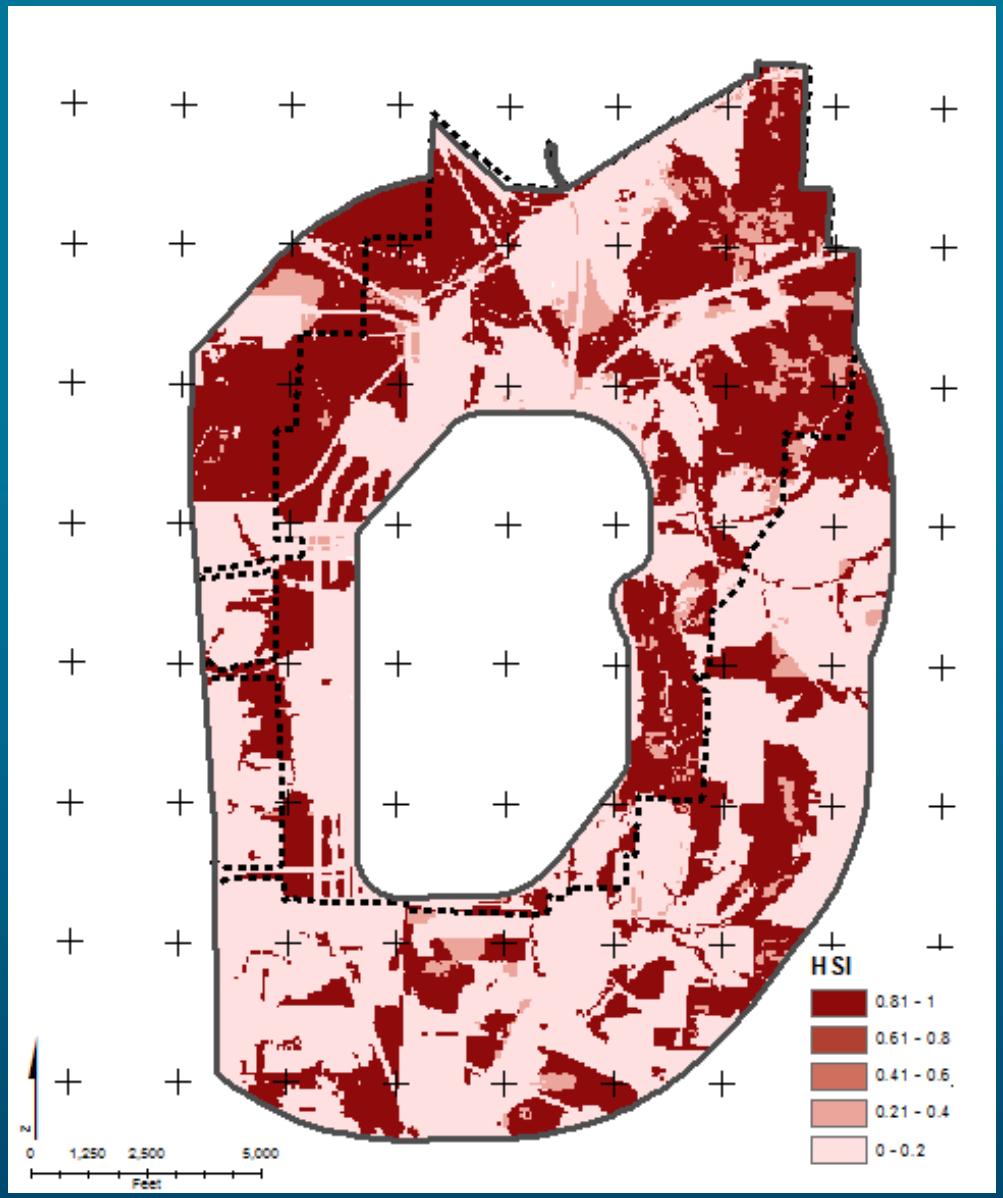


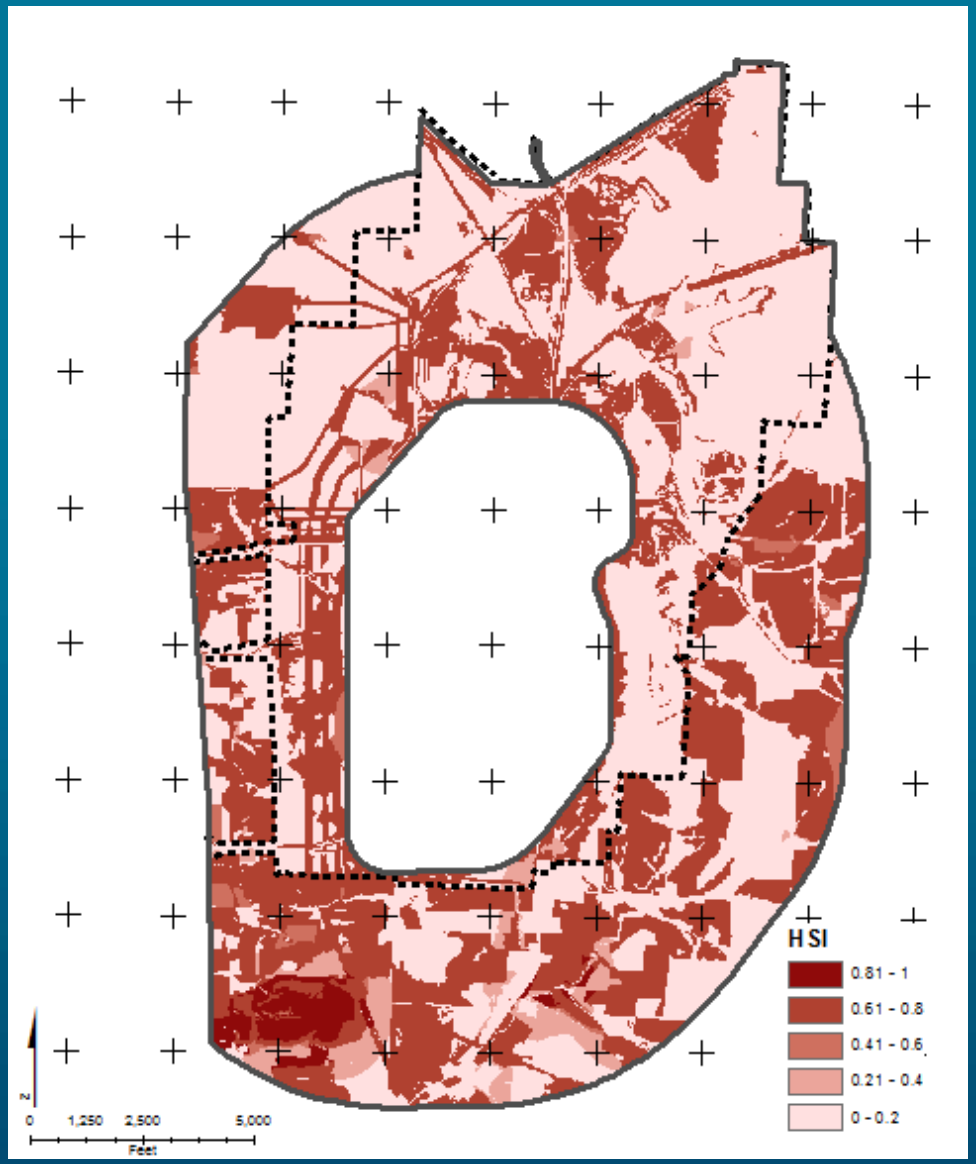
HSI Analysis: Timber Rattlesnake *Crotalus horridus*

