Isolated Natural Resource Area Delineation Report

Campus Drive Property

Village of Hartland, Waukesha County, Wisconsin

March 3, 2020

Project Number: 20190274

506 Springdale Street | Mount Horeb, WI 53572 | www.heartlandecological.com

Campus Drive Property

Village of Hartland, Waukesha County, Wisconsin

March 3, 2020

Prepared for:

Mr. Bryan Lindgren

Neumann Developments, Inc.

N27 W24025 Paul Court

Suite 100

Pewaukee, WI 53072

Prepared by:

Heartland Ecological Group, Inc.

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Mount Horeb, WI 53572

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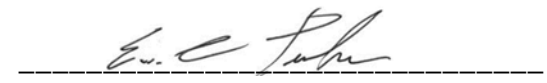


Eric C. Parker, Principal

Jeff Kraemer, Principal

Solutions for people, projects, and ecological resources.

Table of Contents

1.0 Introduction

Heartland Ecological Group, Inc. (“Heartland”) performed a delineation of environmental corridor of the Campus Drive Property (the “Study Area”). Fieldwork was completed on February 25, 2020 by Eric C. Parker (Appendix D, Qualifications). The 53.3-acre Study Area is located east of Campus Drive and north of State Highway 16, in Section 34, Township 8 north, Range 18 east, Village of Hartland, Waukesha County, Wisconsin (Figure 1, Appendix A). The purpose of the environmental corridor delineation was to determine the location and extent of isolated natural resource area (INRA) within the Study Area, refining boundaries most recently defined and mapped by the Southeastern Wisconsin Regional Planning Commission (SEWRPC) in 2010.

One (1) area of INRA totaling approximately 39.9 acres was delineated and mapped within the Study Area (Figure 7, Appendix A). SEWRPC was consulted prior to Heartland’s fieldwork in the refinement of the INRA. SEWRPC initially defines environmental corridor areas which are then adopted by local municipalities, townships, and counties as part of their zoning codes. Such entities have authority via zoning over environmental corridors. Heartland recommends this report be submitted to the Village of Hartland for their review.

2.0 Methods

2.1 Environmental Corridors

Per the "Development Exhibit" provided by SEWRPC (Exhibit B) the INRA in the Study Area is approximately 16.4 acres. SEWRPC's delineation is based on 2010 GIS data and the Village of Hartland's Smart Growth Plan & Zoning Map. Over time the adopted boundary may require adjustment due to changing conditions and, due to scale, the original mapping may not be accurate. Therefore, a delineation of the existing INRA was needed for the Village to evaluate a pending tree protection and building permit. Fieldwork was completed by Eric Parker of Heartland on February 25, 2020.

Initial steps in the corridor (e.g. INRA) delineation refinement may include a review of:

- Aerial photography
- NRCS's *Web Soil Survey*
- USGS 7.5-minute Wisconsin quadrangle map and available topographic maps
- WWI Mapping
- SEWRPC Corridor Composite Map or similar mapping

These and other similar documents may provide evidence of where environmental corridors were previously identified in addition to adjacent areas that possess the required elements. Potential corridor areas were visited and on-site delineations were made.

Heartland conducted a field review and applied the definitions, criteria, and guidelines outlined in "Refining the Delineation of Environmental Corridors in Southeastern Wisconsin" (Rubin and Emmerich, 2000). Field conditions were compared with aerial photography to assess changes in land use and/or vegetative cover. SEWRPC defines environmental corridors such as INRA as …"areas in the landscape containing concentrations of natural resource amenities, as well as scenic, recreational, and historic resource amenities. These corridors generally lie along the major stream valleys, around major lakes, and in the Kettle Moraine area of southeastern Wisconsin. Almost all the remaining high-value woodlands, wetlands, wildlife habitat areas, major bodies of surface water, and delineated floodlands and shorelands are contained within these corridors."

SEWRPC initially identified environmental corridors (including INRA's, primary environmental corridor – PEC, and secondary environmental corridor - SEC) within southeastern Wisconsin through aerial photographic interpretation. Over the course of many years many have been field reviewed by SEWRPC staff biologists and other qualified professionals. The following are definitions for these terms:

- PEC contains concentrations of our most significant natural resources. They are at least 400 acres in size, at least two miles long and at least 200 feet wide.
- SEC contains significant but smaller concentrations of natural resources. They are at least 100 acres in size and at least one mile long, unless serving to link primary corridors.
- INRA contains significant remaining resources apart from environmental corridors. They are at least five acres in size and at least 200 feet wide.

If soil limitations were part of the criteria, soil types were confirmed during the field inspection. Changes in wildlife habitat and/or environmental corridor width were noted. Heartland identified key natural resource base elements including:

- Lakes, rivers, and streams
- Wetlands
- Prairie remnants
- Rugged terrain and steep slopes
- Poorly drained and organic soil
- Potential outdoor recreation sites
- Historic sites and structures
- Undeveloped shorelands and floodlands
- Woodlands
- Wildlife habitat
- Unique landforms
- Existing outdoor recreation sites
- Significant open spaces
- Outstanding scenic areas and vistas

Point values of each base element were summed, and those areas with 10 or more points and met the minimum size and width requirements were identified as environmental corridor.

Heartland typically identifies environmental corridors within the Study Area and determines boundaries by finding the outer drip line of contiguous trees of a woodland comprised of trees at least four (4) inches in diameter at breast height with a minimum density of 17 trees per acre and producing greater than 50% canopy cover. Steep slopes, woodlands, scenic views, and wildlife habitat elements were combined to determine the outer edge of environmental corridors.

