



DEPARTMENT OF THE ARMY
BUFFALO DISTRICT, CORPS OF ENGINEERS
1776 NIAGARA STREET
BUFFALO, NEW YORK 14207-3199

REPLY TO
ATTENTION OF:

November 5, 2013

Regulatory Branch

SUBJECT: Transmittal of Unvalidated Department of the Army Permit No. 2001-00087

Mr. Joe Balog
Crowland Ltd.
6055 Rockside Woods Blvd., Suite 100
Independence, Ohio 44131

Dear Mr. Balog:

This letter concerns your application for a Department of the Army (DA) permit to place fill within waters of the US for the construction of a mixed-use commercial development on an approximately 86-acre parcel located north of Miller Road and east of Interstate 77 in the City of Brecksville, Cuyahoga County, Ohio.

We have completed our evaluation of your application and have decided that your project may be authorized. Please note, the authorized work differs from the originally plan proposed in your permit application. Specifically, you are authorized to permanently fill 2.822 acres of Federal wetlands and permanently fill 350 linear feet of Federal ephemeral streams for the construction of a service station, two restaurants, a hotel, two small office buildings, a corporate headquarters, and associated parking lots, utilities, roads, storm water management features, and landscaping.

Enclosed are an original and one duplicate of the unvalidated DA permit. However, before proceeding with the authorized work, you must complete the permit validation process.

Please indicate your acceptance of the terms and conditions of the enclosed permit by signing and dating the original and duplicate copies. Both documents must be returned to our office so they can be signed by the District Commander or his designated agent, **along with a check in the amount of \$100.00 made payable to US Army Engineer District, Buffalo.** One copy will then be returned to you for your records. This will complete the validation process, and upon receipt of the signed permit work may commence.

Failure to provide the required information within 120 days from the date of this correspondence will result in your file being withdrawn. In the event you reactivate your

Regulatory Branch

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application at a future date, a new public interest review may be required. If your file is withdrawn, a subsequent field inspection will be conducted to ensure no work requiring DA authorization has been performed. If upon inspection of the site we determine work has been conducted within Federal jurisdictional areas without the proper authorization, your file will immediately be forwarded to our Office of Counsel for action.

Finally, this letter contains an initial proffered permit for your proposed project. If you object to this decision, you may request an administrative appeal under Corps regulations at 33 CFR Part 331. Enclosed you will find a Notification of Appeal Process (NAP) fact sheet and Request for Appeal (RFA) form. If you request to appeal the above decision, you must submit a completed RFA form to our office within 60 days of the date on this letter.

In order for an RFA to be accepted by the Corps, the Corps must determine that it is complete; that it meets the criteria for appeal under 33 C.F.R. parts 331.5, and that it has been received by the District Office within 60 days of the date of the NAP. Should you decide to submit an RFA form, it must be received at the above address by January 8, 2014.

It is not necessary to submit an RFA if you do not object to the decision in this letter.

In addition, you must also include a separate document indicating that the person actually signing the enclosed permit has the authority to do so on behalf of the permittee. This letter must be signed by a qualified official other than the person signing the permit. A sample authorization letter is enclosed.

Questions pertaining to this matter should be directed to Project Manager, who may be contacted by calling 716-879-4363, by writing to the following address: U.S. Army Corps of Engineers, 1776 Niagara Street, Buffalo, New York 14207, or by e-mail at: Peter.j.krakowiak@usace.army.mil

Sincerely,


for Diane C. Kozlowski
Chief, Regulatory Branch

Enclosures



REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY

BUFFALO DISTRICT, CORPS OF ENGINEERS
1776 NIAGARA STREET
BUFFALO, NEW YORK 14207-3199

PERMITTEE: CROWLAND, LTD.

PERMIT NUMBER: 2001-00087

EFFECTIVE DATE: _____

NOTE: The term you and its derivatives, as used in this permit, means the permittee or any future transferee. The term "this office" refers to the appropriate district or division office of the Corps of Engineers having jurisdiction over the permitted activity under the authority of the commanding officer.

You are authorized to perform work in accordance with the terms and conditions specified below. (and continue on page 5)

PROJECT DESCRIPTION: CROWLAND, LTD., 6055 ROCKSIDE WOODS BOULEVARD, INDEPENDENCE, OHIO 44131, IS HEREBY AUTHORIZED BY THE SECRETARY OF THE ARMY TO: PLACE FILL IN WATERS OF THE U.S. FOR THE PURPOSE OF CONSTRUCTING A MIXED-USE DEVELOPMENT IN ACCORDANCE WITH THE GENERAL AND SPECIAL CONDITIONS, AND THE PLANS AND DRAWINGS AND ANY ADDITIONAL SPECIAL CONDITIONS ATTACHED HERETO WHICH ARE INCORPORATED IN AND MADE A PART OF THIS PERMIT. SPECIFICALLY, YOU ARE AUTHORIZED TO PERMANENTLY FILL 2.822 ACRES OF FEDERAL WETLANDS AND PERMANENTLY FILL 350 LINEAR FEET OF FEDERAL EPHEMERAL STREAMS FOR THE CONSTRUCTION OF A SERVICE STATION, TWO RESTAURANTS, A HOTEL, TWO SMALL OFFICE BUILDINGS, A CORPORATE HEADQUARTERS, AND ASSOCIATED PARKING LOTS, UTILITIES, ROADS, STORM WATER MANAGEMENT FEATURES, AND LANDSCAPING.

PROJECT LOCATION: THE PROJECT IS LOCATED ON AN APPROXIMATELY 86-ACRE PARCEL LOCATED NORTH OF MILLER ROAD AND EAST OF INTERSTATE 77 IN THE CITY OF BRECKSVILLE, CUYAHOGA COUNTY, OHIO.

PERMIT CONDITIONS

GENERAL CONDITIONS:

1. The time limit for completing the work authorized ends on _____. If you find that you need more time to complete the authorized activity, submit your request for a time extension to this office for consideration at least one month before the above date is reached.
2. You must maintain the activity authorized by this permit in good condition and in conformance with the terms and conditions of this permit. You are not relieved of this requirement if you abandon the permitted activity, although you must make a good faith transfer to a third party in compliance with General Condition 4 below. Should you wish to cease to maintain the authorized activity, or should you desire to abandon it without a good faith transfer, you may obtain a modification of this permit from this office, which may require restoration of the area.
3. If you discover any previously unknown historic or archaeological remains while accomplishing the activity authorized by this permit, you must immediately notify this office of what you have found. We will initiate the Federal and state coordination required to determine if the remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.
4. If you sell the property associated with this permit, you must obtain the signature of the new owner in the space provided and forward a copy of the permit to this office to validate the transfer of this authorization.
5. If a conditioned water quality certification has been issued for your project, you must comply with the conditions specified in the certification as special conditions to this permit.
6. You must allow representatives from this office to inspect the authorized activity at any time deemed necessary to ensure that it is being or has been accomplished in accordance with the terms and conditions of your permit.
7. The permittee understands and agrees that, if future operations by the United States require the removal, relocation, or other alteration, of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from the Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.

FURTHER INFORMATION:

1. Congressional Authorities: You have been authorized to undertake the activity described above pursuant to:

Section 404 of the Clean Water Act (33 U.S.C. 1344).

2. Limits of this authorization.

a. This permit does not obviate the need to obtain other Federal, state or local authorizations required by law.

b. This permit does not grant any property rights or exclusive privileges.

c. This permit does not authorize any injury to the property or rights of others.

d. This permit does not authorize interference with any existing or proposed Federal project.

3. Limits of Federal Liability. In issuing this permit, the Federal Government does not assume any liability for the following:

a. Damages to the permitted project or uses thereof as a result of other permitted or unpermitted activities or from natural causes.

b. Damages to the permitted project or uses thereof as a result of current or future activities undertaken by or on behalf of the United States in the public interest.

c. Damages to persons, property, or to other permitted or unpermitted activities or structures caused by the activity authorized by this permit.

d. Design or construction deficiencies associated with the permitted work.

e. Damage claims associated with any future modification, suspension, or revocation of this permit.

4. Reliance on Applicant's Data: The determination of this office that issuance of this permit is not contrary to the public interest was made in reliance on the information you provided.

5. Reevaluation of Permit Decision. This office may reevaluate its decision on this permit at any time the circumstances warrant. Circumstances that could require a reevaluation include, but are not limited to, the following:

a. You fail to comply with the terms and conditions of this permit.

b. The information provided by you in support of your permit application proves to have been false, incomplete, or inaccurate (see 4 above).

c. Significant new information surfaces which this office did not consider in reaching the original public interest decision.

Such a reevaluation may result in a determination that it is appropriate to use the suspension, modification, and revocation procedures contained in 33 CFR 325.7 or enforcement procedures such as those contained in 33 CFR 326.4 and 326.5. The referenced enforcement procedures provide for the issuance of an administrative order requiring you to comply with the terms and conditions of your permit and for the initiation of legal action where appropriate. You will be required to pay for any corrective measures ordered by this office, and if you fail to comply with such directive, this office may in certain situations (such as this specified in 33 CFR 209.170)

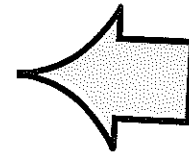
accomplish the corrective measures by contract or otherwise and bill you for the cost.

6. Extensions. General condition 1 establishes a time limit for the completion of the activity authorized by this permit. Unless there are circumstances requiring either a prompt completion of the authorized activity or a reevaluation of the public interest decision, the Corps will normally give favorable consideration to a request for an extension of this time limit.

Your signature below, as permittee, indicates that you accept and agree to comply with the terms and conditions of this permit.

(PERMITTEE)

(DATE)



**SIGN
HERE**

This permit becomes effective when the Federal official, designated to act for the Secretary of the Army, has signed below.