PORTS FUTURE



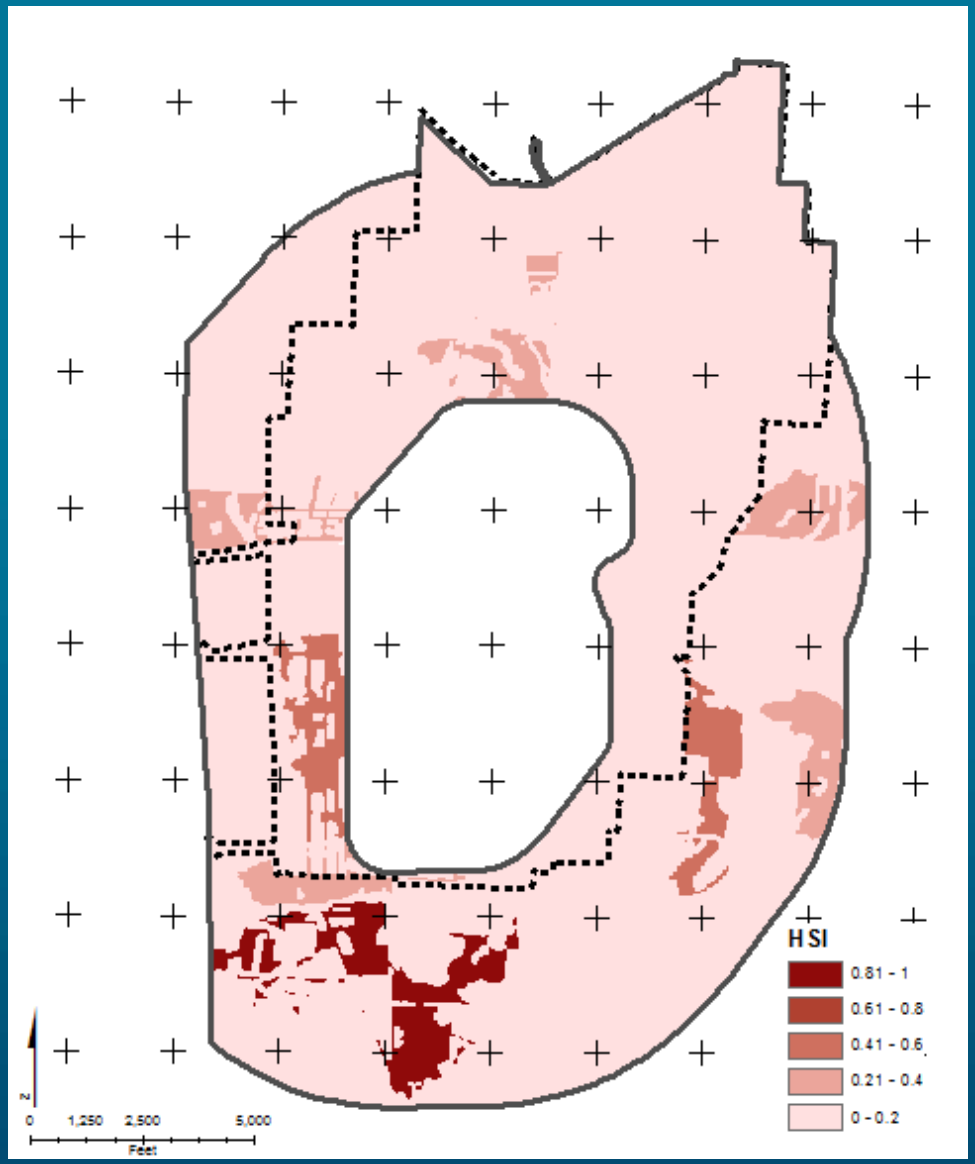
HSI Analysis: Wood Thrush *Hylocichla mustelina*