Staff at SEWRPC were consulted on February 25, 2020 prior to Heartland's fieldwork to assist in the establishment of the natural resource base elements that comprise the INRA in the Study Area. Based on this consultation the INRA in the Study Area is comprised of woodland, steep slopes, and significant wildlife habitat.

3.0 Results

3.1 Site Description

The Study Area is mostly undeveloped woodland with relatively small areas of stormwater management features, historic soil stockpile areas, and trails. The topography within the Study Area was noted to be hilly with various slopes, depressions, and ridges. A topographic high of approximately 1030 feet above mean sea level (msl) is present southwest portion, while topographic lows of approximately 955 feet above msl is present on the western edge of the Study Area (Figures 2 and 7, Appendix A). Land uses within the Study Area and surrounding areas are primarily woodland, wetland, institutional, and residential. General drainage is to the east.

3.2 Isolated Natural Resource Area (INRA)

One INRA area was identified within the Study Area and is depicted on Figure 7 in Appendix A. The natural resource elements within the INRA area included mostly woodlands, but also included wetlands, steep slopes, and significant wildlife habitat. A Photo Log is included in Appendix C.

Tree species comprising the canopy were dominated by black cherry (*Prunus serotina*), red oak (*Quercus rubra*, FACU), white oak (*Quercus alba*), quaking aspen (*Populus tremuloides*), red cedar (*Juniperus virginiana*), shagbark hickory (*Carya ovata*), box elder (*Acer negundo*), American basswood (*Tilia americana*), and American elm (*Ulmus americana*). Dominant shrub species within the INRA included common buckthorn (*Rhamnus cathartica*) and hybrid bush honeysuckle (*Lonicera X bella*).

The edge of the INRA was identified by the outer drip line of the trees that comprise the INRA's woodland canopy. In limited locations what appeared to be a canopy was excluded because it was dominated by ash (*Fraxinus* spp.) trees that were either dead or in poor health due to emerald ash borer. In other areas, a canopy of tree-size common buckthorn was also excluded.

3.3 Other Environmental Considerations

This report is limited to the identification of environmental corridors within the Study Area. Wetlands within the Study Area were previously delineated and were entirely within the INRA. There may be other regulated environmental features within the Study Area, including, but not limited to, historical or archeological features, endangered or threatened species, navigable waters, and floodplains, etc. Federal, state, and local units of government may have regulatory authority to control or restrict land uses within or near these features. Heartland can assist with identification and/or assessment of additional regulated resources at your request, to the extent that the work is within our range of expertise.

4.0 Conclusion

Heartland performed a delineation of INRA in the Campus Drive Study Area. The Study Area was approximately 53.3 acres and is located east of Campus Drive and north of State Highway 16, in Section 34, Township 8 north, Range 18 east, Village of Hartland, Waukesha County, Wisconsin (Figure 1, Appendix A). The purpose of the environmental corridor delineation was to determine the location and extent of INRA within the Study Area, refining boundaries most recently defined and mapped by SEWRPC in 2010 (Figure 7, Appendix A).

The boundary of the INRA within the Study Area was identified and delineated with a sub-meter GPS. The INRA area was comprised of various combinations of natural resource elements including woodlands, steep slopes, a wetland, and wildlife habitat.

Environmental corridor designations were created by SEWRPC and adopted by local municipalities, townships, and counties. These local entities have authority over the extension of sanitary sewers under the oversight of SEWRPC. Heartland recommends this report be submitted to the local zoning authority for final jurisdictional review and concurrence.

Prior to beginning work at this site or disturbing or altering environmental corridors in any way, Heartland recommends that the owner obtain the necessary permits or other agency regulatory review and concurrence with regards to the proposed work to comply with applicable regulations. Heartland can assist with identification and/or assessment of additional regulated resources at your request, to the extent that the work is within our range of expertise.

The information provided by Heartland regarding corridor boundaries is a scientific-based analysis of the component natural resource elements present within the Study Area at the time of the fieldwork. The delineation was performed by experienced and qualified professionals using standard practices and sound professional judgment. The ultimate decision on corridor boundaries rests with SEWRPC or a local unit of government. As a result, there may be adjustments to boundaries based upon review by their staff.

