

March 19, 2021

Tanowa Troupe  
Ohio Power Siting Board  
Secretary, Administration/Docketing  
180 E. Broad Street, 11<sup>th</sup> Floor  
Columbus, OH 43215

**Re: In the Matter of the Application of Hecate Energy Highland 4, LLC's Application for a Certificate of Environmental Compatibility and Public Need to Construct a Solar- Powered Electric Generating Facility in Clay and Whiteoak Townships in Highland County, Ohio Case No. 20-1288-EL-BGN/Compliance with Conditions #6, 8, 9, 11 and 18 Regarding the Start of Construction for Tree Clearing**

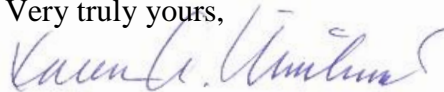
Dear Ms. Troupe:

On March 18, 2021, Hecate Energy Highland 4, LLC ("Hecate Energy") was issued a certificate of environmental compatibility and public need by the Ohio Power Siting Board ("Board") to construct a 65 MW solar-powered electric generating facility in Clay and Whiteoak Township, Highland County, Ohio ("Certificate"). The Certificate was issued subject to twenty three (23) conditions.

At this time, Hecate Energy is providing information to satisfy Conditions #6, 8, 9, 11 and 18 in anticipation of the commencement of tree clearing on March 26, 2021.

With this filing, Hecate Energy will have complied with Conditions #6, 8, 11 and 18 regarding the start of construction for tree clearing. If you have questions or need additional information, please do not hesitate to call.

Very truly yours,



Karen A. Winters  
On behalf of Hecate Energy Highland 4, LLC

cc: Patti Shorr, Hecate Energy LLC  
Jared Wren, Hecate Energy LLC  
Danelle Gagliardi, Esq., Squire Patton Boggs

**Hecate Energy**

621 W. Randolph St.  
Chicago, IL 60661  
www.HecateEnergy.com



March 19, 2021

Robert Holderbaum  
Ohio Power Siting Board  
Executive Director  
180 E. Broad Street, 11<sup>th</sup> Floor  
Columbus, OH 43215

**Re: In the Matter of the Application of Hecate Energy Highland 4, LLC for a Certificate of Environmental Compatibility and Public Need to Construct a Solar-Powered Electric Generating Facility in Clay and Whiteoak Townships, Highland County, Ohio Case No. 20-1288-EL-BGN (Before the Ohio Power Siting Board)/Preconstruction Notice Related to Tree Clearing**

Dear Ashton:

On March 18, 2021, Hecate Energy Highland 4, LLC ("Hecate Energy") was issued a certificate of environmental compatibility and public need ("Certificate") from the Ohio Power Siting Board ("Board") for the construction and operation of a 65 MW project in Clay and Whiteoak Township, Highland County, Ohio to be known as New Market Solar I. The Certificate was issued with twenty three (23) conditions. Condition #17 requires that tree clearing occur between the seasonal cutting dates of October 1 through March 31 to avoid impacts to Indiana bats and northern long eared bats. As a result, Hecate Energy is providing you with information to satisfy Conditions #6, 8, 9, 11 and 18 in anticipation of the commencement of tree clearing on March 26, 2021 as set forth below. This information is provided to you in electronic format and will be uploaded to the docket.

**1. Description of Intended Activity**

Consistent with Condition #8, we have enclosed maps indicating the tree clearing locations for New Market Solar I, the intended site access and exit locations and the scope of work for this preliminary phase of construction. In order to complete the tree clearing by March 31, 2021, the Applicants will be required to mobilize and begin tree clearing by no later than March 26, 2021. The maps are provided to you via shape files. The same information is provided as a courtesy relative to New Market Solar II, for which tree clearing will occur at the same time.

**2. Preconstruction Conference**

Hecate Energy requests that the preconstruction conference contemplated by Condition #2 relative to tree clearing activity occur virtually during the week of March 22<sup>nd</sup>. Hecate Energy

is available any day during that week at the convenience of Board staff to discuss the submittals associated with this preliminary construction work.

**3. Required Permits and Authorizations**

Consistent with Condition #6, Hecate Energy has obtained coverage under Ohio EPA's General Permit for Storm Water Discharges Associated with Construction Activities for its tree clearing activity. The Notice of Intent and accompanying Storm Water Pollution Prevention Plan as well as Ohio EPA's acknowledgement of coverage under the General Permit are included with our submittal.

**4. Notification of Property Owners**

Hecate Energy has provided notice regarding the start of this preliminary construction activity via US mail to affected owners and tenants, including those individuals who were provided notice of the public information meeting, residences located within one mile of the project area, parties to the case, county commissioners, township trustees, emergency responders, schools, and libraries, as well as anyone who has requested updates regarding the project by no later than March 19, 2021, which is seven (7) days prior to the anticipated start of construction, in accordance with Condition #9. These notices will be separately docketed.

**5. General Construction Hours**

Hecate Energy will adhere to the limitations regarding general construction activities set forth in Condition #11, including the limitations on hours during which construction may occur during the course of this preliminary construction activity.

**6. Protection of Field Tile**

Hecate Energy does not believe that any field tile is in jeopardy of damage by construction equipment during this preliminary construction work. However, Hecate Energy will avoid, where possible, or minimize, to the extent practicable, any damage to functioning field tile systems and soils during construction, consistent with Condition #13.

**7. Communication of Activities to ODNR and USF&WS**

Hecate Energy's consultant, Terracon, will be reaching out to both the Ohio Department of Natural Resources and the US Fish & Wildlife Service to advise of the intended date for mobilization for tree clearing.

**8. Environmental Specialist On-Site**

Consistent with the requirement of Condition #18 that the Applicants shall have an environmental specialist on site during construction activities that may affect sensitive areas, Hecate Energy proposes a team from Terracon to perform this function. The resumes of the team leader, Scott West, and other team members are attached, along with a map of sensitive areas.

**Hecate Energy**

621 W. Randolph St.  
Chicago, IL 60661  
[www.HecateEnergy.com](http://www.HecateEnergy.com)



We look forward to confirmation of the date and time of our pre-construction meeting specific to tree clearing thereafter. If you have questions in the interim, please call.

Very truly yours,

Patti Shorr  
SVP Project Development  
Hecate Energy LLC

cc: Jared Wren, Hecate Energy LLC  
Sean Fairfield, Algonquin Power  
Karen A. Winters, Esq., Squire Patton Boggs (US) LLP  
Danelle Gagliardi, Esq., Squire Patton Boggs (US) LLP

# Tree Clearing Plan

## New Market Solar I – 65 MW Project

Per compliance with US Fish and Wildlife Service, tree clearing shall occur between October 15th and March 31<sup>st</sup>. The following plans will provide information for contractor to cut down and remove trees accordingly abiding by all rules and regulations of established laws.

Trees three inches and above are to be cut down prior to April 1<sup>st</sup>

### 1 GENERAL

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The Contractor shall be responsible to provide all material, equipment, and labor required to clear the construction site of unwanted trees, shrubs, and other vegetation. This work shall consist of clearing, grubbing, removing from the ground, and disposing of trees, stumps, brush, shrubs, and other vegetation and debris occurring within the Project boundary. Clearing is further defined as the cutting, dozing or other means of removing trees, logs, brush, shrubs, stumps and debris from the required work area. Grubbing is further defined as the removal of tree stumps and roots from below the ground surface.

### 2 CLEARING

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Remove trees and shrubs within the site boundary. Grub and remove tree stumps and shrubs felled within the limits shown and remove materials from the site or process in an approved manner. Do not cut or damage trees outside the site boundary. Burring is not an approved method of disposal.

#### SEQUENCING OF WORK

- Stake and layout the tree clearing areas, including the necessary SWPPP BMPs
- Install SWPPP BMP measures around work areas as to not disturb wildlife
- Install Silt Fence
- Trees to be cutdown and removed per plans.