Owen J. Beaudoin, Lieutenant Colonel, Corps of Engineers
(DISTRICT COMMANDER)

(DATE)

When the structures or work authorized by this permit are still in existence at the time the property is transferred, the terms and conditions of this permit will continue to be binding on the new owner(s) of the property. To validate the transfer of this permit and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below. A copy of this signed permit and statement shall be forwarded to the Buffalo District at the following address:

U.S. Army Corps of Engineers
Buffalo District
Regulatory Branch
1776 Niagara Street
Buffalo, New York 14207

(TRANSFEREE)

(DATE)

SPECIAL CONDITIONS:

1. The permittee must notify the Regulatory Branch, in writing, one week prior to the date the activities authorized in Waters of the United States, including wetlands, are scheduled to begin. Notification shall either be by: 1) e-mail sent to Peter.j.krakowiak@usace.army.mil AND LRB.Regulatory@usace.army.mil; or 2) mailed to the following address: Mr. Peter Krakowiak, U.S. Army Corps of Engineers, Buffalo District, 1776 Niagara Street, Buffalo New York 14207-3199.
2. Your responsibility to complete the required compensatory mitigation as set forth in Special Conditions 3 and 6 will not be considered fulfilled until you have demonstrated compensatory project success and have received written verification of that success from the U.S. Army Corps of Engineers.

On-site Mitigation Special Conditions:

3. As partial mitigation for impacts to 2.822 acres of Federal wetlands AND as mitigation for 350 linear feet of stream channel, the permittee is required to place a Conservation Easement held by a conservation-oriented 3rd party organization on the preserved area(s), which includes 7.414 acres of wetland, 2,508 linear feet of stream, and 12.1 acres of upland, as identified on Sheet 3 of 7, to guarantee its preservation for aquatic resources in perpetuity. The easement shall be executed and recorded with the Cuyahoga County Recorder of Records for the preservation of aquatic resources as mitigation for the authorized work prior to conducting work authorized by this permit. The 3rd party holding the conservation easement must be a qualified grantee under State Law, have the expressed purpose of protecting natural or aquatic resources, be approved by Peter Krakowiak of this office prior to recordation, and protect the resources in perpetuity. The permittee is required to submit a DRAFT copy of the conservation easement to be reviewed and approved by Peter Krakowiak of this office prior to recordation. The restrictions contained in the easement shall specifically state that the mitigation areas (the wetlands/streams and buffers to be preserved) must not be adversely impacted by construction or structural modifications. A certified copy of the recorded conservation easement must be provided to Mr. Peter Krakowiak, Regulatory Branch, U.S. Army Corps of Engineers, 1776 Niagara Street, Buffalo, New York 14207-3199, prior to conducting work authorized by this permit, or by an approved extension date. The easement document shall contain language that clearly states the intention of protecting water resources and contains the following from the list of Model Conservation Easement (Explanation of Terms):

1. Caption (Parties and Date).
2. Recitals, including the protection of water resources and baseline documentation.

3. Grant.
4. Provisions, including annual easement monitoring.
5. Habendum.
6. Signatures and Acknowledgements.
7. Schedule of Exhibits.

4. The permittee must ensure none of the following activities occur at the mitigation area(s) (as described in Special Condition No. 3): filling, excavating, dredging, mining or drilling, use of ATVs or other recreational motorized vehicles, removal of topsoil, sand, gravel, rock, minerals, or other materials, nor any building of roads or change in topography of the land in any manner (with the exception of the maintenance of small foot trails), construction or placement of buildings, camping accommodations or mobile homes, fences, signs, billboards or other advertising material, or other structures. There shall be no removal, destruction, or cutting of vegetation, spraying with herbicides, grazing of domestic animals, or disturbance or manipulation of the mitigation area without first obtaining Department of the Army authorization. Control of nuisance vegetation, or any other manipulation within the mitigation areas, shall only occur after Corps of Engineers concurrence that such management practices are necessary to ensure the long-term success of the mitigation program.
5. Signage must be placed around the perimeter of the Preserved Area(s), as shown on Sheets 3 of 7. The signs must be placed no greater than 200 feet from each other. The signs must be installed within 14 days of initiating work authorized by this permit. Photographs, verifying installation of the signs, must be included in the first mitigation monitoring report. Draft language to be included on the signs shall be approved by Peter Krakowiak prior to installation of the signs.

Off-site Mitigation Special Conditions:

6. As partial compensatory mitigation to compensate for permanent impacts to 2.822 acres of forested wetland, the permittee must provide at least 5.7 units (as defined below) of forested wetland mitigation, including at least 2.8 acres of forested wetland re-establishment, at Bath Nature Preserve Tamarack Bog located at 4160 Ira Road, Bath Township, Summit County, Ohio, as referenced on Sheets 5 - 7 of 7. Mitigation units shall be generated using a 1:1 ratio for successful re-establishment and a 1:2 ratio for successful rehabilitation. The mitigation acreage shall exclude any acreage located within the existing right-of-way, see Sheet 7 of 7. The mitigation must be constructed in accordance with the attached drawings as well as any permit conditions. The mitigation must be constructed prior to, or concurrent with work authorized by this permit.

7. The permittee is required to place an environmental covenant held by Bath Township on the mitigation area (as described in Special Condition No. 6), as identified on Sheets 5 and 6 of 7, to guarantee its preservation for aquatic resources in-perpetuity. The covenant shall be executed and recorded with the Summit County Recorder of Records for the preservation of aquatic resources as mitigation for the authorized work prior to conducting work authorized by this permit. The permittee is required to submit a DRAFT copy of the environmental covenant to be reviewed and approved by Peter Krakowiak of this office prior to recordation. The restrictions contained in the covenant shall specifically state that the mitigation areas (the wetlands/streams and buffers to be preserved) must not be adversely impacted by construction or structural modifications. A certified copy of the recorded conservation easement must be provided to Peter Krakowiak, U.S. Army Corps of Engineers, 1776 Niagara Street, Buffalo, New York 14207-3199, prior to conducting work authorized by this permit, or by an approved extension date. The covenant document shall contain language that clearly states the intention of protecting water resources.
8. The permittee must ensure none of the following activities occur at the mitigation area(s) (as described in Special Condition No. 6): filling, excavating, dredging, mining or drilling, use of ATVs or other recreational motorized vehicles, removal of topsoil, sand, gravel, rock, minerals, or other materials, nor any building of roads or change in topography of the land in any manner (with the exception of the maintenance of small foot trails), construction or placement of buildings, camping accommodations or mobile homes, fences, signs, billboards or other advertising material, or other structures (with the exception of the proposed boardwalk). There shall be no removal, destruction, or cutting of vegetation, spraying with herbicides, grazing of domestic animals, or disturbance or manipulation of the mitigation area without first obtaining Department of the Army authorization. Control of nuisance vegetation, or any other manipulation within the mitigation areas, shall only occur after Corps of Engineers concurrence that such management practices are necessary to ensure the long-term success of the mitigation program.
9. The permittee shall provide financial assurance in the form of an escrow account in the amount of \$40,000 to ensure the project will meet performance obligations required of the permittee under this permit, in accordance with the following:
 - a. The escrow account agreement shall be approved by USACE prior to execution of the escrow account agreement (please forward to USACE Buffalo District Regulatory Branch, Attention: Peter Krakowiak, 1776 Niagara Street, Buffalo, NY 14207).
 - b. Once approved by the USACE, the escrow agreement will thereby be incorporated into and made part of the permit as Appendix C.
 - c. The escrow agreement shall be executed and the funds shall be secured in the escrow account prior to commencement of authorized work in waters of the U.S.
 - d. Funds may be debited from the escrow account only with written concurrence from USACE as mitigation components are

demonstrated to be functionally assured and self-sustaining in accordance with the performance standards/success criteria as outlined in the approved mitigation plan (Appendix B) and by Special Conditions 13-24 of this permit.

10. The permittee shall provide financial assurance in the form of an escrow account in the amount of \$165,562 for the performance of all other obligations, covenants, terms, conditions, and agreements required of the permittee under this permit, in accordance with the following:
 - a. The escrow account agreement shall be approved by USACE prior to execution of the escrow account agreement (please forward to USACE Buffalo District Regulatory Branch, Attention: Peter Krakowiak, 1776 Niagara Street, Buffalo, NY 14207).
 - b. Once approved by the USACE, the escrow agreement will thereby be incorporated into and made part of the permit as Appendix D.
 - c. The escrow agreement shall be executed and the funds shall be secured in the escrow account prior to commencement of authorized work in waters of the U.S.
 - d. Funds may be debited from the escrow account as agreed upon with Bath Township. The Corps does not need to approve withdrawals associated with these funds.

11. A baseline wetland mitigation report must be forwarded to this office by December 31 in the year of completion of all mitigation construction activities, or by an approved extension. For purposes of this special condition, "completion" means all activities associated with site grading and seeding and/or planting. The baseline report must include the following:
 - a. An "as-built" topographic survey of the mitigation area at 0.5 foot contour intervals.
 - b. Photographs (minimum 15) from fixed locations with a photo-location map.
 - c. A list of plants introduced through seeding and/or planting.
 - d. Water depth and date of measurement from representative locations within the mitigation area. The sample points will be fixed locations and shall be plotted on a map.
 - e. Baseline Vegetation Index of Biotic Integrity (VIBI) scores
 - f. Water chemistry data
 - g. Baseline tamarack and Sphagnum data
 - h. Baseline invasive species data
 - i. A list of any modifications that were made from the original mitigation plan.

12. The permittee is required to submit monitoring and/or compliance reports for the wetland mitigation project, as described in Special Condition No. 6, to this office for 10 years (Year 1, 3, 5, 7, and 10 unless modified by the Corps) following completion of the mitigation construction based upon data collected during each monitored year between June and October. The reports must follow the requirements outlined in Regulatory Guidance Letter No. 08-03 (Minimum Monitoring Requirements for Compensatory Mitigation Projects Involving the Restoration, Establishment, and/or Enhancement of Aquatic Resources). The first report is due by December 31 in the year following completion of mitigation construction, or by an approved extension date (Example – If mitigation construction is completed in 2010, the first year report would be due by Dec. 31, 2011). For purposes of this special condition, "completion" means all activities associated with site grading and seeding and/or planting. All reports must be submitted to Mr. Peter Krakowiak, Regulatory Branch by December 31 of the year due, or by a Corps-approved extension date. These reports must include:

- a. Comparison of site conditions to an as-built survey.
- b. Wetland Delineation, including a map of wetland boundary.
- c. Photographs (minimum 15) from fixed locations with a photo location reference map.
- d. Plant species list with the following information:
 1. Wetland Indicator Status and strata.
 2. Dominant plants and percent cover.
- e. A list of plants introduced through seeding or planting.
- f. Water depth and date of measurement from representative locations within the mitigation area during the growing season. The sample points will be fixed locations and shall be plotted on a map.
- g. Fish and wildlife observations at the mitigation site.
- h. Vegetation Index of Biotic Integrity (VIBI) scores
- j. Water chemistry data
- k. Tamarack and Sphagnum data
- l. Invasive species data
- m. Summary statement regarding the perceived success of the wetland creation project. The report will evaluate the goals/performance standards as set forth in the permit or mitigation and monitoring plan as well as current wetland functions. These reports must also address any potential problem areas and include

suggestions and timetable for correction if it is anticipated that projected goals may not be met.

n. Date(s) of field inspection(s).