5.0 References

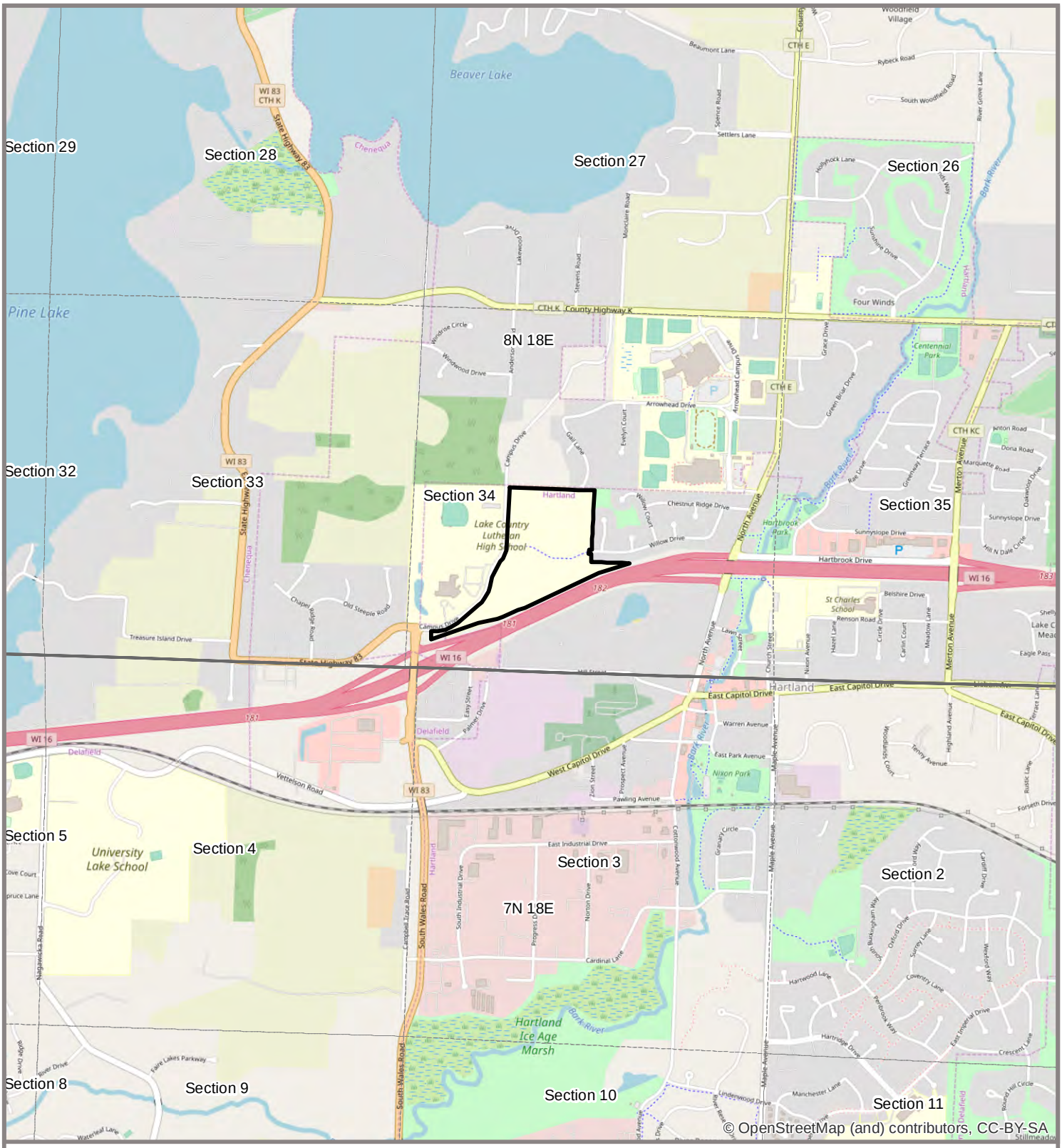
Rubin, B. P. and G. H. Emmerich Jr. 2000. Refining the Delineation of Environmental Corridors in Southeastern Wisconsin, Southeastern Wisconsin Regional Planning Commission Technical Record Vol. 4 No. 2. 1981.

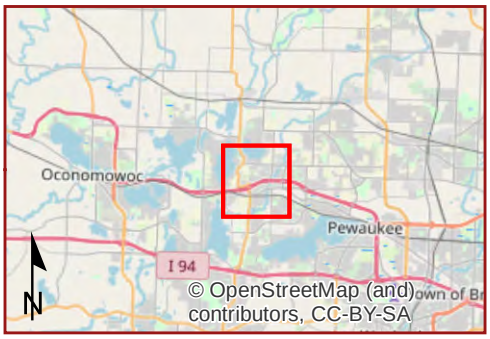
Southeastern Wisconsin Regional Planning Commission (SEWRPC) July 2019. Development Exhibit “Lake Country Lutheran”, East 53.3 Acres, Village of Hartland, WI. Includes 2010 INRA mapping.

United States Geological Survey (USGS). Wisconsin 7.5 Minute Series (Topographic) Maps. 1:24,000. Reston, VA: United States Department of the Interior, USGS.

Wilhelm, G, and L. Rericha. 2017. Flora of the Chicago Region, a Floristic and Ecological Synthesis. Indiana Academy of Science.

Appendix A | Figures





Study Area (53.32 ac)