All clearing and grubbing activities must be performed in accordance with Project permit specifications and requirements. Erosion and sediment controls, in accordance with the SWPPP, must be in place prior to clearing and grubbing activities.

### 3 WETLANDS

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No clearing activities are permitting within wetland boundaries.

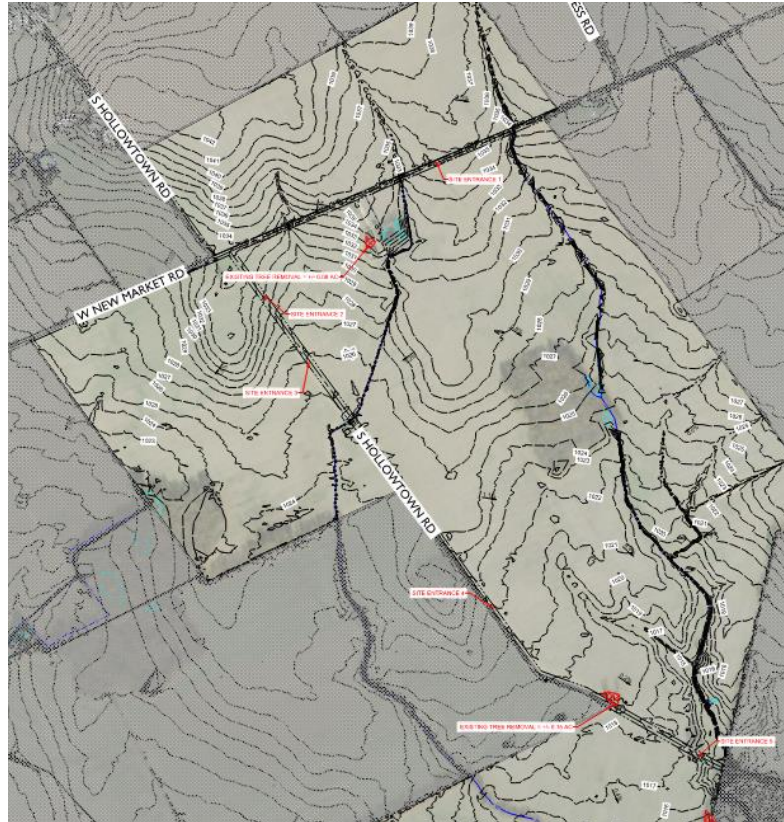
### 4 ACCESS / EGRESS

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Contractor shall utilize existing access and egress points identified on the Project drawings. Access/Egress point are identified as "Entrance #".

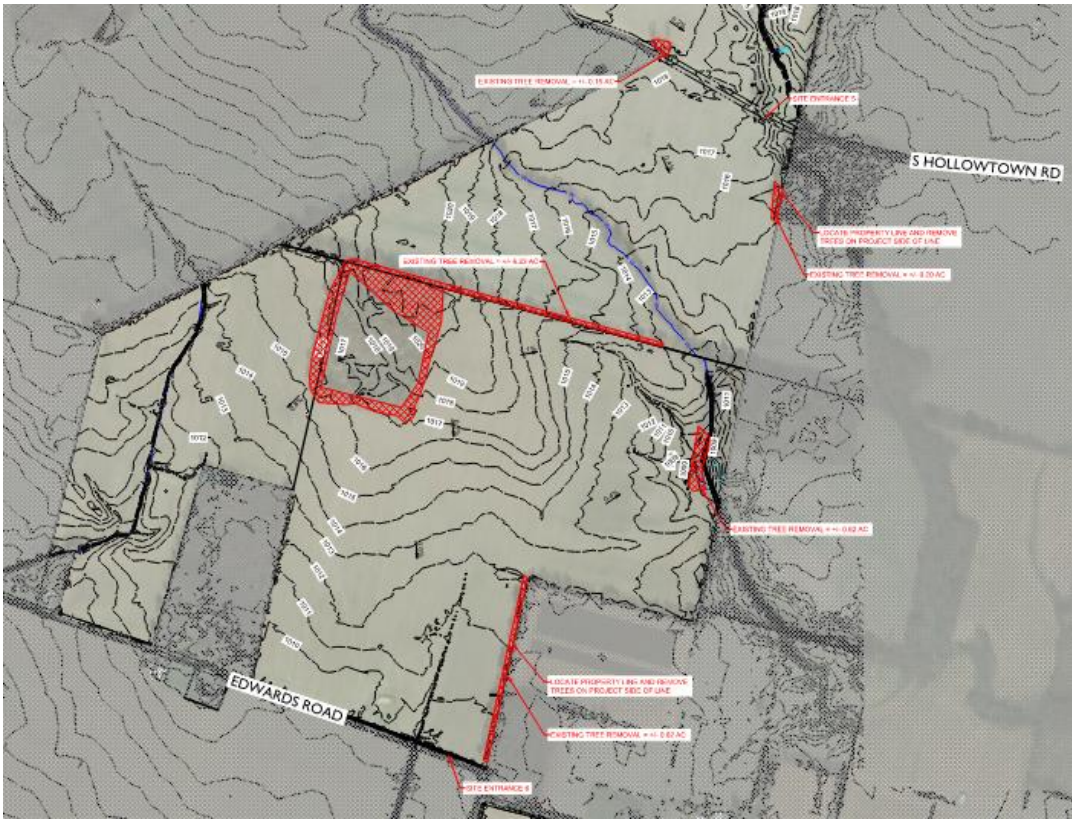
## 5 TREE CLEARING AREAS

Figure 1 NMS-I





*Figure 2 NMS-I*







Mike DeWine, Governor  
Jon Husted, Lt. Governor  
Laurie A. Stevenson, Director

Mar 09, 2021

McCarthy Building Companies, Inc.  
Stephen McVay  
12851 Manchester Road  
St. Louis, MO 63131

Re: Approval Under Ohio EPA National Pollutant Discharge Elimination System (NPDES) - Construction Site Stormwater General Permit - OHC000005

Dear Applicant,

Your NPDES Notice of Intent (NOI) application is approved for the following facility/site. Please use your Ohio EPA Facility Permit Number in all future correspondence.

<b>Facility Name:</b>	Highland 2 and Highland 4 Solar Project
<b>Facility Location:</b>	Intersection of Edwards &Stringtown Rd
<b>City:</b>	Sardinia
<b>County:</b>	Highland
<b>Township:</b>	White Oak
<b>Ohio EPA Facility Permit Number:</b>	1GC08023*AG
<b>Permit Effective Date:</b>	Mar 09, 2021

Please read and review the permit carefully. The permit contains requirements and prohibitions with which you must comply. Coverage under this permit will remain in effect until a renewal of the permit is issued by the Ohio EPA.

If more than one operator (defined in the permit) will be engaged at the site, each operator shall seek coverage under the general permit. Additional operator(s) shall submit a Co-Permittee NOI to be covered under this permit. There is no fee associated with the Co-Permittee NOI form.

Please be aware that this letter only authorizes discharges in accordance with the above referenced NPDES CGP. The placement to fill into regulated waters of the state may require a 401 Water Quality Certification and/or Isolated Wetlands Permit from Ohio EPA. Also, a Permit-To-Install (PTI) is required for the construction of sanitary or industrial wastewater collection, conveyance, storage, treatment, or disposal facility; unless a specific exemption by rule exists. Failure to obtain the required permits in advance is a violation of Ohio Revised Code 6111 and potentially subjects you to enforcement and civil penalties.

To view your electronic submissions and permits please Logon in to the Ohio EPA's eBusiness Center at <http://ebiz.epa.ohio.gov>.

If you need assistance or have questions please call (614) 644-2001 and ask for Construction Site Stormwater General Permit support or visit our website at <http://www.epa.ohio.gov>.