Special Conditions - Performance Standards (for mitigation described in Special Condition No. 6):

13. The re-established and rehabilitated wetland areas as identified in Special Condition 6, must meet the three-wetland parameters as specified in the 1987 Corps of Engineers Wetland Delineation Manual, including the appropriate Regional Supplement.
14. Re-established wetlands identified as bog habitat (as defined in the ORAM Manual) shall meet a Vegetation Index of Biotic Integrity (VIBI) score of at least 66.
15. Re-established wetlands identified as forested wetland habitat shall meet a Vegetation Index of Biotic Integrity (VIBI) score of at least 61.
16. Rehabilitated wetlands identified as bog habitat shall meet a VIBI score of at least 66 or show a 10 point increase from the baseline score, whichever is higher.
17. Rehabilitated wetlands identified as forested wetland habitat shall meet a VIBI score of at least 61 or show a 10 point increase from the baseline score, whichever is higher.
18. The mitigation area, as described in Special Condition 6, must be vegetated with a minimum of 75 percent (%) relative cover of native perennial hydrophytic vegetation (Wetland Indicator Status of FAC, FACW, or OBL), by the end of the 10-year monitoring period.
19. The mitigation area shall have less than 5% relative cover of all non-*Typha* invasive plant species listed in Appendix A. Due to the difficulty of distinguishing the three species of cattails (*Typha latifolia*, *Typha angustifolia*, and *Typha x glauca*), as well as the likelihood that at least one of these will be present in many types of Ohio wetlands, the total relative cover of all invasive species, including *Typha spp.* shall be less than 10% throughout the 10-year monitoring period.
20. A minimum of 400 native live and healthy (disease and pest free) woody plants per acre must be present within the forested wetland area at the end of the 10-year monitoring period. If the criteria specified above are not met, corrective measures, such as but not limited to, additional woody plantings shall be implemented. If corrective measures are required, additional monitoring, beyond the 10-year monitoring period, may be required at the discretion of the District Engineer. The permittee must receive written approval from the Corps prior to conducting any corrective measures.

21. Of the at least 400 woody plants per acre required in Special Condition No. 20, a minimum of 40 live and healthy (disease and pest free) tamarack (*Larix laricina*) trees per acre must be present within the re-established and rehabilitated bog wetland areas at the end of the 10-year monitoring period. If the criteria specified above are not met, corrective measures, such as but not limited to, additional woody plantings shall be implemented. If corrective measures are required, additional monitoring, beyond the 10-year monitoring period, may be required at the discretion of the District Engineer. The permittee must receive written approval from the Corps prior to conducting any corrective measures.
22. If natural recruitment of tamarack (*Larix laricina*) trees does not occur by the end of the third growing season, supplemental planting shall occur during the fourth growing season. For this mitigation project successful natural recruitment shall be considered achieved if there is an average of at least 10 tamarack trees per acre by the end of the third growing season.
23. A minimum of two times the baseline acreage (aerial cover) of sphagnum moss (as determined by the results of Special Condition No. 11) shall be present within the rehabilitated wetland area by the end of the 10-year monitoring period. If the criteria specified above are not met, corrective measures shall be implemented. If corrective measures are required, additional monitoring, beyond the 10-year monitoring period, may be required at the discretion of the District Engineer. The permittee must receive written approval from the Corps prior to conducting any corrective measures.
24. At the end of the monitoring period, there shall be at least as many acres of bog habitat present as identified in the baseline report. If the acreage of bog habitat decreases as a result of the mitigation activities, additional mitigation may be required as determined by the District Engineer.
25. The compensatory wetland mitigation plan entitled Crowland Ltd. – Miller Road Mitigation and Monitoring Plan dated October 2013, is hereby incorporated into and made part of the permit as “Appendix B”. The permittee must implement the mitigation in accordance with the plan and any permit conditions. The mitigation performance standards listed in the Special Conditions supersede any conflicting standards listed in the compensatory mitigation plan as listed previously.

Special Conditions - General:

26. The permittee assumes all liability for accomplishing corrective work. Should the District Engineer determine the compensatory mitigation to be unsuccessful at the end of the monitoring period or during the monitoring period where specific performance criteria must be met, the permittee will be required to undertake, and bear all costs associated with additional mitigative or corrective measures. These actions may include, but are not limited to, regrading, additional planting, purchase of wetland credits from a bank, etc. Additional yearly monitoring of the site may be required at the discretion of the District Engineer.

27. If any tree clearing is proposed to occur after September 30, 2014, the permittee shall contact Peter Krakowiak, U.S. Army Corps of Engineers, 1776 Niagara Street, Buffalo, NY 14207, 716-879-4363 as early as possible to determine if additional coordination regarding any Federally listed species under the Endangered Species Act is necessary. If additional coordination is determined to be needed, the Corps, in conjunction with the permittee, will contact the U.S. Fish and Wildlife Service to begin the consultation process. Should consultation be required, this office strongly recommends refraining from clearing trees while consultation is taking place to avoid potential violation of the Endangered Species Act.
28. You are responsible for ensuring that the contractor and/or workers executing the activities authorized by this permit have knowledge of the terms and conditions of the authorization and that a copy of the permit document is posted at the project site throughout the period the work is underway.
29. At the request of an authorized representative of the Buffalo District, U.S. Army Corps of Engineers, the permittee must allow access to the project site to determine compliance with the conditions of this permit.
30. The Water Quality Certification issued for this project by the State of Ohio is part of this Department of the Army permit pursuant to Section 401(d) of the Clean Water Act. Noncompliance with any limitations or requirements stated in the certification may be a basis for suspension, revocation or modification of this permit.
31. Should human remains be encountered during any phase of the proposed project, such person or persons encountering the human remains shall immediately cease work and will make a reasonable effort to refrain from disturbing or removing the human remains, protect the exposed portions of the human remains from inclement weather and vandalism, and immediately notify the applicant. The applicant will immediately notify the U.S. Army Corps of Engineers and the Ohio State Historic Preservation Office. If the human remains are not subject to a criminal investigation by local, state, or Federal authorities, the Ohio SHPO's Policy Statement on Treatment of Human Remains (1977) will be used as guidance.
32. That the mechanical equipment used to execute the work authorized herein shall be operated in such a way as to minimize turbidity that could degrade water quality and adversely affect aquatic plant and animal life.
33. Siltation barriers (i.e. silt fencing or hay bales) must be installed between the wetlands and the adjoining development and toed-in to prevent siltation into the wetlands. The siltation barriers must be checked periodically to ensure that they are functioning properly and not damaged. Repairs to damaged siltation barriers must be completed promptly, and the

siltation barriers must remain in place until the site is stabilized by the re-growth of suitable vegetation. All controls must be completely removed once the area is stabilized.

34. All erosion and sediment control practices shall be in place prior to any grading or filling operations and installation of proposed structures or utilities. They shall remain in place until construction is completed and the area is stabilized.
35. That the fill material shall be free of oil and grease, debris, wood, general refuse, plaster, and other pollutants, and shall contain no broken asphalt.
36. The disposal of trees, brush and other debris in any stream corridor, wetland or surface water is prohibited.
37. This permit does not authorize sidecasting or any other temporary or permanent disposal of dredged or fill material in the avoided wetlands or any other water of the United States including freshwater wetlands.
38. The permittee must install orange safety fencing around the perimeter of the development area to prevent any inadvertent disturbance to the adjacent wetlands or their wetland buffers by construction operations and equipment. The fencing must be placed in uplands, be maintained throughout the duration of the project, and must be removed immediately after construction has been completed.

**NOTIFICATION OF ADMINISTRATIVE APPEAL OPTIONS AND PROCESS AND
REQUEST FOR APPEAL**

Applicant: Crowland Ltd.		File Number: 2001-00087	Date: 11/5/13
Attached is:		See Section below	
X	INITIAL PROFFERED PERMIT (Standard Permit or Letter of permission)	A	
	PROFFERED PERMIT (Standard Permit or Letter of permission)	B	
	PERMIT DENIAL	C	
	APPROVED JURISDICTIONAL DETERMINATION	D	
	PRELIMINARY JURISDICTIONAL DETERMINATION	E	

SECTION I: The following identifies your rights and options regarding an administrative appeal of the above decision. Additional information may be found at http://www.usace.army.mil/CECW/Pages/reg_materials.aspx or Corps regulations at 33 CFR Part 331.

A: INITIAL PROFFERED PERMIT: You may accept or object to the permit.

- **ACCEPT:** If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- **OBJECT:** If you object to the permit (Standard or LOP) because of certain terms and conditions therein, you may request that the permit be modified accordingly. You must complete Section II of this form and return the form to the district engineer. Your objections must be received by the district engineer within 60 days of the date of this notice, or you will forfeit your right to appeal the permit in the future. Upon receipt of your letter, the district engineer will evaluate your objections and may: (a) modify the permit to address all of your concerns, (b) modify the permit to address some of your objections, or (c) not modify the permit having determined that the permit should be issued as previously written. After evaluating your objections, the district engineer will send you a proffered permit for your reconsideration, as indicated in Section B below.

B: PROFFERED PERMIT: You may accept or appeal the permit

- **ACCEPT:** If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- **APPEAL:** If you choose to decline the proffered permit (Standard or LOP) because of certain terms and conditions therein, you may appeal the declined permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

C: PERMIT DENIAL: You may appeal the denial of a permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

D: APPROVED JURISDICTIONAL DETERMINATION: You may accept or appeal the approved JD or provide new information.

- **ACCEPT:** You do not need to notify the Corps to accept an approved JD. Failure to notify the Corps within 60 days of the date of this notice, means that you accept the approved JD in its entirety, and waive all rights to appeal the approved JD.
- **APPEAL:** If you disagree with the approved JD, you may appeal the approved JD under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

E: PRELIMINARY JURISDICTIONAL DETERMINATION: You do not need to respond to the Corps regarding the preliminary JD. The Preliminary JD is not appealable. If you wish, you may request an approved JD (which may be appealed), by contacting the Corps district for further instruction. Also you may provide new information for further consideration by the Corps to reevaluate the JD.