PLSS Township

PLSS Section

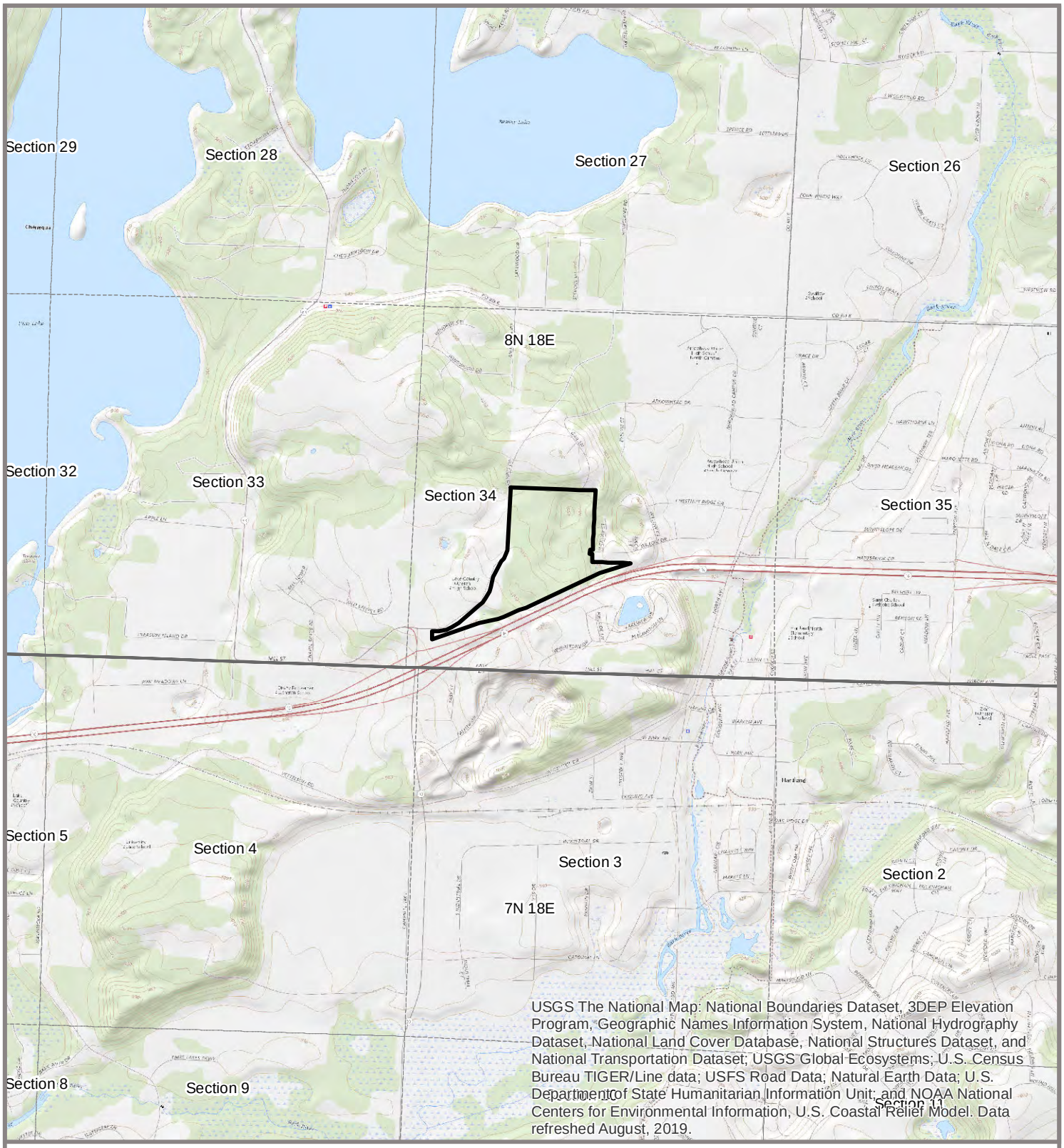
0 1,000 2,000 Ft

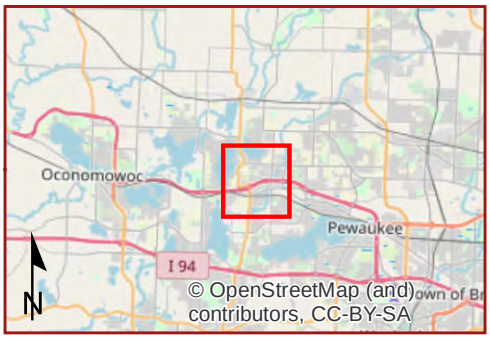
Heartland ECOLOGICAL GROUP INC

Figure 1. Project Location

Campus Drive Parcel
Project #20190274
T8N, R18E, S34
V Hartland,
Waukesha Co, WI

OpenStreetMap
Data: ESRI 12/10/2019





Study Area (53.32 ac)