Sincerely,

Laurie A. Stevenson  
Director

# Shannon Felkey

## SENIOR SCIENTIST

### PROFESSIONAL EXPERIENCE

Ms. Felkey is a Senior Scientist for Natural Resources in Terracon's Columbus, Ohio office. Ms. Felkey has sixteen years of experience working with wetland projects and on projects and working with the National Environmental Policy Act (NEPA). Her background in wetland science also allows her to assist clients in avoidance and permitting for wetlands that may be located on site. In addition, she has experience consulting on projects with Threatened or Endangered Species issues with the USFWS through their Section 7 consultation process. She has managed over 800 NEPA projects for various clients in the telecommunications sector. Her understanding of the Nationwide Programmatic Agreement and Section 106 processes has helped clients with compliance issues that may have been pending. She has developed strong relationships with various reviewing agencies such as the State Historic Preservation Offices (SHPOs) in the Great Lakes Region, the US Fish and Wildlife Service (USFWS), the US Army Corps of Engineers (USACE), and the Tribal Nations. Ms. Felkey has also performed Phase 1 Environmental Site Assessments, asbestos surveys, and wetland delineations on communications towers sites and commercial sites for various clients.

### PROJECT EXPERIENCE

#### **Stream & Wetland Monitoring for Allen East Schools- Allen County, Ohio \***

Provided monitoring to a 1,520 ft on-site stream restoration and 1-acre wetland mitigation project. This project was a pilot project with the OEPA and ACOE. The project involved restoring a depleted system to one that was more functional. Field Analysis and documentation was sent to the Ohio EPA Division of Surface Water and Buffalo ACOE. Provided site recommendations and corrective actions for the client to help meet mitigation goals by 2012. VIBI analysis was a part of the monitoring requirements for this project.

#### **Wetland Monitoring for a Commercial Development site – Henry County, Ohio\***

Provided monitoring for a 6.2-acre wetland mitigation project. Field analysis and documentation to the Ohio EPA Division of Surface Water. Provided site recommendations for the client.

#### **Vegetation Monitoring and Installation (Stream Mitigation)- Van Wert County, Ohio\***

Provided vegetation monitoring of an 8-acre stream mitigation project for the City of Van Wert. Per the permit conditions, installed woody species within the stream mitigation site. Provided monitoring of invasive species to maintain critical permit parameters.

#### **Wetland Monitoring & Vegetation Installation (Forested Wetland)- Mercer County, Ohio\***

Provided wetland monitoring of a 3-acre wetland mitigation project for a housing development project (Southshore Acres). Per the permit conditions, installed woody species and herbaceous plants within the wetland mitigation site. VIBI analysis was a part of monitoring requirements for this project.

#### **Wetland & Stream Delineations (proposed natural gas lines)- Greene County, Pennsylvania\***

Provided wetland delineations and stream assessments along several miles of proposed natural gas line for gas companies utilizing the Marcellus Shale gas formation. Delineations included filing of USACE Regional Supplement forms and stream evaluation forms.

#### **Wetland & Stream Delineations (Communications Tower Sites)- Various locations in Ohio, Kentucky, & West Virginia\***

Has performed over 60 Wetland & Stream Delineations as a part of the siting and NEPA requirements for new telecommunications tower sites. Delineations included filing of USACE Regional Supplement forms, Ohio Headwater Habitat Evaluation Index (HHEI) forms, and Ohio Rapid Assessment Management (ORAM) forms.

### EDUCATION

Bachelor of Science, Environmental Biology, University of Dayton, 2002

### CERTIFICATIONS

40-Hour HAZWOPER

### WORK HISTORY

Terracon Consultants, Inc., Senior Scientist June 2020 - Present

Environmental Resources Management, Senior Scientist 2018-2020

CTL Engineering, Inc., Wetland/Environmental Scientist, 2004-2018

### ADDITIONAL TRAINING

OSHA 40-Hour Safety Training and Refresher courses

ODOT Ecological Training Course

ODOT Section 4F Training

ODOT Categorical Exclusion Training Course

ODOT Waterway Permitting Training Course

ODOT Section 106/ National Resigner Eligibility Training

ODOT Section 106 Advanced Workshop

Ohio SHPO Section 106 for Wireless Communications and the Nationwide Programmatic Agreement Workshop

OEPA Ohio Rapid Assessment Method for Wetlands v5 Training

38-HR Army Corps of Engineers Wetland Delineation & Management Training

US Fish and Wildlife Endangered Species Consultation in Ohio Workshop

\* Work performed prior to joining Terracon.

**Wetland & Stream Delineations (Well Pad Sites)- Various locations in Eastern Ohio\***

Has performed over 50 Wetland & Stream Delineations as a part of sighting for new well pad sites throughout Eastern Ohio. Delineations included filing of USACE Regional Supplement forms, Ohio Headwater Habitat Evaluation Index (HHEI) forms, and Ohio Rapid Assessment Management (ORAM) forms. Delineations included the identification of potential Indiana bat habitat trees. Recommendations for avoidance and reconfiguration of sites was provided to the client as a part of the project.

**Wetland & Stream Delineation for Ohio Valley Schools- Adams County, Ohio\***

Has performed a wetland and stream delineation on a 130-acre parcel in West Union, Ohio and a 15-acre parcel in Seaman, Ohio. Delineations included filing of USACE Regional Supplement forms, Ohio Headwater Habitat Evaluation Index (HHEI) forms, and Ohio Rapid Assessment Management (ORAM) forms.

**Wetland & Stream Delineation for Galion City Schools- Crawford County, Ohio \***

Has performed a wetland and stream delineation on a 40-acre parcel in Galion, Ohio. Delineations included filing of USACE Regional Supplement forms, Ohio Headwater Habitat Evaluation Index (HHEI) forms, and Ohio Rapid Assessment Management (ORAM) forms.

**Wetland & Stream Delineation for the City of Wapakoneta – Augulaize County, Ohio\***

Has performed a wetland and stream delineation on a 471-acre parcel in Wapakoneta, Ohio. Delineations included filing of USACE Regional Supplement forms, Ohio Headwater Habitat Evaluation Index (HHEI) forms, and Ohio Rapid Assessment Management (ORAM) forms.

**Wetland & Stream Delineation for Chenevy & Piccin Engineering- Union County, Ohio\***

Perfomed a wetland and stream delineation on a 127-acre property in Plain City, Ohio. Delineations included filing of USACE Regional Supplement forms, Ohio Headwater Habitat Evaluation Index (HHEI) forms, and Ohio Rapid Assessment Management (ORAM) forms.

**Wetland & Stream Delineation for Energy Corporation of America- Washington County, Pennsylvania\***

Provided wetland delineations and stream assessments along 22-miles of proposed natural gas line for gas companies utilizing the Marcellus Shale gas formation. Delineations included filing of USACE Regional Supplement forms and stream evaluation forms

**Level 2 Ecological Survey for ODOT- Belmont County, Ohio\***

Conducted a Level 2 Ecological Survey in conjunction with EMH&T for a realignment of E Captina Hwy (SR148) for ODOT near Powhatan Point, in Belmont County, Ohio. Assisted in endangered species consultation and identification of terrestrial species habitat. Also assisted in wetland delineation and stream identification on site.

**Level 1 Ecological Survey for Beaver Excavating- Pike County, Ohio\***

Conducted a Level 1 Ecological Survey for Beaver Excavating, where they had planned to utilize ground as a staging area for their construction equipment during a bridge replacement project. Has also conducted Level 1 Ecological Surveys for Beaver Excavating, on areas where they proposed to utilize the land as a borrow pit for their construction projects.