SECTION II - REQUEST FOR APPEAL or OBJECTIONS TO AN INITIAL PROFFERED PERMIT

REASONS FOR APPEAL OR OBJECTIONS: (Describe your reasons for appealing the decision or your objections to an initial proffered permit in clear concise statements. You may attach additional information to this form to clarify where your reasons or objections are addressed in the administrative record.)

ADDITIONAL INFORMATION: The appeal is limited to a review of the administrative record, the Corps memorandum for the record of the appeal conference or meeting, and any supplemental information that the review officer has determined is needed to clarify the administrative record. Neither the appellant nor the Corps may add new information or analyses to the record. However, you may provide additional information to clarify the location of information that is already in the administrative record.

POINT OF CONTACT FOR QUESTIONS OR INFORMATION:

If you have questions regarding this decision and/or the appeal process you may contact:

Peter Krakowiak
United States Army Corps of Engineers
Buffalo District
1776 Niagara Street
Buffalo, NY 14207
716-879-4363
Peter.j.krakowiak@usace.army.mil

If you only have questions regarding the appeal process you may also contact:

Attn: Appeal Review Officer
Great Lakes and Ohio River Division
CELRD-PD-REG
550 Main Street, Room 10524
Cincinnati, OH 45202-3222
513-684-6212; FAX 513-684-2460

RIGHT OF ENTRY: Your signature below grants the right of entry to Corps of Engineers personnel, and any government consultants, to conduct investigations of the project site during the course of the appeal process. You will be provided a 15 day notice of any site investigation, and will have the opportunity to participate in all site investigations.

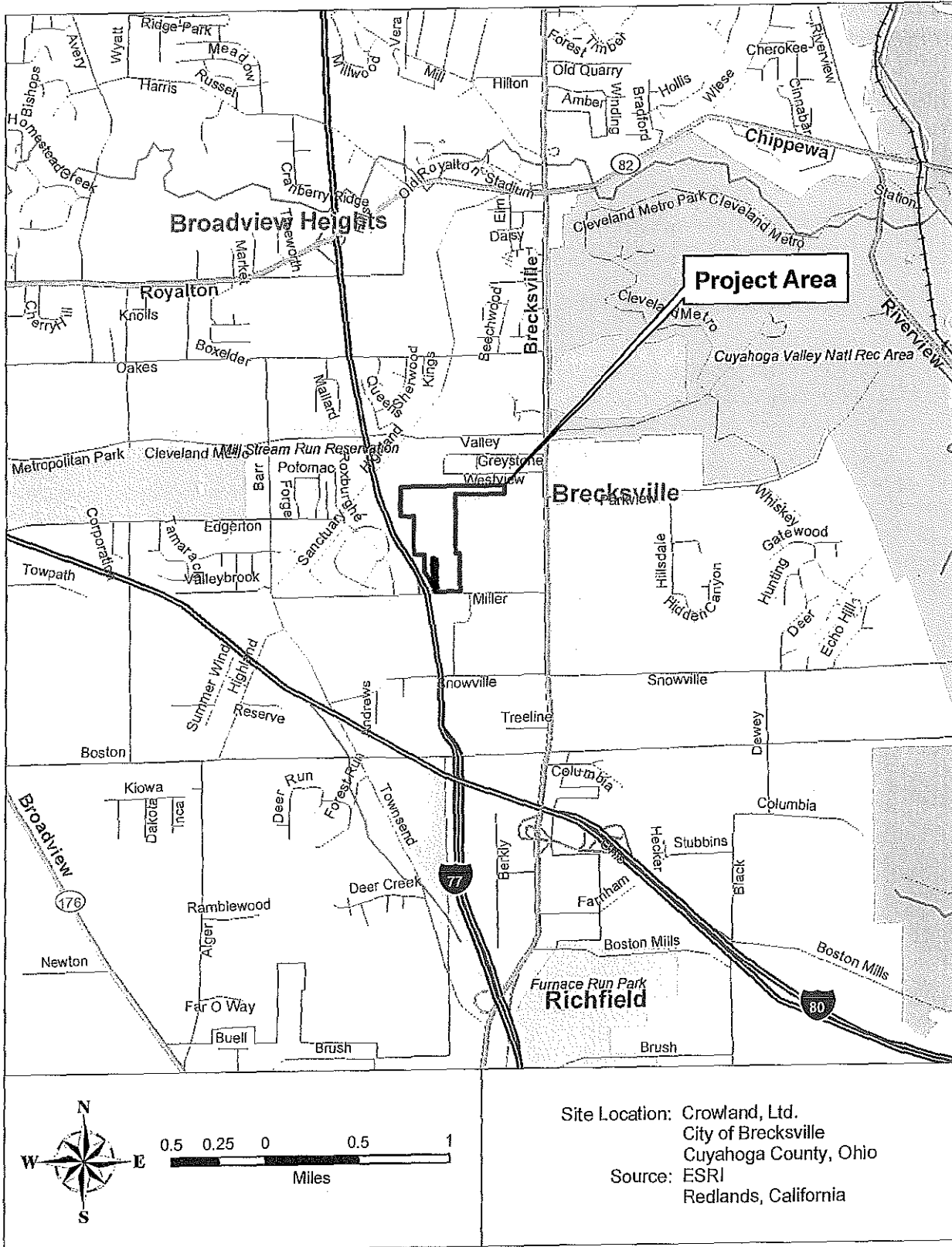
Signature of appellant or agent.

Date:

Telephone number:



Location of Project Area on Highway Map

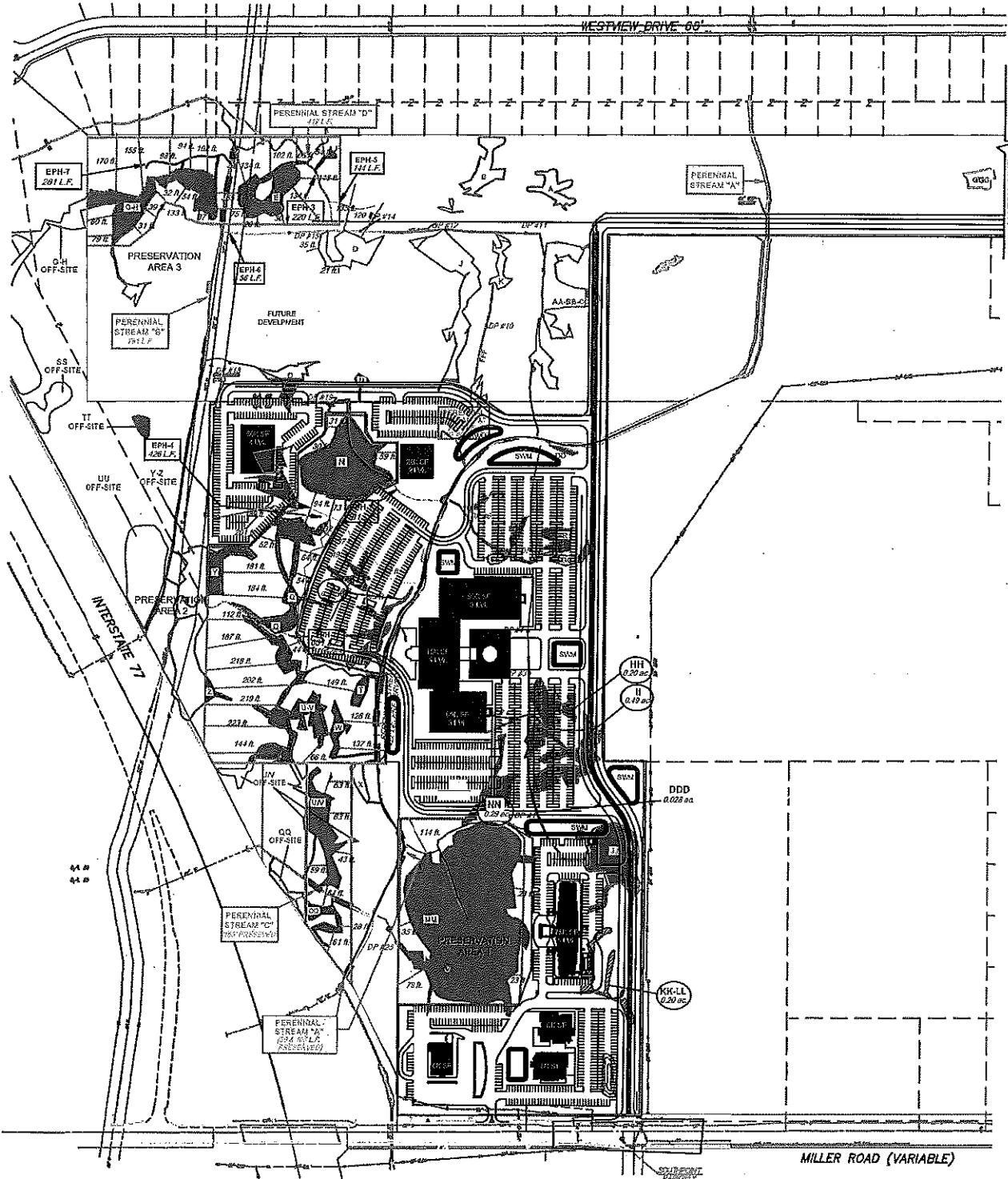
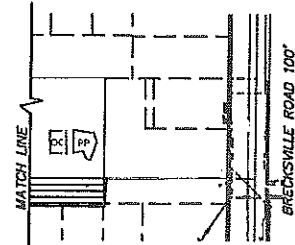


Site Location: Crowland, Ltd.
 City of Brecksville
 Cuyahoga County, Ohio
 Source: ESRI
 Redlands, California



GRAPHIC SCALE
0' 150' 300'

Crowland, Ltd.
D/A Processing No. 2001-00087
Cuyahoga County, Ohio
Quad: Broadview Heights
Sheet 2 of 7