PLSS Township

PLSS Section

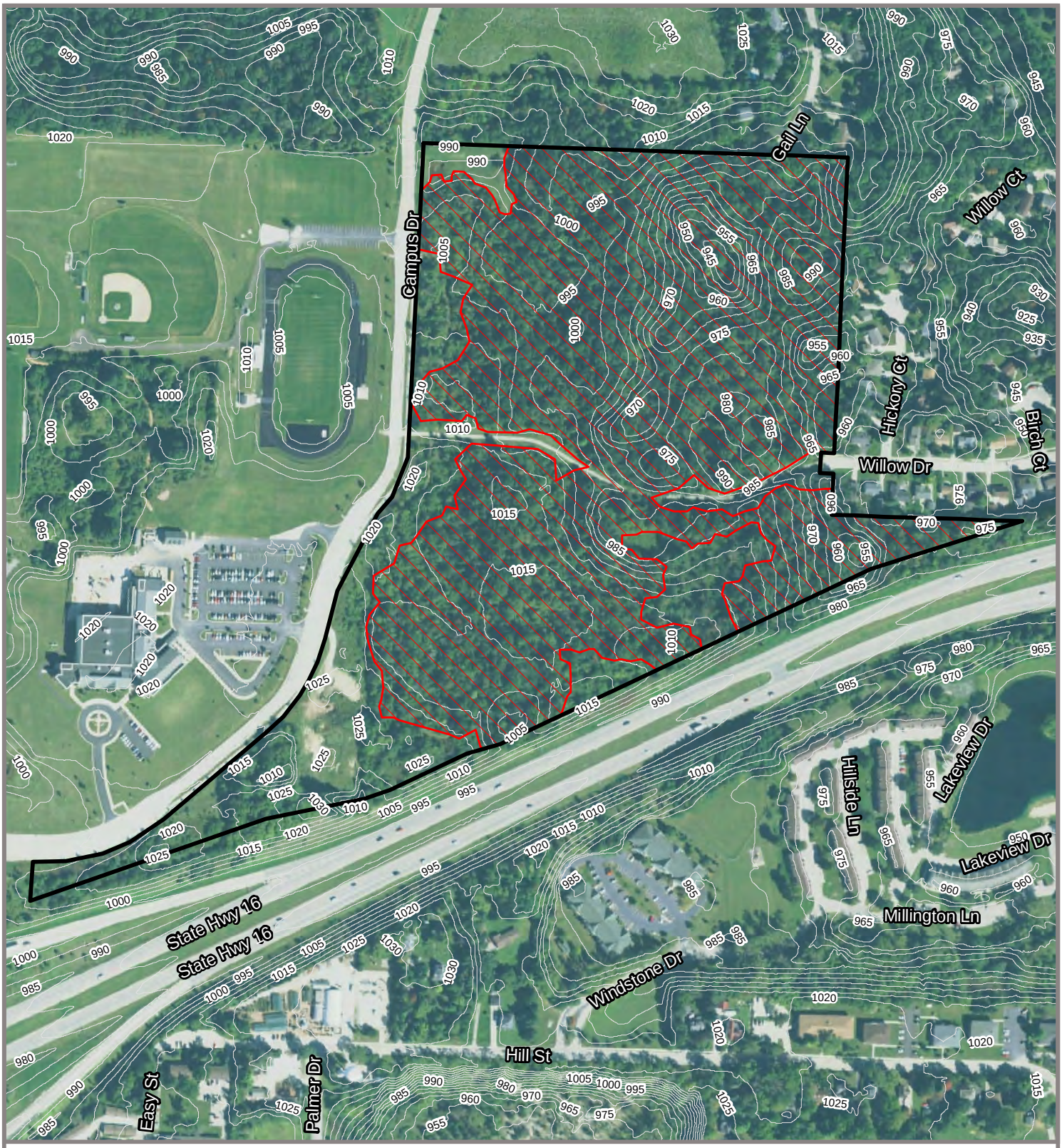
0 1,000 2,000 Ft

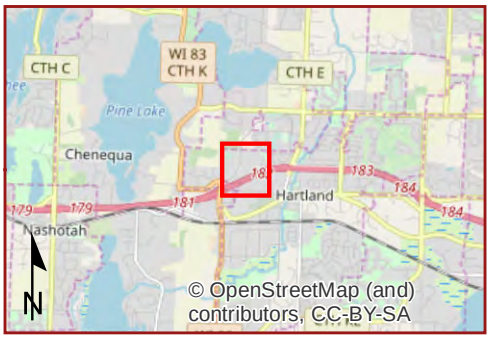
Heartland ECOLOGICAL GROUP INC

Figure 2. USGS Topography

Campus Drive Parcel
Project #20190274
T8N, R18E, S34
V Hartland,
Waukesha Co, WI

USGSTopo
Data: USGS *12/10/2019*





Study Area (53.32 ac)

Areas Meeting INRA Criteria in Feb. 2020 (39.90 ac)

Waukesha Co 5' Contours

0 200 400 Ft

Heartland ECOLOGICAL GROUP INC

Figure 7. INRA Mapping

Campus Drive Parcel
Project #20190274
T8N, R18E, S34
V Hartland,
Waukesha Co, WI

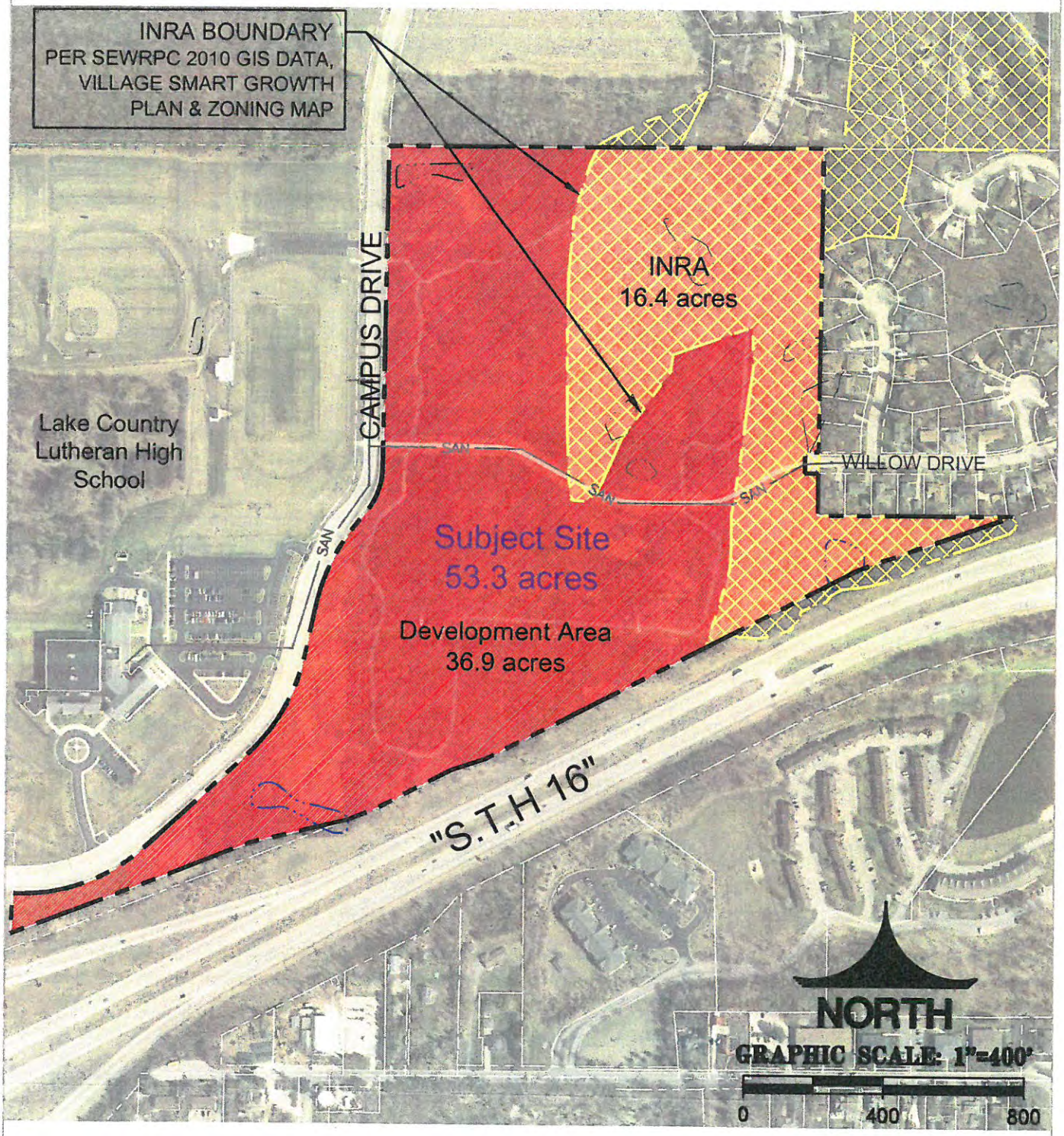
2018 NAIP
Data: Waukesha Co, HEG 2/27/2020