**Catagorical Exclusion Project for a proposed power substation- Fairfield County, Ohio**

Conducted a NEPA Catagorical Exclusion report and screening on a proposed power substation located in the Fairfield County area. This project included conducting public involvement, tribal coordination, endangered and threatened species consultation, consultation with local governmental agencies, wetland and floodplain review, prime farmland review, underprivelaged population review, and cultural resources review.

**Enviromental Assessment for a proposed medical facility – Franklin County, Ohio**

Conducted an Environmental Assessment for a proposed medical facility receiving federal funding. The Environmental Assessment included a conducting public involvement, tribal coordination, endangered and threatened species consultation, consultation with local governmental agencies, review of environmental health conditions, noise assessment, air quality assessment, wetland and floodplain review, prime farmland review, underprivelaged population review, and cultural resources review.

**Environmental Assessments and NEPA Threshold Screenings- Telecommunications sites- throughout Ohio, West Virginia, Kentucky, Indiana, and Pennsylvania\***

FCC-NEPA Threshold Screening for over 400 locations in Ohio following the FCC/NEPA and NHPA Section 106 review process. Conducted Tribal Consultation, Public Involvement, Cultural Resources coordination, Section 7 Endangered Species Consultation, Wetlands Assessments and permitting, floodplain coordination for the projects, including any additional work that may be required and reporting.

# Austin Whalen

## ENGINEERING TECHNICIAN

### PROFESSIONAL EXPERIENCE

Mr. Whalen is an Engineering Technician in Terracon's Denver office. He is responsible for performing a variety of field and laboratory testing, observations, and inspections for soils, concrete, and asphalt for projects throughout the Denver Metro area.

Mr. Whalen has experience providing testing and observation services for public, commercial, and mixed-use developments. He has provided services on entertainment, recreation, multi-family, senior living, municipal, and technology sector projects.

### PROJECT EXPERIENCE

#### Aurora Central Recreation Center, Aurora, CO

Terracon is performing materials testing for the City of Aurora during the initial phase of construction for a new recreation center. This phase will include earthwork for over excavation and drilled pier installation. Mr. Whalen is serving as an engineering technician and providing concrete compressive strength and field density testing, and reinforcing steel and masonry observation services for this ongoing project.

#### Trail Winds Recreation Center, Thornton, CO

Mr. Whalen has served as an engineering technician for construction engineering inspection services performed during the construction of a new two-story, approximately 84,000 square feet in plan area recreation center. The construction includes an aquatics area, a fitness area, and a learning center, which will house exercise studios, a gym, locker rooms, offices, meeting/multipurpose rooms, a weights/fitness area, an indoor track, and a pool. Construction also includes pedestrian sidewalks, and adjacent parking and drive areas, as well as one below-grade level for the lower portions of the pools and maintenance space in the aquatics area. Mr. Whalen has performed field density and laboratory characteristics for soils testing during this project.

#### Confidential Data Centers, Denver Metro Area, CO

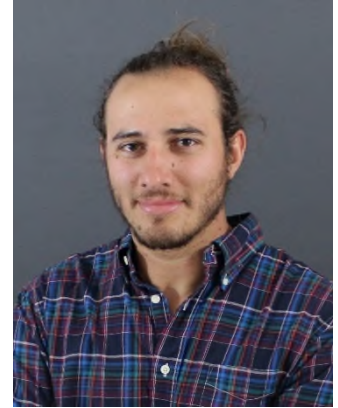
Mr. Whalen has served as an engineering technician for two data center sites in the Denver Metro area. Each center is a one-story building totaling approximately 185,000 square feet in space and includes a steel structure clad with precast and metal wall panels. These facilities will include approximately 75,000 square feet of critical white space and 109,000 square feet of support space (electrical, mechanical, storage, staging, corridors, and administrative areas) each. In addition, each site will include a Visitor and Vehicle Reception Center (VVRC), which is a separate, standalone facility consisting of approximately 10,000 square feet of security space and vehicle screening. This site is considered to be Site 2 out of four sites for the project. Each site will house an office/operations building, two core data halls, and three data centers. Mr. Whalen has provided concrete compressive strength testing and roofing observation services throughout the duration of this ongoing project.

#### Denver Water Operations Complex Redevelopment – Denver, CO

Mr. Whalen has served as an engineering technician and provided construction engineering testing and inspection services during the construction of a project consisting of a near complete redevelopment of the 34-acre Denver Water Complex and Headquarters. The existing campus operates out of various buildings that have been in services for 20 to over 100 years. Construction for the new and improved campus will include a new administration building, parking garage, warehouse, wellness/clinic building, trades building, fleet maintenance building, wash building, renovation of two existing buildings (Building 16 and the 3 Stones/Building 15), along with new site work. Mr. Whalen has performed concrete compressive strength and field density testing for the project.

#### Crossing Pointe – Adams County Housing Authority, Thornton, CO

Mr. Whalen has served as an engineering technician during the construction of an affordable senior and family housing community located adjacent to the Colorado & 104th St. light rail station in Thornton, CO. The project includes three buildings organized around landscaped courtyards. Two of the buildings will be four-story multifamily residential while the third one is a senior living building. All three will provide 206 dwelling units with surface and underground parking. Construction includes earthwork; utilities concrete paving including walkways, site stairs, sidewalks, and driveway paving; retaining walls; concrete and steel structural work, exterior and interior architectural work; and mechanical, plumbing, fire protection, and electrical work. Mr. Whalen has performed field density and concrete compressive strength testing, as well as proof roll, masonry, and drilled shaft observations, for this project.



### CERTIFICATIONS

American Concrete Institute (ACI)  
Concrete Technician

Nuclear Gauge Safety Training

### WORK HISTORY

Terracon Consultants, Inc.,  
Engineering Technician, July 2018 –  
Present

# Cassandra E. Brendel

## FIELD SCIENTIST

### PROFESSIONAL EXPERIENCE

Ms. Brendel works in Terracon's Cincinnati office where she is responsible for site reconnaissance and report preparation of Wetland and Stream Delineations and Phase I Environmental Site Assessments (ESA). She has experience in stream and wetland assessments, restoration, and monitoring, plant and animal species identification and surveying, soil and groundwater sampling, as well as animal husbandry and veterinary care. Her experience is based on biological and ecological academia and fieldwork, data collection/ analysis as a research assistant, teaching assistant, and field technician.

### PROJECT EXPERIENCE

#### DIVING

##### **Dive Team Safety Support– New Hampshire, Ohio, West Virginia, Michigan**

Assisted Dive Team with underwater bridge inspections and mussel surveys, ensuring safety while underwater and onboard. Responsibilities included remaining in contact with divers while underwater through the use of communication lines, setting up diving equipment, ensuring dive boat contained all necessary equipment for inspections, and report preparation.

#### COMMERCIAL

##### **Love's Emergency Response – Sadieville, KY**

Performed emergency response oversight and monitoring and maintenance of a down-gradient stream impacted by an extensive biodiesel spill. Appropriate plan of actions determined on a weekly basis, in coordination with the project manager, including dissolved oxygen monitoring, assessing and performing oil-absorbent boom replacement, and examining product levels in extraction wells and oil-water separator.

##### **Mt. Orab Wetland Delineations and Phase I ESAs – Mt. Orab, OH**

Performed multiple preliminary wetland and stream assessments, Threatened and Endangered Species review and Phase I Environmental Site Assessments, and Wetland Delineations of large forested and agricultural parcels in Mt. Orab, Ohio in conjunction with Natural Resources Staff Scientist. Completed reporting, review of current and historical site information, correspondence with local and state regulatory agencies, and performing site reconnaissance.

##### **Highland Solar Wetland Delineation and Phase I ESA – Buford, Ohio**

Performed Phase I Environmental Site Assessment and Wetland Delineation, in conjunction with Environmental Field Scientist, on a partial agricultural, partial forested parcel. Completed reporting, reviewing historical and current information, contacting local agencies, and performing site reconnaissance visits.