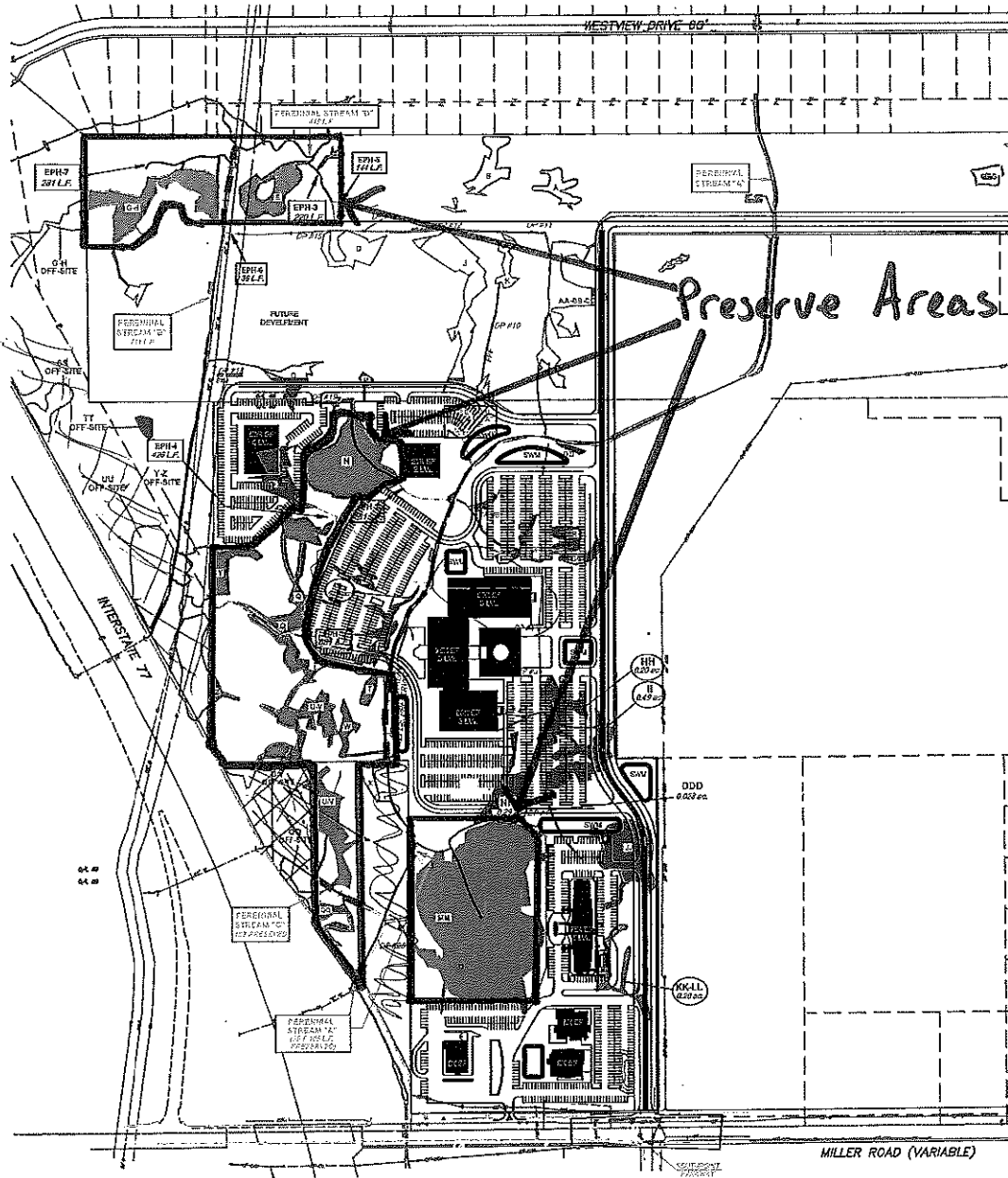
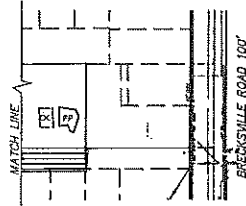
ON-SITE: WETLANDS/STREAMS:	EXISTING: (ORIG. BOUNDARY)	IMPACTED: (REVISED BOUNDARY)	PRESERVED: (REVISED BOUNDARY)	AVOIDED: (ORIGINAL BOUNDARY)
FEDERAL WETLANDS	12.06 AC.	2.822 AC.	7.414 AC.	1.828 AC.
ISOLATED WETLANDS	0.80 AC.	0.201 AC.		0.599 AC.
STREAMS	5,135 LIN. FT.	350 LIN. FT.	2,508 LIN. FT.	2,277 LIN. FT.

TOTAL SITE = 88.7 ACRES
TOTAL DEVELOPED SITE (WITH ROAD) = 38.35 ACRES
TOTAL PRESERVED = 19.5 ACRES TOTAL REMAINING = 30.85 ACRES

REVISED 02/28/13
MINIMUM DEVELOPMENT ALTERNATIVE
CROWLAND, LTD.
CITY OF BRECKSVILLE, CUYAHOGA COUNTY, OHIO



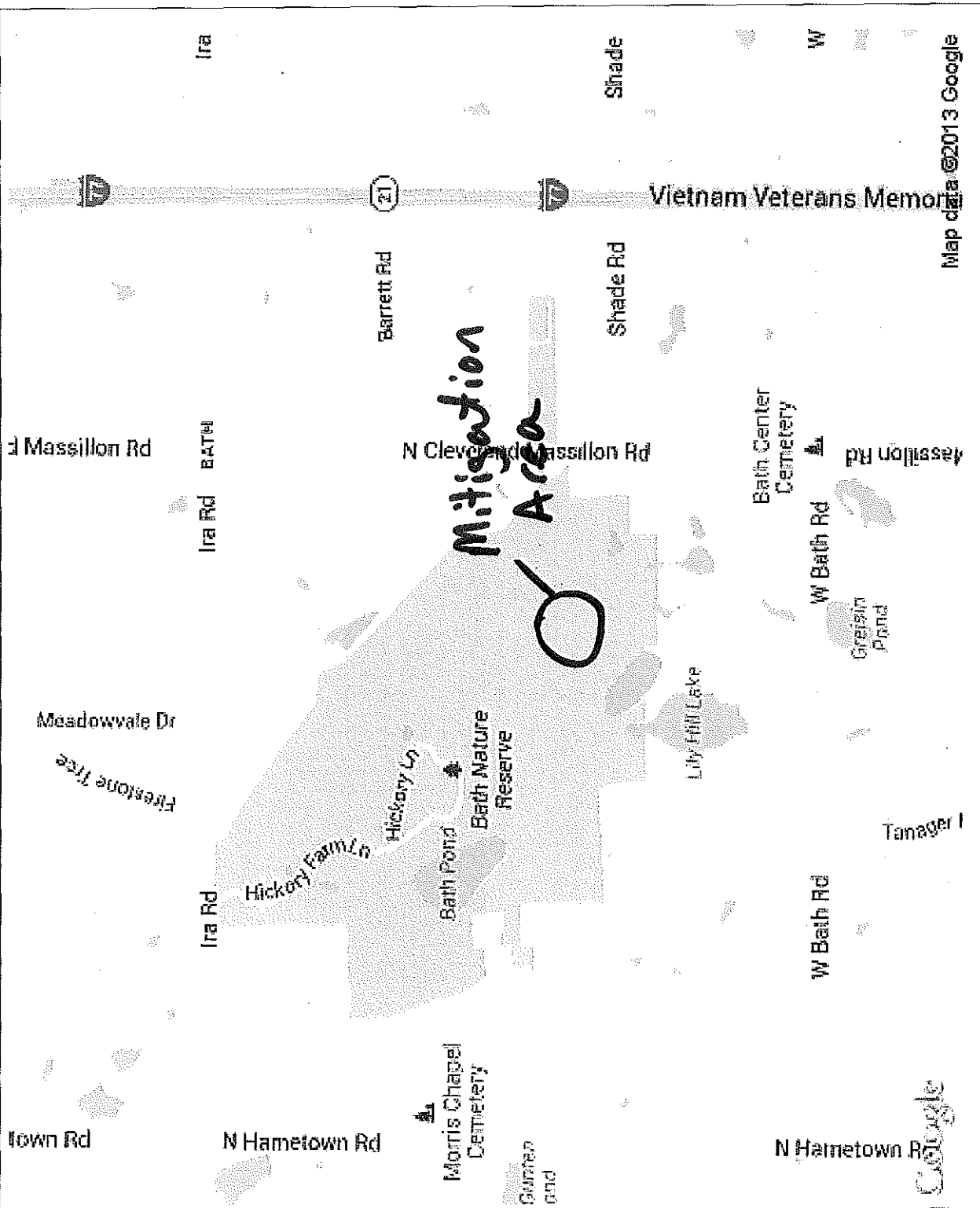
GRAPHIC SCALE
 0' 150' 300'



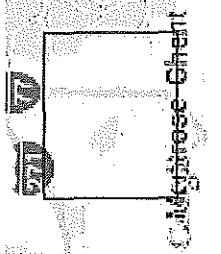
ON-SITE: WETLANDS/STREAMS:	EXISTING: (ORIG. BOUNDARY)	IMPACTED: (REVISED BOUNDARY)	PRESERVED: (REVISED BOUNDARY)	AVOIDED: (ORIGINAL BOUNDARY)
FEDERAL WETLANDS	12.06 AC.	2.822 AC	7.414 AC	1.828 AC
ISOLATED WETLANDS	0.80 AC.	0.201 AC.		0.599 AC.
STREAMS	5,135 LIN. FT.	350 LIN. Ft	2,508 LIN. FT.	2,277 LIN. FT.