Appendix B | SEWRPC Mapping

Development Exhibit

"LAKE COUNTRY LUTHERAN"

(EAST 53.3 ACRES)
VILLAGE OF HARTLAND, WI



DATE: 07/31/2019

Appendix C | Site Photographs

Photo #1 INRA opening in southern part of Study Area, view east.

Photo #2 INRA opening in northwestern part of Study Area, view southeast.

Photo #3 INRA opening in northwestern part of Study Area, view northeast.

Photo #4 INRA opening in west central part of Study Area, view south.

Photo #5 View along path in west central part of Study Area, an INRA opening.

Appendix D | Delineator Qualifications

Eric C. Parker, PWS

Principal Scientist
eric@heartlandecological.com
(414) 380-0269

Mr. Parker is a certified Professional Wetland Scientist and Wisconsin Assured Wetland Delineator with over 30 years of professional and project management experience assisting public and private clientele. He has completed wetland projects in other states including IL, IN, OH, MI, ND, MO, PA, TX, MD, VA, and NC. His work has supported thousands of institutional, commercial, utility, residential, industrial & transportation projects. His natural resource specialties include botanical surveys, wetland science, restoration and mitigation. Mr. Parker has a widespread understanding of the scientific, technical and regulatory aspects of natural resources projects. His interests also include floristic quality assessment (FQA) and wetness categorization of plant species.

His experience includes the following: Botanical / Biological Surveys and Natural Resource Inventories; Rare Species Surveys, Conservation Plans and Monitoring; Wetland Determination, Delineation and Functional Assessment; Wetland Restoration, Mitigation, Banking and Monitoring; Habitat Restoration, Wildlife Surveys, SCAT surveys, Environmental Assessments; Local, state, federal permit applications; Expert Witness testimony; and Regulatory permit compliance.

Education

BS, Watershed Management, Soils Minor
University of Wisconsin - Stevens Point
Stevens Point, WI, 1983

Wetland Ecosystems (including delineation & assessment)
USEPA Graduate School
Washington DC, 1988

Field Oriented Wetland Delineation Course (1987 Corps Manual)
Wetlands Training Institute (WTI)
St. Paul, MN, 1994

Basic Wetland Delineation Training
Wisconsin Department of Administration
Waukesha, WI, 1997

Vegetation Description, UWM Cedarburg Bog Field Station, Saukville, WI, 1998

Advanced Wetland Delineation
University of Wisconsin - La Crosse
Bayfield County, WI, 2001

Critical Methods in Wetland Delineation
University of Wisconsin - La Crosse Continuing Education and Extension, Madison, WI, 2006, 2008, 2010, 2014, 2016, 2017, 2018, 2019, 2020

Mosses ID & Ecology, UWM Cedarburg Bog Field Station, Saukville, WI, 1998

Sedges ID & Ecology, UWM Cedarburg Bog Field Station, Saukville, WI, 2002, 2006, 2010

Grasses ID & Ecology, UWM Cedarburg Bog Field Station, Saukville, WI, 1998

Registrations

Professional Wetland Scientist #838, Society of Wetland Scientists Certification Program

Certified Wetland Scientist #C-058
Stormwater Management Commission
Lake County, IL

