

Saari, Christopher A - DNR

From: Bytner, Tim (Pittsburgh) USA <Tim.Bytner@TRMI.Biz>
Sent: Wednesday, June 06, 2018 10:44 AM
To: Hansen, Kody C - DNR; Patarcity, Jane M (Manor Oak) USA; Bytner, Timothy
Cc: Saari, Christopher A - DNR
Subject: RE: RESPONSE REQUEST: Beazer - Any Updates?
Attachments: 2018 May 21 final signed FFS PA.PDF

Good Morning Kody,

Thanks for reaching out to me. The EPA has also signed off on the Project Agreement and I have attached a copy of the agreement for your files. It's early in the process but the project is progressing as expected. I understand that there is a designated group of folks at the WDNR to address this project and that there is an upcoming conference call between those folks, the EPA and Beazer to discuss next steps. Going forward, it will be important for all parties to remain engaged in the project so as to avoid unnecessary delays and I think everyone is prepared to keep the lines of communication open.

Thank you very much for your offer to help and we'll certainly let you know if we need anything. We look forward to a successful project!

Sincerely,
Tim Bytner

From: Hansen, Kody C - DNR [mailto:Kody.Hansen@wisconsin.gov]
Sent: Tuesday, June 05, 2018 11:10 AM
To: Bytner, Tim (Pittsburgh) USA; Patarcity, Jane M (Manor Oak) USA; Bytner, Timothy
Cc: Saari, Christopher A - DNR
Subject: RESPONSE REQUEST: Beazer - Any Updates?

Good morning Jane and Tim,

First, I hope you are having a great start to your week. I was looking through my files and the last correspondence we had seemed to be in late March, early April. Beazer East, Inc. signed the documents related to the project agreement and sent them to US EPA for action. This email is just a check-in to see if the project is progressing as you anticipated. Do you need anything from the Wisconsin Department of Natural Resources?

There is no urgency on my end. I just want to make sure I keep in touch and Beazer has what it needs to be successful. Please advise if there is anything I can do to help. Thanks for your time!!

Sincerely,

Kody

We are committed to service excellence.

Visit our survey at http://secure-web.cisco.com/1ZgMQw7skilUKa-NJmUpTDgnD_H57tIRrMOBPqLAEW3sr4o-1mFC117RmFayv5BD9RggYr3jOd50m4tX57CpiSXR6qmC71vx4NbrMQs91DgasZpjmwreMpkDagkdUpBo-2JmHf0CJc4XX2Bj3sdVGv1UWgMlw4V0vbJPwMyqzKAoyZfWd75rD7RXx8C8xUbtWVjplobLdY942Z0XipuOWptzC72w6-

FSkJBr18bbRO-0t_B1_vJNDcC7dUeFO95q5dqW6KMMTHSxr-keGtG8WuGAXpC1HENKKPEgH2edByqK5R_7BumApNG76Wla-p-6cVNcKAdNwIFhafixVPkRRxw/http%3A%2F%2Fdnr.wi.gov%2Fcustomersurvey to evaluate how I did.

Kody Hansen
Environmental Enforcement Specialist – Bureau of Law Enforcement
Wisconsin Department of Natural Resources
Phone: 920-360-6320
Kody.Hansen@Wisconsin.gov



GREAT LAKES LEGACY ACT PROJECT AGREEMENT
BETWEEN
THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
AND
BEAZER EAST, INC.
FOR
FOCUSED FEASIBILITY STUDY
FOR
CRAWFORD CREEK AND TRIBUTARY REMEDIATION AND RESTORATION

The United States Environmental Protection Agency (U.S. EPA), represented by the Great Lakes National Program Office (GLNPO), and Beazer East, Inc. (the Non-Federal Sponsor), are entering into this Project Agreement (Agreement) to conduct a Focused Feasibility Study (FFS) for Crawford Creek and Tributary Remediation and Restoration, as more fully described in this Agreement (the Project).

The Project, as defined in Paragraph 1.h of this Agreement, is a qualified project under the Great Lakes Legacy Act (GLLA), codified as amended at 33 U.S.C. § 1268(c)(11). The Crawford Creek and Tributary Site includes those areas specifically noted on Figure 1 of the Statement of Work that is attached hereto and is part of the St. Louis River Area of Concern (SLRAOC), and the Project is to be carried out within the SLRAOC, which is wholly within the United States. The Project will complete the FFS to identify a consensus cleanup/restoration approach for the Crawford Creek and Tributary Site. The Non-Federal Sponsor submitted an application to GLNPO for Focused Feasibility Study for Crawford Creek and Tributary Remediation and Restoration dated January 26, 2017. The Project is described more completely in the attached Statement of Work.