##### **LGE Pipeline – Louisville, Kentucky**

Performed Wetland Delineations, in conjunction with Environmental Field Scientist, of multiple proposed linear pipelines. Completed reporting, reviewing historical and current information, contacting local agencies, and performing site reconnaissance visits.

##### **Duke Energy Substations – Multiple locations in Ohio**

Submitted USACE 404 and 401 permits for proposed Duke Energy substation expansions in the state of Ohio.

##### **IDI Park South Phase I ESA – Walton, KY**

Performed Phase I Environmental Site Assessment of an industrial warehouse property, which consisted of reviewing historical and current information, contacting local agencies, performing site reconnaissance visits, and report preparation.

##### **Former Piqua Oil Change Facility Phase I ESA – Piqua, Ohio**

Performed Phase I Environmental Site Assessment of a former oil change facility, which consisted of reviewing historical and current information, contacting local agencies, performing site reconnaissance visits, and report preparation.

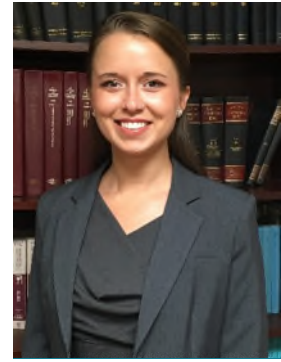
#### TRANSPORTATION

##### **Proposed Turn Lane– Carmel, IN**

Performed Phase I Environmental Site Assessment of a residential property, which consisted of reviewing historical and current information, correspondence with local regulatory agencies, performing site reconnaissance visits, and report preparation.

##### **CVG Expansion – Hebron, KY**

Performed Wetland and Stream Delineation of a large forested property outside of Cincinnati Airport, in conjunction with Natural Resources Staff Scientist and Project Manager. Responsibilities include review of current site information, site reconnaissance, and report preparation.



### EDUCATION

Bachelor of Science, Biological Sciences

Northern Kentucky University

Bachelor of Science, Psychology

Northern Kentucky University

### CERTIFICATIONS

Wetland Delineation Certification

First Aid/CPR/AED Certified

Emergency Oxygen for Diving Injuries Certification

ODOT Ecological Training Certification

### Affiliations

NKU Young Alumni Council Member

Keep Cincinnati Beautiful Young Professionals Council Member

Terracon Young Professionals

### WORK HISTORY

Terracon Consultants, Inc.

Field Scientist

2016 – Present

Northern Kentucky University

Center for Environmental Restoration

Field Technician

2015 – 2016

Banfield Pet Hospital

Veterinary Assistant

2009 - 2014



# Michael D. Perkins

## SENIOR STAFF SCIENTIST

### PROFESSIONAL EXPERIENCE

Mr. Perkins works out of Terracon's Cincinnati office, where he performs wetland delineation and permitting, natural resource surveys, as well as Phase I ESAs. Mr. Perkins has a diverse professional and academic background in plant community ecology and natural resources consulting. His knowledge is derived from diverse ecological fieldwork in endangered species protocols, and experience leading on project design, management, and data collection and analysis as a researcher and research assistant, in highly varied ecosystems both domestic and international. This experience is built upon strong academic training in ecological, environmental, and geographic sciences.

#### AREAS OF EXPERTISE INCLUDE:

- Wetland and Stream Delineation
- 404/401 Wetland and Stream Permitting
- Threatened and Endangered Species Surveys
- GIS and Remote Sensing
- Plant and Wildlife Ecology

### PROJECT EXPERIENCE

#### WETLAND DELINEATION AND 404/401 PERMITTING

- Mr. Perkins has performed dozens of US Army Corps of Engineers (USACE)-jurisdictional wetland and stream delineations for projects throughout Ohio, Kentucky, Indiana, Missouri, Illinois, Michigan, Connecticut, Pennsylvania, and North Carolina.
- Mr. Perkins has successfully coordinated and submitted dozens of USACE 404 and 401 permits, as well as wetland permits for multiple states and Isolated Wetland Permits for projects throughout the Midwest.

#### THREATENED & ENDANGERED (T&E) SPECIES SURVEYS

- Mr. Perkins has led surveying efforts focused on the northern spotted owl (*Strix occidentalis caurina*), marbled murrelets (*Brachyramphus marmoratus*), as well as plant and raptor surveys in the Southwest US for energy and natural resource extraction clients and in the Midwest for telecommunications clients.
- Mr. Perkins has also led T&E species (avian, mammal, plant) habitat surveys in the Midwest.

#### GIS ANALYSIS

- Geohazards analysis for a petroleum pipeline through West Virginia, Pennsylvania, Ohio, and Michigan
- Potential waters of the US constraints analysis for solar projects across the Midwest and the southern US

#### Environmental Site Assessments (ESAs)

Phase I Environmental Site Assessments. Mr. Perkins has conducted 100 Phase I ESAs for telecommunication, retail, energy, and property development clients.

#### PRESENTATIONS/PUBLISHED ARTICLES

"The Impacts of Agricultural Land-uses on Mycorrhizal Fungal Community Composition in the southern Yucatán Peninsular Region" presented at the Association of American Geographers Annual Meeting, Seattle, Washington, April 2010.

### EDUCATION

PhD (ABD), Geography, Indiana University, Bloomington, IN

Master of Arts, International Affairs, focus in Central American Ecology, Ohio University, Athens, OH, 2007

Bachelor of Science, Environmental Science, Morehead State University, Morehead, KY, 2005

### WORK HISTORY

Terracon Consultants, Inc.  
Environmental Department, 2014-Present

Department of Geography, Indiana University, Bloomington Indiana, Associate Instructor, 2009-2014

Kingfisher Ecological, Inc. Corvallis, OR, Wildlife Biologist, 2006-2012

Hamer Environmental, Mt. Vernon, WA, Wildlife Biologist, 2009

University of Washington, Seattle, WA, Research Assistant, 2009

### TRAINING

Marbled Murrelet Survey Training (Mad River Biologists, Arcata, CA, 2009)

Society of Wetland Scientists - Wetland Delineation Certification Training (Richard Chinn Environmental Training, 2014)

Bat Conservation and Management, Bat Survey Techniques Workshop, (2015)

Ohio Rapid Assessment Method for Wetlands (ORAM) Training Course (Ohio Environmental Protection Agency, 2017)

Ecological Training and Waterways Permits Training (Ohio Department of Transportation, 2017)

### CERTIFICATIONS

Wilderness First Aid (National Outdoor Leadership School, 2017)SWCA, Botanist, Vernal, UT, 2008



# Michael P. Doust

## ENVIRONMENTAL TECHNICIAN

### PROFESSIONAL EXPERIENCE

Mr. Doust is an Environmental Technician in Terracon's Cincinnati office. He is responsible for field activities which may have hazardous materials associated with facilities. Mr. Doust has two years of professional consulting experience evaluating properties for environmental conditions and hazardous materials, evaluating employee exposure to hazardous materials, and managing hazardous materials in buildings. Mr. Doust has performed multiple building inspections for asbestos-containing materials and has overseen multiple asbestos abatement projects.

Mr. Doust has been working as a Laboratory Technician in the Terracon Cincinnati Soils Lab working on a variety of soils projects. During his time in the lab he prepped soil and carried out several different tests to determine the properties of soil samples. Methods used include: unconfined soil test, confined soil test, plastic limits test, California bearing test, and standards/modified soil proctors. Mr. Doust has worked on special soil stabilization projects involving cement, lime, and lime kiln dust.

Mr. Doust has been involved with several Duke Energy construction oversight projects as an assistant superintendent through Terracon Cincinnati's Facilities department. His main duties while involved with these projects are to ensure contractors are following specifications and running Dukes' health and safety programs.