Qualified Wetland Specialist #W-057
Kane County, Illinois

Project Experience

Wetland Delineation & Regulatory Support

Example 2019 Wetland Delineations in WI (39 sites)
North Hills Subdivision, Waukesha Co., WI (Jan); Prairie Walk Subdivision, Waukesha Co., WI (Apr); Loomis Parcel Determination, WI (Mar-Apr); Lamminem Parcel, Kenosha Co., WI (Apr); Lot 103 Burlington, Racine Co., WI (Apr); 7220 Ryan Rd Parcel, Milwaukee Co., WI (Apr); 1-Acre Franklin Parcel, Milwaukee Co., WI (June); 256th Ave Site, Kenosha Co., WI (May); 915 Main St Mukwonago, Waukesha Co., WI (May); Muskego Lakes CC, Muskego, Waukesha Co., WI (June), Bonniwell Road Parcel, Ozaukee Co., WI (July); 333 Portland Rd Site, City of Waterloo, Jefferson Co., WI (May); Thompson Lane Parcel, Village of Chenequa, Waukesha Co., WI (May); Schmitz Redi-Mix Site, Village of Mt. Pleasant, Racine Co., WI (June); New Berlin Redi-Mix Site, City of New Berlin, Waukesha Co., WI (May); Elm Grove Road Basin, City of New Berlin, Waukesha Co., WI (May); Lathrop-Meacham Parcels Mitigation Site, Village of Mt. Pleasant, Racine Co., WI (May-July); Lot 18-31 Geneva National Site, Town of Geneva, Walworth Co., WI (July); Bohner's Lake Parcel, Town of Burlington, Racine Co., WI (Sept); 6970 South 6th St., City of Oak Creek, Milwaukee Co., WI (Aug); Weatherstone Meadows site, City of New Berlin, Waukesha Co., WI (Aug); Parkview Apartments site, Village of Somers, Kenosha Co., WI (Aug); Volkswagen Expansion site, Village of Pleasant Prairie, Kenosha Co., WI (Aug); Pewaukee-Brookfield Trail, Waukesha Co., WI (Aug-Sept); Parcel 1268-993, City of New Berlin, Waukesha Co., WI (Aug); Germantown Industrial Business Park, Washington Co., WI (Oct); Haasch-Finger site, City of Brookfield, Waukesha Co., WI (Oct); Kennedy Property, Village of Waunakee, Dane Co., WI (Oct); Jefferson County Interurban Trail, Towns of Watertown and Ixonia, Jefferson Co., WI (Oct); Mukwonago Residential Parcel, Village of Mukwonago, Waukesha Co., WI (Oct); Pine Ridge Estates, City of Oconomowoc, Waukesha Co., WI (Oct); Silver Lake Parcels, Village of Salem Lakes, Kenosha Co., WI (Oct); New Berlin Trail Phase II, City of Waukesha, Waukesha Co., WI (Oct); 1910 W Puetz Road site, City of Oak Creek, Milwaukee County, WI (Oct); Project Redline, Village of Menomonee Falls, WI (Oct); CSM 3232 Oulot 1, Village of Mt. Pleasant, Racine Co., WI (Oct); Plant Community Mapping and Assessment, City of Oak Creek, Milwaukee Co., WI (Nov); Faber Property, Village of Williams Bay, Walworth Co., WI (Nov); Campus Drive Property, Village of Hartland, Waukesha Co., WI (Dec).

Example 2018 Wetland Delineations in WI and IL (50 sites)
Homestead Acres, Racine Co., WI (Apr); Greenmeadows, Racine Co., WI (Apr), Wind Point School, Racine Co., WI (Apr); Vintage Parc East, Kenosha Co., WI (Apr); Nelson-Heckel, Kenosha Co., WI (Apr); Caledonia Storage, Racine Co., WI (Apr); New Berlin Storage, Waukesha Co., WI (Mar); Manke Gravel Pit, Columbia Co., WI (May); Drissel-Wallace, Kenosha Co., WI (May); LaBelle Golf Course, Waukesha Co., WI (May); Waterloo Aluminum, Jefferson Co., WI (May); Salem Business Park, Kenosha Co., WI (May); Audubon Arboretum, Racine Co., WI (May); Briarwood, Racine Co., WI (May); Basting-Brown Parcels, Waukesha Co., WI (May); 84-Acre Site, Racine Co., WI (May); Jolenta Lane, Waukesha Co., WI (Apr); Rock Road Storage, Walworth Co., WI (May); Wildwood Creek, Winnebago Co., WI (Jun); Green Bay Site, Brown Co., WI (Jun); Main Street Market, Kenosha Co., WI (Jul), Armstrong Eddy Park, Rock Co., WI (May), Hickory St Site, Ozaukee Co., WI (Jun), Parcel DW 800004, Walworth Co. (Jun); Lot 8 Parcel WCA-0003, Walworth Co., WI (Jun); RRR Grundy, Kane Co., IL (Jul); Coleman Norris Parcel, Waukesha Co., WI (Jul); Deaton Parcel, Kenosha Co., WI (Aug); Hintz Parcel, Washington Co., WI (Aug); Loomis-Ryan Rds Site, Milwaukee Co., WI (Aug); Grass Parcels, Waukesha Co., WI (Sep); Mallard Ridge Landfill Pipeline, Walworth Co., WI (Sep); Glacier Ridge Landfill Pipeline, Dodge Co., WI (Sep); Ravenwoods, Waukesha Co., WI (Aug); Canopy Hills, Racine Co., WI (Sep); Duck Pond, Kenosha Co., WI (Sep); Splinter Parcels, Racine Co., WI (Oct); Berget Parcel, Walworth Co., WI (Sep); Saylesville Rd Parcel, Waukesha Co., WI (Oct); Racine Ave-Lawnsdale Rd Parcel, Waukesha Co., WI (Oct); Braun Rd-90th St Parcel, Racine Co., WI (Oct); Grafton Parcels, Ozaukee Co., WI (Dec); Crawford Parcel, Racine Co., WI (Nov); Kotas Parcels, Racine Co., WI (Nov); Altamount Acres South, Racine Co., WI (Dec); Christina Estates, Racine Co., WI (Dec); Christina Estates NE, Racine Co., WI (Dec); Lathrop Parcel, Racine Co., WI (Dec); Hillside Ridge, Waukesha Co., WI (Dec); Stolz Property, Waukesha Co., WI (Dec).