TOTAL SITE = 88.7 ACRES
 TOTAL DEVELOPED SITE (WITH ROAD) = 38.35 ACRES
 TOTAL PRESERVED = 19.5 ACRES TOTAL REMAINING = 30.85 ACRES

REVISED 02/28/13
 MINIMUM DEVELOPMENT ALTERNATIVE
 CROWLAND, LTD.
 CITY OF BRECKSVILLE, CUYAHOGA COUNTY, OHIO



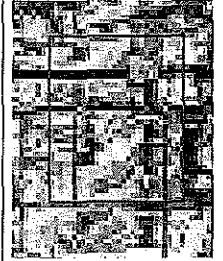
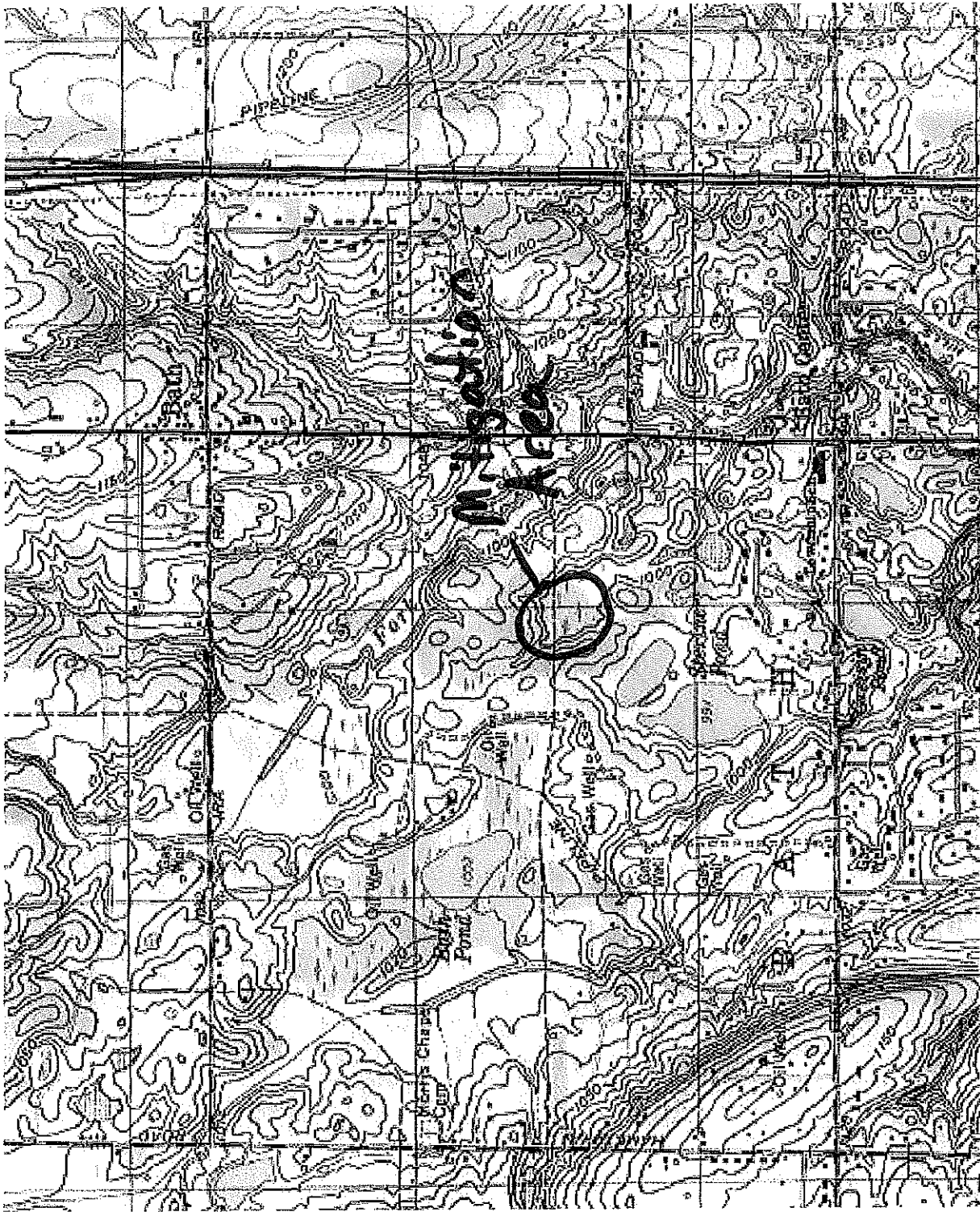
Map data ©2013 Google



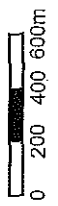
Tamarack Bog mitigation site



Crowland, Ltd.
D/A Processing No. 2001-00087
Cuyahoga County, Ohio
Quad: Broadview Heights
Sheet 5 of 7



Tamarack Bog mitigation site



Date Printed: 10.07.2013 Map Scale: 1:27084

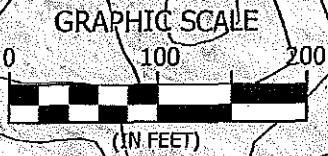
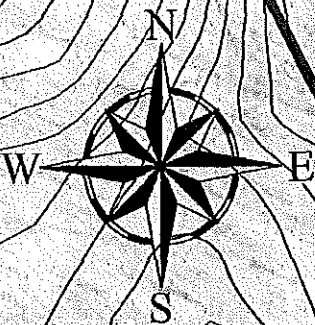


Mitigation Area



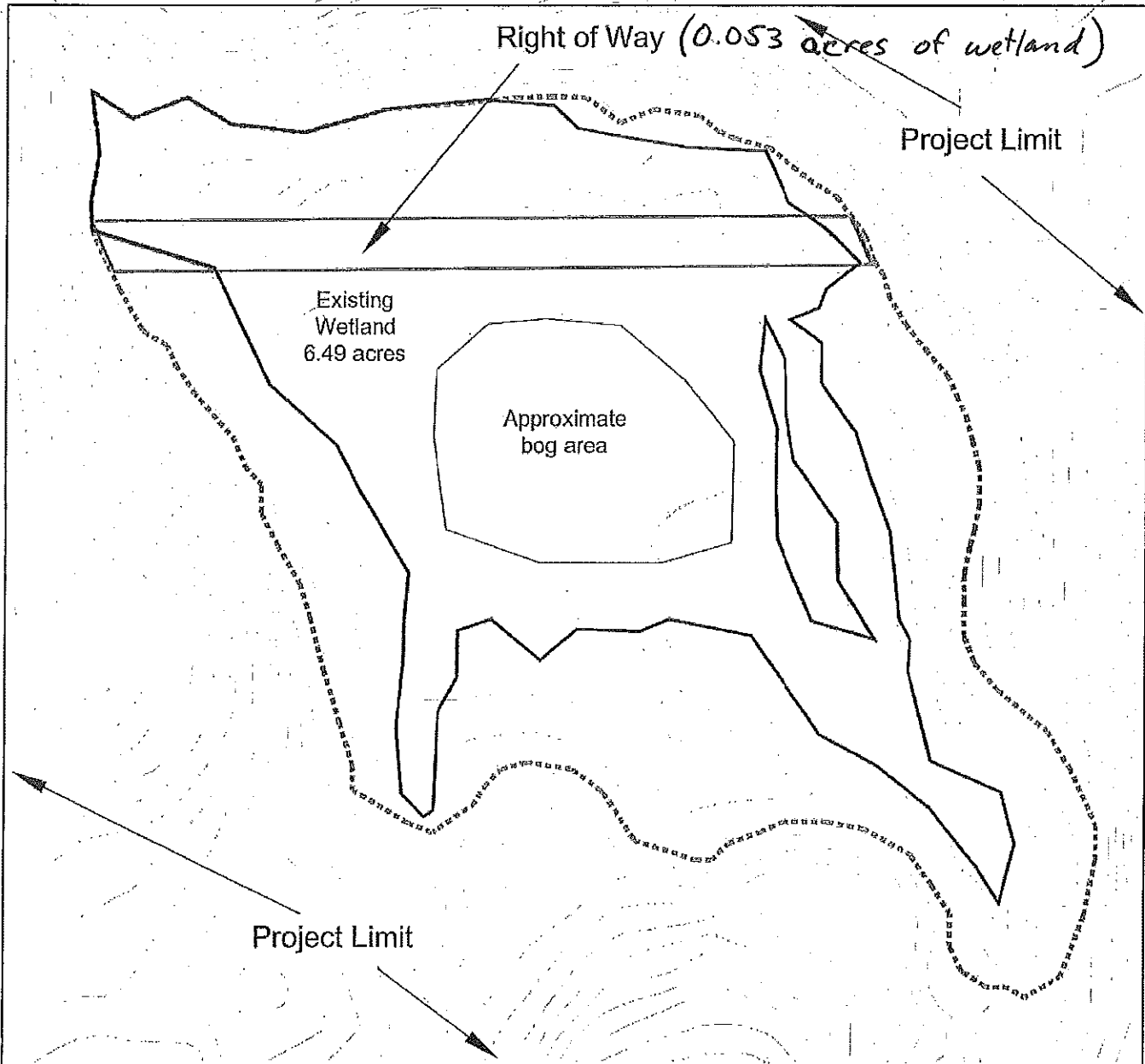
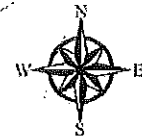
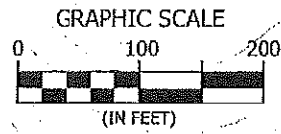
Proposed Total Wetland Mitigation 10.86 acres

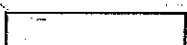
acres



- = Approximate property boundary
- = Delineated wetlands (existing; 6.49 acres)
- = Proposed wetlands restoration (4.37 acres)

Figure 3
Mitigation Area Map



 = Delineated wetlands (existing; 6.49 acres)

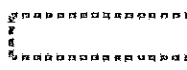
 = Proposed Wetlands Mitigation Zone
8.6 acres Restoration/Enhancement