Mr. Doust has been involved with construction materials testing and inspection. He is trained in construction materials testing and inspection through the American Concrete Institute training program. He is level 1 ACI concrete field testing certified through 2025. He has assisted on large and small pours in the states of Ohio, Kentucky, and Indiana.

Mr. Doust was employed as the Laboratory Technician at Thomas More University Biology Field Station. He oversaw all lab research and managed undergraduate work study students. Mr. Doust was responsible for managing the aquaculture systems, where they collaborate with USFWS to raise endangered freshwater mussels and head start Eastern Hellbenders. He worked alongside the STEM Outreach Coordinator, assisting with STEM outreach programs for K-12 schools.

Mr. Doust was the Principal Investigator for a stream assessment project which was completed by the Thomas More University Biology Field Station. The goal of this study was to: evaluate the present status of the macroinvertebrate and fish populations in Stepstone Creek, enumerate species, and calculate community wide metrics to assess the overall health of the ecosystem. The data was used to form an overall management plan for a portion of Stepstone Creek which was impacted by a limestone mining operation.

Mr. Doust worked as a Graduate Resident Advisor for the Evans Scholarship Foundation. He provided guidance and leadership to 70 undergraduate students. He Worked closely with Wester Golf Association Officials, Chapter Advisors, and Executive Board members to ensure the success of all Evans Scholars.

Mr. Doust served as a Teacher's Assistant for the Biology Department at Miami University. He instructed multiple undergraduate Biology labs. In addition to instructing Biology labs, he was responsible for: grading, managing gradebooks, constructing exams, holding weekly office hours and attending regular meetings to develop lesson plans.

Mr. Doust interned at Thomas More University Biology Field Station. He assisted with a bioassessment of the Ohio River. Mr. Doust helped examine habitat, water quality, and fish populations to assess the health of the river ecosystem around two coal burning power plants. He assisted with the examination of the current composition of the fish community, spatial variation between fish populations near the coal fired energy plants, and the hydrological, chemical and physical characteristics of the Ohio River near the plant.

### PROJECT EXPERIENCE

**Duke Energy - Miami Fort Power Generating Station:** Provided third party oversight of asbestos abatement and air monitoring during the decommissioning of unit 6.

**Duke Energy - Wabash Power Generating Station:** Provided third party oversight of asbestos abatement and air monitoring during the 2-year decommissioning of the facility.

**Duke Energy - Gallagher Power Generating Station:** Completed a 3-month, approximately \$175k asbestos survey of an approximately 1-million square foot power plant to be decommissioned.

**Duke Energy - Cayuga Generating Station:** Provided third party oversight of asbestos abatement and air monitoring during various outage projects.

### EDUCATION

Master of Environmental Science,  
Miami University  
2016 - 2019

Bachelor of Science, Environmental  
Science, University of St. Francis  
2012 - 2016

### WORK HISTORY

Thomas More University, Biology  
Field Station  
Lab Technician  
2018 - 2019

Thomas More University, Biology  
Field Station  
Principal Investigator  
2018

Miami University, Evans Scholarship  
Foundation  
Graduate Resident Advisor  
2017 - 2018

Miami University, Graduate Assistant  
Teachers Assistant  
2016 - 2018

Thomas More University, Biology  
Field Station  
Intern  
2016

### CERTIFICATES

Indiana Asbestos Inspector

Indiana Asbestos Supervisor

Kentucky Division for Air Quality  
Asbestos Management Planner

Kentucky Division for Air Quality  
Asbestos Supervisor

Ohio Asbestos Abatement Specialist

Ohio Asbestos Hazard Evaluation  
Specialist

West Virginia Hazard Evaluation  
Specialist

ACI Concrete Field Testing Certified  
- Level 1

**Duke Energy - Gibson Power Generating Station:** Worked with CIH to assess chlorine and ammonia exposure levels in areas of the generating station.

**Duke Energy – Central Stores, Plainfield Indiana:** Served as an assistant superintendent. Ran Duke's Job Hazard Analysis and Health Hazard Analysis safety programs for the roof demolition of the central store's facility at Duke's regional headquarters in Plainfield Indiana.

**Duke Energy - 4<sup>th</sup> and Main:** Served as an assistant superintendent for a multimillion-dollar parking garage renovation at Dukes' regional headquarters in Cincinnati, Ohio.

**University of Cincinnati, Cincinnati, OH:** Performed asbestos, lead and PCB abatement project oversight and monitoring for one year in buildings throughout campus.

**Wright-Patterson Airforce Base Dayton, Ohio:** Performed asbestos surveys on multiple facilities located on base.

**U.S. Department of Veterans Affairs:** Provided hazardous material inspections prior to renovation projects and at the Chillicothe, Cincinnati, Battle Creek, Lexington, and Louisville V.A. Medical Centers. Provided asbestos abatement oversight and air monitoring services at the Cincinnati and Chillicothe V.A. Medical Centers.

**Former Sillito's Building, Cincinnati, Ohio:** Performed a comprehensive asbestos and lead inspection of the 10-story former department store in downtown Cincinnati, Ohio.

**Ohio State University, Lima, Ohio:** Performed a comprehensive asbestos survey of six on campus buildings and one-off campus building on Ohio State's satellite campus in Lima. Helped to prepare documents and reports in accordance with Ohio State guidelines.

**Amazon at CVG, Hebron, Kentucky:** Performed concrete testing and inspection services, in accordance with ACI protocols, on 600+ yard deck and mud mat concrete pours for Amazon's air hub at CVG.

**Terracon Cincinnati, Ohio:** Served as a Laboratory Technician in the Soils Lab working on a variety of soils projects. Prepped soil and carried out several different tests to determine the properties of soil samples. Methods used include: unconfined soil test, confined soil test, plastic limits test, California bearing test, and standards/modified soil proctors. Mr. Doust has worked on special soil stabilization projects involving cement, lime, and lime kiln dust.

# Scott E. West

## SENIOR PROJECT MANAGER/NATURAL RESOURCE SPECIALIST

### PROFESSIONAL EXPERIENCE

Mr. West has a diverse professional background in environmental consulting. His knowledge includes in-depth natural resource experience managing various ecological projects involving wetland delineations, habitat surveys, wetland restoration, permitting, and mitigation design. Over the past 17 years, he has performed a wide range of projects including wetland surveys/delineations, 404/401 permit applications, wetland and stream mitigation/restoration, threatened and endangered species surveys, and environmental site assessments. Mr. West is the technical practice lead/ regional manager for providing and developing natural resource services to clients in the midwest region as well as serving as project manager for natural resources projects in Ohio, Kentucky, Indiana, Illinois, and West Virginia regions.

He is directly involved with client development, project management, and environmental staff supervision. He is experienced with projects related to wetland delineation requirements and regulatory permitting issues for Section 404 and 401 of the Clean Water Act. Mr. West has conducted this work on a variety of sites including industrial facilities, utility substations, and transmission lines, residential developments, commercial developments, and landfills. In addition, Mr. West serves as a corporate wide Authorized Project Reviewer (APR) for Natural Resource work conducted as part of Terracon's quality control process.

### AREAS OF EXPERTISE INCLUDE:

- 404/401 Permitting
- Wetland and Stream Delineation
- Natural Resource Surveys
- Threatened and Endangered Species Reviews
- Environmental Site Assessment (ESAs)

### PROJECT EXPERIENCE

#### Wetland Delineation and 404/401 Permitting

Mr. West has performed over 250 wetland assessments and delineation surveys of numerous Corps-jurisdictional wetlands and streams on multiple projects scheduled to be developed in Ohio, Kentucky, Indiana, and West Virginia. Wetland/stream boundaries were verified by the Regional Corps Districts and state/ local regulatory agencies. Habitat quantitative evaluations of the wetlands and streams were completed using approved field methods (ORAM/VIBI/QHEI/HHEI). Comprehensive wetland and stream mitigation strategies were cooperatively developed between the interested parties and the regulatory agencies involved. Necessary Section 401 and 404 permitting and wetland mitigation design were approved, when needed. These projects involved a combination of mitigation strategies including wetland construction, restoration, enhancement, and/or riparian buffer improvements.