Example 2017 Wetland Delineations in WI, MI, IN, and IL (31 Sites)
Back 40 Mine, Menominee Co., MI (Jan); Oakdale Rd Site, Waukesha Co., WI (Sep), Birds Eye Foods,

Walworth Co., WI (Sep); Boss Property, Leelanau Co., MI (Jul); Brighton Estates, Waukesha Co., WI (Sep); Saltzman North, Waukesha Co., WI (Sep); Susnar Parcel, Waukesha Co., WI (Sep); Wrenwood Site, Washington Co., WI; Chorneyko Site, Walworth Co., WI (Apr); CN Railroad Bridges-6 Sites, Fond du Lac & Winnebago Co's, WI; CN Railroad Freeport Culvert, Kane Co., IL (May); Herrling Site, Dane Co., WI (Sep); MMSD Sewerage Project, Milwaukee Co., WI (May); Spring St Site, Racine Co., WI (Oct); Goshen Midway Cell Tower, Elkhart Co., IN (Apr); Two Creeks Utility Site, Manitowoc Co., WI (Nov); Suncast Site, Kane Co., IL (Dec); Lot 51 Lakeview Corp Park, Kenosha Co., WI (Oct); Lakefront Gun Range, Racine Co., WI (Oct); WI Club Golf Course, Milwaukee Co., WI (Apr); WisDOT Improvements, STH 32 Racine Co (Aug), STH 67 Walworth Co. (Sep), STH 20, Racine Co. (Oct), 27th St, Milwaukee Co. (Sep); Conference Point Boat Launch, Walworth Co., WI (Oct); Lake View RR Corridor, Portage Co., WI (Sep).

Example 2016 Wetland Delineations in WI, OH, MI and IL (Mostly Large Projects)
AEP Wavery-Adams-Seaman 138 kV Trans. Line Rebuild, Adams & Pike Co's, OH (Dec); Kansas West-Faraday Trans. Line Rebuild-Macon, Moultrie, & Coles Co's, IL (Jan), Riveredge Nature Center Preliminary, Ozaukee Co., WI (Feb); Lost Creek Mitigation Site, Portage Co., WI (Jun); I-41 Burleigh to Good Hope Corridor WisDOT, Milwaukee Co., WI (Jul); STH 60 Corridor, Ozaukee & Washington Co's, WI (Aug–Oct); Erin Hills Golf Course, Washington Co., WI (Sep); Back 40 Mine, Menominee Co., MI; Lake Zurich SW Cell Tower, Lake Co., IL (Oct); Acme Steel Coke Site, Cook Co., IL (Dec).

Example 2015 Wetland Delineations in WI, IL, and MO (Mostly Large Projects)
Bolser Street MO33211-M Cell Tower Site, Grundy Co., MO (Sep); Section 9 Site, Dane Co., WI (Apr); Franzel Rd Site, Bayfield Co., WI (Apr); Big Eau Pleine Mitigation Site, Marathon Co., WI (Aug); Taylor Road Siding Track, Jackson Co., WI (Nov); UPS-CACH Site, Cook Co., IL (Jun); Eggers Woods Forest Preserve, Cook Co., IL (Mar).

Example 2014 Wetland Delineations in WI, IL, and MI (Mostly Large Projects)
Emerald Park Western Expansion, Waukesha Co., WI (Oct); Arcadia Mining Site-Trempealeau Co., WI (Apr); Kalamazoo River Parcel, Kalamazoo and Calhoun Co's, MI (Jul); G2 Mitigation Site - Winnebago Co., WI (May); Line 6A MP 378.94, McHenry Co., IL (Sep); Geneva National Site, Walworth Co., WI (Nov); Nortrax Site -Lincoln Co., WI (Oct); Toberman Parcel- Crawford Co., WI (Oct).

Example 2013 Wetland Delineations in WI, IL, OH, and MI (Mostly Large Projects)
West Central Lateral - Eau Claire, Clark, Jackson & Monroe Co's, WI (Apr-May); Walker Cranberry 80-acre Parcel – Jackson Co., WI (Sept - Oct); Berne to Natrium Pipeline, Monroe Co., OH (Oct); CNX Noble Pipeline – Noble Co., OH (Oct); Deer Grove Forest Preserve, Cook Co., IL (Nov).

Example 2012 Wetland Delineations in WI, IL, IN, and TX (Mostly Large Projects)
West Central Lateral (190 miles), Eau Claire, Clark, Jackson & Monroe Co's, WI (Sep-Nov); Morrison Creek Cranberry Parcel, Jackson Co., WI (Aug); London Mitigation Site, Jefferson Co., WI (July); Southern Access Pipeline, Sawyer & Washburn Co's, WI (Jun); I-80 Interchange, LaPorte Co., IN (Mar); Eagle-Ford Shale Plays, LaSalle & McMullen Co's, TX (Jan-Feb).

I-94 Corridor Wetland and Primary Environmental Corridor Mapping and Endangered Species Study, Milwaukee, Racine, and Kenosha Counties, WI (Project Manager and Lead Scientist)

Deer Grove Forest Preserve Wetland Delineation and Restoration*, Cook County, IL (Project Manager and Lead Scientist)

Elm Road Generating Station, Oak Creek & Caledonia, WI (Project Manager & Lead Scientist)

Tri-State Tollway, Deerfield Plaza Wetland and Endangered Species Investigation, Lake and Cook Counties, IL (Lead Scientist)

Guardian II Laterals, Fox Valley, Hartford and West Bend, WI (Project Manager and Lead Scientist)

ATC Paris to St. Martins (KK3025) 138KV Line Rebuild, Kenosha, Racine and Milwaukee Counties, WI (Project Manager and Lead Scientist)