Figure 3
Mitigation Area
Rev 10-9-2013



APPENDIX A INVASIVE PLANT LIST FOR OHIO MITIGATION

Scientific Name	Common Name
<i>Acer platanoides</i>	Norway Maple
<i>Ailanthus altissima</i>	Tree-of-Heaven
<i>Alliaria petiolata</i>	Garlic Mustard
<i>Alnus glutinosa</i>	European Alder
<i>Berberis thunbergii</i>	Japanese Barberry
<i>Butomus umbellatus</i>	Flowering-rush
<i>Catalpa speciosa</i>	Northern Catalpa
<i>Celastrus orbiculatus</i>	Asian Bittersweet
<i>Cirsium arvense</i>	Canada Thistle
<i>Conium maculatum</i>	Poison Hemlock
<i>Coronilla varia</i>	Crown Vetch
<i>Dipsacus fullonum</i>	Common Teasel
<i>Dipsacus laciniatus</i>	Cut-leaved Teasel
<i>Elaeagnus angustifolia</i>	Russian Olive
<i>Elaeagnus umbellata</i>	Autumn Olive
<i>Epilobium hirsutum</i>	Hairy Willow-herb
<i>Epilobium parviflorum</i>	Small-flowered Willow-herb
<i>Euonymus alatus</i>	Winged Euonymus
<i>Euonymus fortunei</i>	Wintercreeper
<i>Hydrocharis morsus-ranae</i>	Common Frog-bit
<i>Iris pseudacorus</i>	Yellow Flag
<i>Ligustrum vulgare</i>	Common Privet
<i>Lonicera japonica</i>	Japanese Honeysuckle
<i>Lonicera maackii</i>	Amur Honeysuckle
<i>Lonicera morrowii</i>	Morrow Honeysuckle
<i>Lonicera tartarica</i>	Tartarian Honeysuckle
<i>Lythrum salicaria</i>	Purple Loosestrife
<i>Maclura pomifera</i>	Osage Orange
<i>Microstegium vimineum</i>	Japanese Stilt Grass
<i>Myriophyllum spicatum</i>	Eurasian Water-milfoil
<i>Najas minor</i>	Lesser Naiad
<i>Nasturtium officinale</i>	Watercress
<i>Phalaris arundinacea</i>	Reed Canary Grass
<i>Phragmites australis</i>	Common Reed
<i>Polygonum cuspidatum</i>	Japanese Knotweed
<i>Potamogeton crispus</i>	Curly Pondweed
<i>Pyrus calleryana</i>	Bradford Pear
<i>Ranunculus ficaria</i>	Lesser Celandine
<i>Rhamnus cathartica</i>	Common Buckthorn
<i>Rhamnus frangula</i>	Glossy Buckthorn
<i>Rosa multiflora</i>	Multiflora Rose
<i>Schoenoplectus mucronatus</i>	Bog Bulrush
<i>Sorghum halepense</i>	Johnson Grass
<i>Typha angustifolia</i>	Narrow-Leaved Cattail
<i>Typha x glauca</i>	Hybrid Cattail
<i>Viburnum opulus var. opulus</i>	European Cranberry-Bush
<i>Vinca minor</i>	Periwinkle



Crowland Ltd. – Miller Road Mitigation and Monitoring Plan – October 2013

Mitigation Plan (33 CFR 332.4(c)/40 CFR 230.92.4(c))

A mitigation plan is required for all forms of compensatory mitigation, whether permittee-responsible mitigation, mitigation banks, or in-lieu fee mitigation projects.

On-Site Mitigation

Within the Project location (Miller Road, City of Brecksville, OH) the Applicant will preserve in perpetuity 2,508 linear feet of stream and 19.560 acres, including 7.414 acres of wetland and 12.148 acres of non-wetland upland buffer. A conservation easement will be prepared that will protect the remaining wetlands, streams and adjacent upland buffers will preclude any future development, to be held by a conservation-oriented third-party organization. The draft preservation easement instrument will be provided to the Corps for approval prior to implementation.

To further mitigation the project wetland impacts, the Applicant will provided within watershed wetland mitigation, as described below.

The Tamarack Bog Preservation, Enhancement and/or Potential Restoration Mitigation Plan

1. Objectives. *A description of the resource type(s) and amount(s) that will be provided, the method of compensation (restoration, establishment, preservation etc.), and how the anticipated functions of the mitigation project will address watershed needs.*

The Applicant has proposed a within-watershed wetland mitigation project as compensation for the wetland impacts resulting from the proposed project. Although the Applicant will not be implementing the actual project, the Applicant will be ultimately responsible for the success of the mitigation project, as defined in the proposal described below. The Applicant will fund Bath Township for supporting a mitigation project for the preservation, enhancement and potentially restoration of the Tamarack Bog (the "Bog"), located in the Bath Nature Preserve (BNP), 4160 Ira Rd, Bath, Ohio (Figures 1 and 2).

The bog had an historic extent of 13.8 acres (Miletti *et al*, 2005), but a delineation conducted verified by the Corps, showed the wetland has been reduced to an area of 6.490 acres. Miletti *et al*. 2005 (attached) study suggested the main reason for the decrease in size of the Bog was the construction of two drainage ditches through the east and south portions of the Bog sometime around 1970. Ohio EPA believes the ditches were installed to fill inline ponds constructed directly downstream. The ditches lowered the water level of the bog/fen, changing the hydrology of the wetland from a sphagnum bog to peat wetland wherein maple trees were able to gain a foothold and shade out the remnant bog species, which are assumed to have been present

throughout the wetland in greater abundance. Bath Township is felling the last of the maple trees and has installed an Agri Drain Inline Water Level Control Structure (Agri Drain) at the outlet of the ditch to allow future re-flooding of the Bog, but has yet to implement its operation.

Topographic information coupled with field observations show that the proposed wetland mitigation project can enhance and/or potentially restore the bog/fen and /or forested wetland from the existing 6.490-acre size to at least 8.6 acres (when restoration within an existing right of way is excluded). Based on historic aerial photographs, Miletti et al. 2005 estimated the maximum size of the Bog at 13.8 acres. Therefore, it seems practicable to enhance and/or potentially restore more wetland than is being proposed, however, the plan is erring on the conservative side. The mitigation plan will result in at least at least 8.6 acres of bog/fen and/or forested wetland, with a minimum of 2.8 acres of forested wetland re-establishment and a minimum of 2.8 acres of rehabilitation of the existing wetland (Figure 3).

The primary goal of this project is to increase the amount and quality of bog/fen habitat. A secondary goal concerns peripheral areas of the project that do not (and cannot) eventually become bog or fen habits. The goal for those areas is to foster development of wet forest and other high quality wetlands. To enhance the bog/fen the project will a) restore the hydrology, and b) remove and control invasive species, especially red maple and European buckthorn. To improve hydrology the project will increase water levels in small (4") inch stages and monitor and evaluate the results before proceeding to the next increase event. This incremental approach will also give the bog species (such as Tamarack trees and sphagnum moss) time to expand into the newly inundated area, and should prevent development of any major open water zones.

Bogs are rare wetland types within Ohio. This preservation, enhancement and/or potential restoration project will help to enhance and/or potentially restore this scarce water resource and will help to protect known threatened and endangered species that have been identified within this bog (see below). The proposed mitigation project will conduct a pre-flooding site study to establish baseline parameters of the existing conditions. Once the Agri Drain is employed and the flooding is done, monitoring will continue for a period of 10 years to ensure the proper flooding level is attained and maintained, the desired bog species are re-established, and a minimum of 2.8 acres of forested wetland will be re-established and a minimum of 2.8 acres of rehabilitation of existing wetland will occur.

2. Site selection. *A description of the factors considered during the site selection process. This should include consideration of watershed needs, onsite alternatives where applicable, and practicability of accomplishing ecologically self-sustaining aquatic resource restoration, establishment, enhancement, and/or preservation at the mitigation project site.*

The selected Mitigation Site is within the Cuyahoga River watershed (HUC 04110002), the same watershed where the wetland impacts occur. The proposed mitigation Project follows the recommendations for the Bog enhancement and restoration as described in

a published peer reviewed research article that studied this specific bog (Miletti *et al*, 2005). Representatives of Ohio EPA, the University of Akron, Cleveland Museum of Natural History, Bath Township and the Applicant's consultant conducted a field review of the proposed site on March 21, 2013. The Miletti study identified two State potentially threatened plant species (*Carex atlantica* var. *capillacea* and *Larix laricina**) and one State endangered plant species (*Carex disperma**). The starred plants (*) were found during the March 21, 2013 site visit. It was agreed by all that this site was a very good site for a unique wetland mitigation project and had considerable public awareness and educational opportunities. The site has a very high probability of success, and will provide valuable bog/fen enhancement and restoration data for such sites.

3. Site protection instrument. *A description of the legal arrangements and instrument including site ownership, that will be used to ensure the long-term protection of the mitigation project site.*

Once the Mitigation Project is accepted, a site boundary survey will be conducted. The site is located within the Bath Nature Preserve, and the specific mitigation area will be protected in perpetuity within the park by the Township through an environmental covenant held by Bath Township for the purpose of subjecting the Environmental Covenant Area to the activity and use limitations as set forth in the Environmental Covenant. The mitigation area is expected to have an upland buffer, with varying width that will be determined once the initial surveys are completed. Regardless, it should be noted that the entire area surrounding the bog is still within the Bath Nature Preserve. A draft copy of the environmental covenant will be provided to the Corps for review and approval prior to recordation.

4. Baseline information. *A description of the ecological characteristics of the proposed mitigation project site, in the case of an application for a DA permit, the impact site. This may include descriptions of historic and existing plant communities, historic and existing hydrology, soil conditions, a map showing the locations of the impact and mitigation site(s) or the geographic coordinates for those site(s), and other characteristics appropriate to the type of resource proposed as compensation. The baseline information should include a delineation of waters of the United States on the proposed mitigation project site. A prospective permittee planning to secure credits from an approved mitigation bank or in-lieu fee program only needs to provide baseline information about the impact site.*

The Ohio EPA, the University of Akron (which has a field station within the overall Bath Nature Preserve), Bath Township and the Applicant have prepared a conceptual mitigation plan that includes baseline data collection to occur within the first year, followed by implementing the Agri Drain.

4. A baseline wetland construction report must be forwarded to the Corps by December 31 in the year of completion of all mitigation construction activities, or by an approved extension. For purposes of this special condition, "completion" means all activities associated with site grading and seeding and/or planting. The baseline report must include the following:
 - a. An "as-built" topographic survey of the mitigation area at 0.5 foot contour intervals.
 - b. Photographs (minimum 15) from fixed locations with a photo-location map.
 - c. A list of plants introduced through seeding and/or planting.
 - d. Water depth and date of measurement from representative locations within the mitigation area. The sample points will be fixed locations and shall be plotted on a map.
 - e. Baseline Vegetation Index of Biotic Integrity (VIBI) scores
 - f. Water chemistry data
 - g. Baseline tamarack and Sphagnum data
 - h. Baseline invasive species data
 - i. A list of any modifications that were made from the original mitigation plan.

5. Determination of credits. *A description of the number of credits to be provided including a brief explanation of the rationale for this determination.*

As partial mitigation for impacts to 2.822 acres of Federal wetlands and as mitigation for 350 linear feet of stream channel, the Applicant will place a Conservation Easement held by a conservation-oriented 3rd party organization on the preserved area(s), which includes 7.414 acres of wetland, 2,508 linear feet of stream, and 12.1 acres of upland, on the project site where impacts will occur, to guarantee its preservation for aquatic resources in perpetuity.