#### Sheffield/ Sheffield Lake City Schools 404/401 Permitting

Performed a wetland assessment, jurisdictional review, and 401 and 404 permitting tasks necessary to get the approval for impacts to 5.6 acres of Category 3 wetland in Sheffield Village, Ohio. Tasks involved in this process included permit application, alternative analysis preparation, public need demonstration, ORAM documentation, mitigation plan preparation, public hearing assistance, and numerous other tasks necessary to get approval from the Army Corps of Engineers and the Ohio EPA on such a large impact to such high-quality wetlands. Continued follow-up work includes mitigation activities and additional delineation/ permitting projects for the school system.

#### Dominion Energy (work performed with another firm)\*

Was part of a team that completed wetland and natural resources services for numerous transmission line projects located in and around Southwest Ohio. Wetland boundaries and stream classifications were field verified and approved by regulatory agencies. Section 401 or 404 permitting and wetland mitigation design has been approved, or is pending, and include a combination of mitigation strategies consisting of wetland construction, stream restoration, enhancement, and/or riparian buffer improvements.

#### Duke Energy

Completion of various wetlands and natural resources services for numerous substation and transmission line projects located in and around Southwest Ohio, Indiana, and Northern Kentucky. Wetland boundaries and stream classifications were field verified and approved by regulatory agencies. Section 401/404 permitting and wetland mitigation was conducted as part of most of these projects.

#### Country Squire Lake Dam Remediation Project- 404 /401 Permitting

Performed a wetland assessment, jurisdictional review, and 401 and 404 permitting tasks necessary to get the approval for impacts to on-site streams and wetland in North Vernon, IN. Tasks involved in this process included permit application, alternatives analysis preparation, public need demonstration, mitigation plan preparation, and numerous other tasks necessary to get approval



### EDUCATION

B.S. Biology/Botany, Colorado State University, Fort Collins, CO, 2010

### CERTIFICATIONS

OSHA HAZWOPER 40 Hour Certification Training (Cincinnati State University 2003- plus refreshers)

Wetlands Delineation Certification Training (Ohio State University, 2005)

Primary Headwater Habitat Evaluation Index -HHEI (OEPA 2006)

Wetland Construction and Restoration (Ohio State University, 2007)

Ohio Rapid Assessment Method for Wetlands Training - ORAM (OEPA 2008)

Wetland Biocriteria Vegetative Index Training- VIBI (OEPA 2008)

Section 106 Cultural Resource Review Training (ODOT 2010)

Categorical Exclusion Training (ODOT 2010)

National Environmental Policy Act (NEPA) Training (ODOT 2011)

Waterway Permits Training (ODOT 2017)

Ecological Training (ODOT 2017)

Cardiopulmonary Resuscitation (CPR) and First Aid (American Red Cross) - annually

### AFFILIATIONS

Society of Wetland Scientists

### WORK HISTORY

Senior Project Manager  
Terracon Consultants, Inc.,  
Environmental Department  
07/2011- present

Project Manager/ Natural Resource Biologist, Shaw Environmental & Infrastructure, Inc., Cincinnati, Ohio  
05/2005 - 7/2011

from the Army Corps of Engineers and the Indiana Department of Environmental Management. Continued follow-up work includes on-site wetland mitigation and post-construction monitoring of the constructed wetland and enhanced stream.

#### **Toyota Motor Company- Wetland Delineation and Initial Permitting**

Performed wetland assessment, jurisdictional determination meetings, and 404 permitting steps for the expansion of the Toyota Manufacturing Facility in Buffalo, West Virginia.

#### **Law Firm, After-the-Fact Wetland Determination, Butler County, OH**

Completed an after-the-fact wetland determination for a 56-acre parcel in Butler County, Ohio that was previously altered by the existing landowner. Mr. West was contracted by a Cincinnati-based law firm that represented a large, international merchandise company that was interested in purchasing the property for commercial development. Due to the extensive land alterations and filling that had already occurred across the property, Mr. West completed a thorough office data review and evaluation of available maps, aerial photographs, geotechnical boring logs, and other resources to make an "atypical" wetland determination using Corps-approved methods. The wetland determination was successfully completed and approved by the Corps within the limited timeframe allotted for this project, which enabled the development to proceed on schedule.

#### **A&E Firm, Wetland Delineation, and 404/401 Permitting, Cleveland, OH**

Completion of various wetland services for numerous residential and commercial developments located in and around Cleveland, Ohio. Each development project ranged in size from approximately 20 to 300 acres. Wetland boundaries and stream classifications were field verified and approved by regulatory agencies. Section 401 or 404 permitting and wetland mitigation design has been approved, or is pending, and include a combination of mitigation strategies consisting of wetland construction, stream restoration, enhancement, and/or riparian buffer improvements.

#### **Residential Development Firm, Wetland/Stream Delineation & Section 404 Permitting, Boone and Kenton Counties, KY**

Provided comprehensive wetland services to a local civil engineering firm hired to design four separate residential and mixed commercial-use projects. Projects ranged from approximately 60 acres to over 300 acres in size and generally consisted of forested sites. In most cases, wetland permitting and mitigation costs were reduced by modifying site development plans to avoid and/or minimize wetland and stream impacts. This approach was also effective in avoiding unnecessary project start-up delays.

#### **A&E Firm, Wetland Delineation, 404/401 Permitting, and T&E Survey, Cincinnati, OH**

Managed projects providing comprehensive wetland services, including permitting services, regulatory assistance, Threatened and Endangered Species Surveys, impact minimization and mitigation oversight for a large scale hospital facility located in Green Township, Ohio. Complications arose in this project when homes were demolished prior to regulatory approval of permit applications. This led to a Cultural Resource Section 106 review, as required by the State Historic Preservation Office (SHPO). Mr. West was instrumental in getting proper regulatory approval which allowed the project to proceed as scheduled.

#### **MITIGATION CONSTRUCTION OVERSIGHT AND POST-CONSTRUCTION MONITORING**

##### **Local A&E Firm, Wetland Delineation, and 404/401 Permitting, Cincinnati Children's Hospital Butler County, OH**

Mr. West provided contractor oversight during the construction of a 0.5-acre emergent wetland and 1,500 linear feet of intermittent channel using natural channel design principles for a new medical campus development. Stream construction included the creation of a planted riparian corridor using 1,200 Ohio –native hardwood containerized trees and shrubs and an understory, herbaceous seed mix. He performed a review of the river bank design and made changes that significantly improved the overall success of the project. He worked with a local nursery to assure proper plant selection which improved survival of the species planted. The stream construction has been monitored for four years as per the permit conditions and has been given positive comments by local ACOE field reviews. Mr. West performed QA/QC on the planting stock as it was grown at the nursery and was a primary scientist on the successful monitoring program.

##### **Keystone Power Plant Mitigation and Monitoring, Shelocta, PA**

Provided mitigation plan preparation, design, and contractor oversight during the construction of a 6 acre forested/ scrub-shrub wetland and over 7,500 linear feet of intermittent/ perennial stream channel using natural channel design principles as part of mandatory mitigation requirements for a 404 Individual Permit Application. Mr. West also conducted bi-annual mitigation monitoring and reporting to the regulatory agencies in an effort to document the progress of the mitigated wetlands and streams. After the second year of monitoring, Mr. West designed and implemented a corrective action plan due to deficiencies (dying vegetation/ low flowing streams). Following the fourth year of a five year monitoring plan, Mr. West was able to demonstrate that the mitigation was successful and an additional year of monitoring/ reporting was not necessary.