PORTS FUTURE



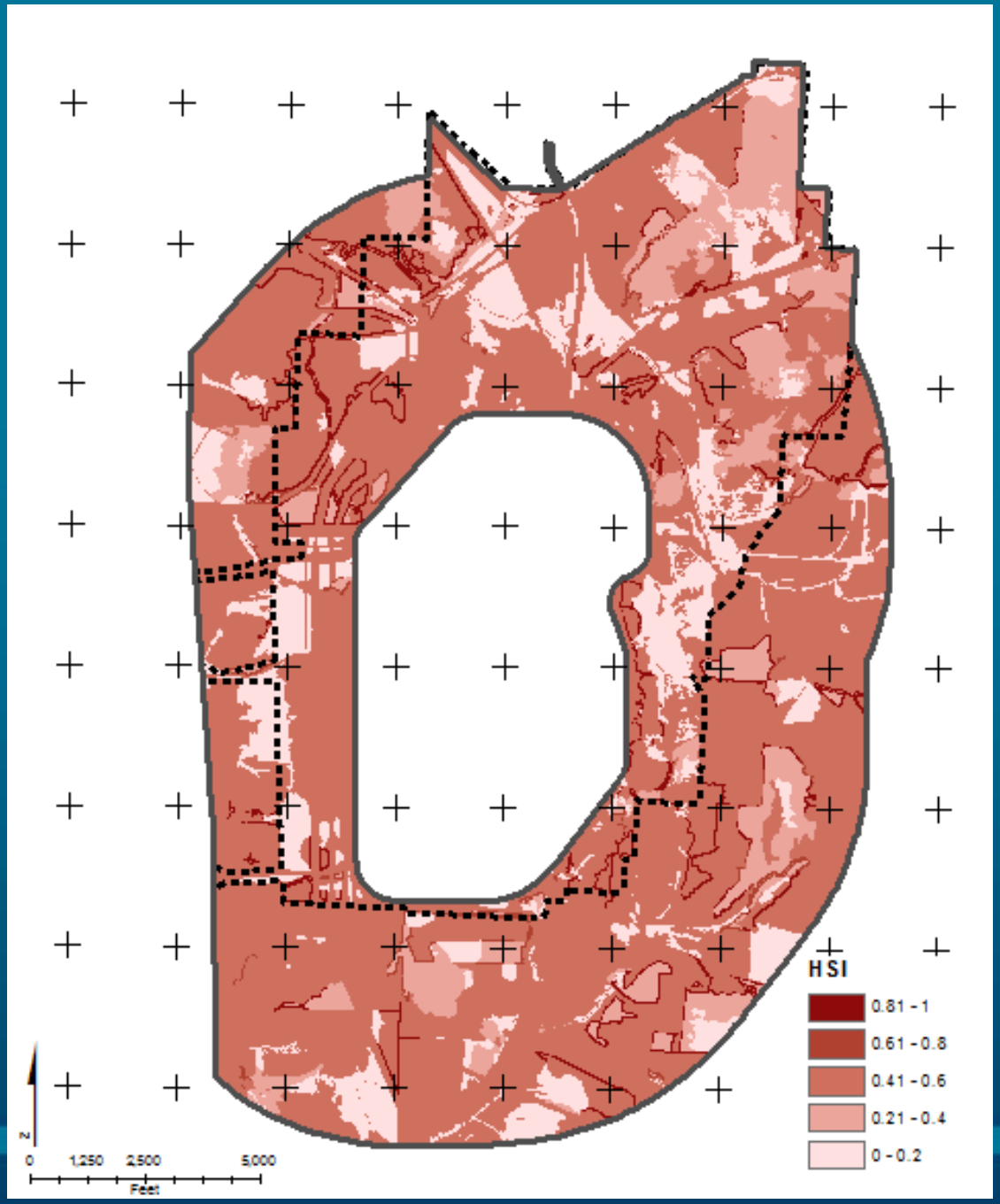
HSI Analysis: Northern Bobwhite *Colinus virginianus*

PORTS FUTURE



HSI Analysis: Henslow's Sparrow *Ammodramus henslowii*

PORTS FUTURE



HSI Analysis: Indiana Bat *Myotis sodalis*

PORTS FUTURE

Questions?

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