As further compensatory mitigation to compensate for permanent impacts to 2.822 acres of forested wetland, the Applicant will re-establish and rehabilitate at least 8.6 acres of bog and/or forested wetland (with a minimum of 2.8 acres of forested wetland re-establishment and a minimum of 2.8 acres of rehabilitation of the existing wetland) at Bath Nature Preserve Tamarack Bog located at 4160 Ira Road, Bath Township, Summit County, Ohio. In addition, the Applicant will preserve in perpetuity 2,508 linear feet of stream and 19.560 acres, including 7.414 acres of wetland and 12.148 acres of non-

wetland upland buffer on the Project site in Brecksville, OH, where the impacts will occur.

6. Mitigation work plan. *Detailed written specifications and work descriptions for the mitigation project, including: the geographic boundaries of the project; construction methods, timing, and sequence; source(s) of water; methods for establishing the desired plant community; plans to control invasive plant species; proposed grading plan; soil management; and erosion control measures. For stream mitigation projects, the mitigation work plan may also include other relevant information, such as planform geometry, channel form (e.g., typical channel cross-sections), watershed size, design discharge, and riparian area plantings.*

The Mitigation plan calls for five specific actions:

- Area Reflooding and Maintenance – The flood levels appropriate to re-establish a bog/fen and/or forested wetland community within the former bog/fen area will be identified and set using the Agri Drain, which was installed in the late winter of 2013 by Bath Township, but has not yet been employed. The specific location of the Agri Drain was based on historic aerial photographs, as it is the most likely location of the historic discharge point from the bog/fen. Placing the Agri Drain at that location is historically and ecologically accurate. This flow control structure can be adjusted to allow back-flooding to occur at specific elevations. Once the detailed contour map is completed, the exact elevation of the back-flooding can be established and maintained. The continuous data depth loggers will be used in conjunction with other well data to fine tune flooding as the project proceeds. The baseline vegetative and water chemistry data data will be collected at the earlier appropriate date. Changes in the water level within the bog will be driven by the success of the sphagnum and other bog species repatriation. The goal is to strike a balance between expanding the bog flooded perimeter while not creating a water depth too deep to support the extant vegetation community within the existing bog. The desired condition in the bog/fen is one of permanent inundation. Hydrologic indicators of permanent inundation take a considerable time to form. As a surrogate, a measure of the flood prone perimeter will be used. Prior to the baseline flood prone perimeter being mapped, a Sampling and Analysis Plan (SAP), complete with methodology and reporting shall be developed.
- Maple Tree removal –The plan is to girdle red maples in the project area to reduce the amount of impact to the bog, and the amount of debris falling at one time. This will also provide important snag habitat for animal species. Chemical treatment may be used to prevent growth from the girdled trees. This will open the area to sunlight and encourage the growth of Tamarack trees and sphagnum moss. The expansion of sphagnum moss should allow for an expansion of *Carex disperma*, which grows on sphagnum moss, as well as other bog species that exists in the seed bank;
- Invasive and Nuisance Species Removal – Invasive species, including *Phragmites australis* (common reed, FACW), *Frangula alnus* (glossy buckthorn,

FAC) and other invasive species, as identified in the Interagency Review Team for Mitigation Bank's list of invasive species, will be cut and/or treated to prevent regrowth. It is likely that specific native nuisance vegetation such as the maple trees and swamp loosestrife will be targeted for selective removal as the project proceeds in order to encourage native bog species to recolonize the area;

- Active Data Interpretation and Field Adjustments – The mitigation area will be subject to continuous monitoring, even outside the prescribed sample collection periods, as the University of Akron maintains their field station near the site. This active monitoring, coupled with the scheduled monitoring, will be used to assess the progress of the wetland enhancement and bog expansion. If adjustments in water depths are determined to be needed, the lead monitoring entity will inform the Corps and the Ohio EPA of the recommended change and implement that change after that consultation and written concurrence;
- Public Educational Component – Once the overall mitigation plan is approved, and the baseline survey completed, Bath Township will work with the University of Akron to incorporate educational components into the overall Tamarack Bog Restoration Project. This will include the construction of a boardwalk that will be connected to the existing trail system to provide access to the vicinity of the bog. It will incorporate informational signage. As this is a public educational component critically important to Bath Township, the installation of the boardwalk is critical for the participation of the Township in this project. The boardwalk will be installed on stilts, with a planked walkway that will not impact the bog, similar to those used in parks in the Kent Bog and the Triangle Bog. No treated lumber will be used in the construction of the boardwalk. The exact location of the boardwalk will be determined once the topographic survey is completed and the sampling locations finalized.

7. Maintenance plan. *A description and schedule of maintenance requirements to ensure the continued viability of the resource once initial construction is completed.*

Bath Township will continue its oversight of the Mitigation area after the completion of the work to ensure the continued health and functionality of the mitigation area. Maintenance activities may include invasive species removal, alterations of water levels within the enhanced and/or potentially restored wetland area using the Agri Drain structure, and potential supplemental planting of tamarack seedlings taken from other bogs within the region.

8. Performance standards. *Ecologically-based standards that will be used to determine whether the mitigation project is achieving its objectives.*

Bath Township will preserve, enhance and/or potentially restore the 8.6 acres of Category 3 wetland area that could be considered the historic bog/fen footprint by expanding the existing bog/fen community to encompass the mitigation area. This will be determined in the year ten wetland delineation, which will show expansion of the sphagnum mats, other bog species, an increase of Tamarack trees, and increases in

water elevation measured at the water level data loggers and in the flood-prone perimeter. Bath Township will preserve and enhance the existing acres of Category 3 wetland by increasing the number of Tamarack trees, expanding the of sphagnum mats which will be documented in the year 10 delineation and by stabilizing the permanent inundation hydrology by proper adjustment and management of the Agri Drain.

The following specific goals will be attained within the mitigation area:

1. A minimum of 400 native, live and healthy (disease and pest free) woody plants per acre, must be present within the forested wetland area at the end of the 10-year monitoring period.
2. Of the 400 woody plants, a minimum of 40 live and healthy (disease and pest free) tamarack (*Larix laricina*) trees per acre must be present within the re-established and rehabilitated bog wetland areas at the end of the 10-year monitoring period.
3. A minimum of two times the baseline acreage of sphagnum moss, by aerial coverage (as determined by the baseline sphagnum survey,) shall be present within the rehabilitated bog wetland area by the end of the 10-year monitoring period.

9. Monitoring requirements. *A description of parameters monitored to determine whether the mitigation project is on track to meet performance standards and if adaptive management is needed. A schedule for monitoring and reporting monitoring results to the DE must be included.*

In addition to the baseline survey, the following metrics will be collected during ten years of monitoring, as noted:

5. The Applicant will submit monitoring and/or compliance reports for the wetland mitigation project, to the Corps office for 10 years (Year 1, 3, 5, 7, and 10 unless modified by the Corps) following completion of the mitigation construction based upon data collected during each monitored year between June and October. The reports must follow the requirements outlined in Regulatory Guidance Letter No. 08-03 (Minimum Monitoring Requirements for Compensatory Mitigation Projects Involving the Restoration, Establishment, and/or Enhancement of Aquatic Resources). The first report is due by December 31 in the year following completion of mitigation construction, or by an approved extension date (Example – If mitigation construction is completed in 2010, the first year report would be due by Dec. 31, 2011). For purposes of this special condition, "completion" means all activities associated with site grading and seeding and/or planting. All reports must be submitted to the Regulatory Branch by December 31 of the year due, or by a Corps-approved extension date. These reports must include:
 - a. Comparison of site conditions to an as-built survey.

- b. Wetland Delineation, including a map of wetland boundary.
- c. Photographs (minimum 15) from fixed locations with a photo location reference map.
- d. Plant species list with the following information:
 - 1. Wetland Indicator Status and strata.
 - 2. Dominant plants and percent cover.
- e. A list of plants introduced through seeding or planting.
- f. Water depth and date of measurement from representative locations within the mitigation area during the growing season. The sample points will be fixed locations and shall be plotted on a map.
- g. Fish and wildlife observations at the mitigation site.
- h. Vegetation Index of Biotic Integrity (VIBI) scores
- j. Water chemistry data
- k. Tamarack and Sphagnum data
- l. Invasive species data
- m. Summary statement regarding the perceived success of the wetland creation project. The report will evaluate the goals/performance standards as set forth in the permit or mitigation and monitoring plan as well as current wetland functions. These reports must also address any potential problem areas and include suggestions and timetable for correction if it is anticipated that projected goals may not be met.
- n. Date(s) of field inspection(s).

10. Long-term management plan. *A description of how the mitigation project will be managed after performance standards have been achieved to ensure the long-term sustainability of the resource, including long-term financing mechanisms and the party responsible for long-term management.*

Bath Township is maintaining the Mitigation site as part of the overall Bath Nature Preserve. The Township will continue to monitor the Tamarack Bog area, address issues such as invasive species (including maple trees and other native species) and water level (including maintenance of the Agri Drain), unauthorized public access and other issues that would impact the health and functionality of the Tamarack Bog.

As further long-term protection, the Applicant will work with the Town of Bath place an environmental covenant, held by Bath Township, on the mitigation area to guarantee its preservation for aquatic resources in-perpetuity.

11. Adaptive management plan. *A management strategy to address unforeseen changes in site conditions or other components of the mitigation project, including the party or parties responsible for implementing adaptive management measures.*

As noted above, this Mitigation plan incorporates the use of the collected data to determine if adjustments to various components of the plan need to be implemented. Of paramount importance is the monitoring of the depth of the back-flooded waters, so that the surface of the bog area is fully inundated/saturated. Bath Township and the University of Akron will be the primary leads in suggesting changes to the original plan.

12. Financial assurances. *A description of financial assurances that will be provided and how they are sufficient to ensure a high level of confidence that the mitigation project will be successfully completed, in accordance with its performance standards.*

The Town of Bath has committed its internal resources and has partnered with the University of Akron to ensure that the mitigation plan is fully implemented and maintained. The Applicant will set aside a total of \$40,000 in an escrow account to for the performance of all obligations, covenants, terms, conditions, and agreements required of the mitigation plan.

13. Other information. *The DE may require additional information as necessary to determine the appropriateness, feasibility, and practicability of the mitigation project.*