##### **AK Steel, Stream Bank Restoration, Middletown, OH**

Oversaw and participated in the ecological restoration of approximately 1,200 linear feet of a degraded stream bank for a large industrial site in Middletown, Ohio. Mr. West was responsible for overseeing all stream bank restoration activities including grading activities, Ohio-native seed mix, and containerized plant procurement, bioengineering materials, soil amendments, and product installation. The project area is remote with accessibility challenges requiring extensive pre-mobilization planning and stringent health and safety requirements. Site restoration was successfully completed under budget and within schedule. Mr. West is currently working with the owner, regulatory agencies, and interested parties during the post-construction monitoring period to address invasive species concerns and plant uptake of perched groundwater containing low levels of PCB constituents. This effort includes semi-annual monitoring visits to assess the vegetative composition and health, select herbicide applications, groundwater sampling, and supplemental planting.

##### **Wright Patterson Air Force Base, Natural Resource Services, Green County, OH**

Provided technical leadership for multiple natural resource projects located at the Wright-Patterson Air Force Base. Projects generally involve pre-mitigation assessment, site selection, mitigation construction design, budgetary estimating, post-construction monitoring, and management of onsite activities. In many cases, prior impacts to aquatic resources previously identified on the Base had occurred and regulatory permitting was approved; however, specific mitigation measures needed to compensate for the



necessary impacts were not finalized. Mr. West's attention to detail, expertise with federal and state regulatory requirements, and mitigation experience were highly-valued attributes toward completing the project work scope within an expedited timeframe.

#### **Post-Construction Mitigation Monitoring, Ohio and Kentucky Sites**

Performed annual mitigation monitoring for various constructed wetland and stream restoration/enhancement on numerous projects located throughout Ohio and Northern Kentucky. Activities included assessment of the vegetative habitat development, hydrologic monitoring, invasive species removal, and application of qualitative and quantitative habitat rating data sheets including QHEI, HHEI, and ORAM. Annual mitigation monitoring reports were prepared for each site and submitted to the appropriate regulatory agencies for review and approval.

#### **WETLAND AND STREAM MITIGATION BANKING**

##### **Northern Kentucky Mitigation Bank, Campbell County, KY**

Mr. West assisted in providing the technical expertise and leadership to a group of business investors and environmental conservationists interested in developing a wetland and stream mitigation bank in Northern Kentucky on a 152-acre property. Being the first interagency review team (IRT) mitigation bank project approved in the region, the largest challenge, beyond satisfying the scientific and technical requirements, was to coordinate and incorporate multiple interests and comments from the various federal and state agencies. The IRT agencies included the US ACOE, US Fish and Wildlife Service, EPA, Kentucky Department for Environmental Protection, and Kentucky Fish and Wildlife. The ecological improvements proposed across the property involved the restoration of 35 acres of wetland habitat that had been converted to agricultural, as well as preservation and enhancement of four miles of stream habitat and riparian buffer. To accomplish these goals, Mr. West inventoried and evaluated on-site soil properties, precipitation data, hydrologic factors, macro- and micro-nutrient concentrations, and related criteria to ensure successful wetland habitat restoration. Stream preservation and enhancement involved an initial assessment and inventory of existing aquatic resources using Primary Headwater Habitat principals (Ohio EPA) and EPA Rapid Bioassessment Protocols. Stream enhancement/restoration activities were designed using natural channel design methods and bioengineering principals. As part of the project, a multi-season field pilot study documenting the hydrologic regime to be developed across the agricultural field, and prepared seeding and containerized planting specifications using native species. Regulatory approval was achieved in June 2008 and wetland restoration construction and plantings were immediately initiated. To date, wetland hydrologic conditions have been successfully restored across the agricultural field and wetland plant propagation, as measured by percent cover and species diversity. Mitigation construction was completed in the spring of 2009 and credit release is currently active.

#### **ECOLOGICAL HABITAT ASSESSMENTS**

##### **Provided comprehensive ecological and Threatened and Endangered (T&E) habitat assessments for undeveloped sites located in Kentucky and Ohio**

Ecological assessments were completed on several large, undeveloped parcels of land to identify existing vegetative communities, habitat quality, endangered species habitat, including the Indiana Bat (*Myotis sodalis*) and Running Buffalo Clover (*Trifolium stoloniferum*), and invasive species. These assessments were often conducted in conjunction with Section 404 and Section 401 permits and for wetland enhancement purposes.

##### **Vegetative Index of Biotic Integrity (VIBI) surveys for numerous sites throughout Ohio and Northern Kentucky**

This method is a standardized in-depth vegetation sampling technique for monitoring mitigation wetlands using vascular plants as an indicator species.

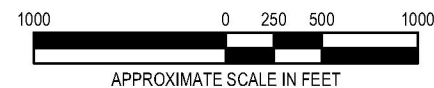
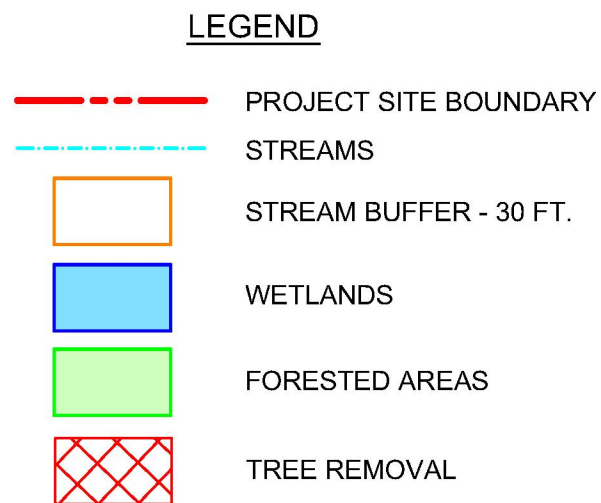
##### **Survey for the Illinois Chorus Frog (*Pseudacris streckeri illinoensis*)**

The Illinois Chorus Frog is listed on the threatened species list of the state of Illinois - The survey, which was conducted on a 1,400-acre project site (forested and agricultural land) of a proposed wind turbine farm, was performed by conducting both audio and visual inspections for the species. Another similar project (Illinois Chorus Frog Survey) was conducted on an over 10,000-acre site near Springfield, IL.

#### **ENVIRONMENTAL SITE ASSESSMENTS**

##### **Environmental Site Assessment (ESA/ Phase I)**

Mr. West has conducted over one hundred (100) Environmental Site Assessments which have included office data reviews, site reconnaissance, and report preparation. Sites investigated have included industrial facilities, commercial and residential properties, medical buildings, and vacant/ undeveloped land. Clients include property management corporations, financial institutions, and private property owners. In many cases, Mr. West's familiarity with Natural Resources allows him to perform both ESAs and Wetland/ Stream delineations simultaneously, saving the client's time and cutting project costs.



## ENVIRONMENTALLY SENSITIVE AREAS

Hecate Energy Highland 2, LLC  
New Market Solar I  
OH 138  
Buford, Highland County, Ohio



611 LUNKEN PARK DRIVE  
CINCINNATI, OHIO 45226  
PH (513) 321-5816  
FAX (513) 321-4540

## EXHIBIT 1

DESIGNED BY:	MDP
DRAWN BY:	KM
APPVD. BY:	SW
SCALE:	1"=100'
DATE:	03/17/2021
JOB NO.	N1217124
ACAD NO.	SITE PLAN.DWG
SHEET NO.:	1

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**This foregoing document was electronically filed with the Public Utilities**

**Commission of Ohio Docketing Information System on**

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**in**

**Case No(s). 20-1288-EL-BGN**

Summary: Notification Compliance with Condition No. 6, 8, 9, 11 and 18 electronically filed by Ms. Karen A. Winters on behalf of Hecate Energy Highland 4 LLC