Section 118(c)(11) of the GLLA, 33 U.S.C. § 1268(c)(11), pertains to the remediation of sediment contamination in Areas of Concern. Under Section 118(c)(11)(D)(iii), 33 U.S.C. § 1268(c)(11)(D)(iii), the Non-Federal Sponsor must enter into a written project agreement under which it agrees to carry out its responsibilities and requirements for the Project. Section 118(c)(11)(E), 33 U.S.C. § 1268(c)(11)(E), specifies the Non-Federal Sponsor's share of the cost of the Project, including, but not limited to: the value and types of any in-kind contribution of material or services that are integral to the Project and are to be provided by the Non-Federal Sponsor; limitations on the credit for any such in-kind contributions provided by the Non-Federal Sponsor; and the Non-Federal Sponsor's responsibility for 100% of the cost of long-term operation and maintenance of the Project.

This Agreement under the GLLA to conduct the FFS will facilitate removing Beneficial Use Impairments and delisting an Area of Concern. The work under this Agreement ties directly

to U.S. EPA's Strategic Plan for 2014-2018, including the following strategic measure: by 2018, implement all management actions necessary for delisting 12 Areas of Concern in the Great Lakes (cumulative). (2013 baseline: 3.) That strategic measure supports Objective 2.2: Protect and Restore Watersheds and Aquatic Ecosystems. In addition, the work under this Agreement supports the following two Measures of Progress from the Great Lakes Restoration Initiative Action Plan II: all necessary management actions in Areas of Concern have been taken; and removal of Beneficial Use Impairments in Areas of Concern.

The Estimated Total Project Cost of the Project is \$850,000. The Non-Federal Sponsor's share of the cost of the Project is 50%, and GLNPO's share of the costs of the Project is 50%.

GLNPO and the Non-Federal Sponsor have the authority and capability to perform as set forth in this Agreement and intend to cooperate in cost-sharing and financing of the Project according to the terms of this Agreement.

NOW, THEREFORE, GLNPO and the Non-Federal Sponsor agree as follows:

ARTICLE I - DEFINITIONS AND GENERAL PROVISIONS

1. For purposes of this Agreement:

- a. "Article" means a portion of this Agreement identified by roman numeral.
- b. "Estimated Total Project Costs" means \$850,000.00. The Estimated Total Project Costs may be increased by 5% as a contingency without GLNPO and the Non-Federal Sponsor having to sign a modification to this Agreement.
- c. "Fiscal Year" means one fiscal year of GLNPO. The GLNPO fiscal year begins on October 1 and ends on September 30.
- d. "GLLA" means the Great Lakes Legacy Act, 33 U.S.C. § 1268(c)(11), as amended.
- e. "In-Kind Contributions" means the value, as established by GLNPO, of Project related goods and services provided by the Non-Federal Sponsor that GLNPO determines are integral to the Project, including, but not limited to: construction and operation of Project elements, airspace for the disposal of dredged sediment in an excavated material disposal facility, construction materials, equipment, design or engineering services, laboratory services and staff charges.
- f. "Non-Federal Proportionate Share" means the ratio of the Non-Federal Sponsor's total cash and in-kind contribution required according to Paragraphs 5 and 19 of this Agreement to the total financial obligations for the Project, as projected by GLNPO.

g. "Paragraph" means a portion of this Agreement identified by Arabic numeral.

h. "Project" means work set forth in the Statement of Work, which is attached hereto and incorporated by reference, to complete a FFS to evaluate and address data gaps, evaluate a defined set of remedial alternatives in an FFS Report, and develop a remedial approach for a future remedial action.

i. "Project period" means the time from the date the Project Agreement first becomes effective to the date that GLNPO notifies the Non-Federal Sponsor in writing of GLNPO's determination that the Project is complete and can be closed out or is otherwise terminated.

j. "Total Project Costs" means all costs incurred by the Non-Federal Sponsor and/or GLNPO according to this Agreement that are directly related to the work on the Project prior to any operation and maintenance costs. Subject to this Agreement, the term includes, but is not limited to: the value of the Non-Federal Sponsor's in-kind contributions; GLNPO's engineering and design costs during the Project; investigation costs to identify the existence and extent of hazardous substances; actual Project costs; GLNPO's costs of contract dispute settlements or awards; and audit costs pursuant to Paragraphs 33 and 34 of this Agreement. The term does not include any financial obligations for the operation and maintenance of the Project; or any costs of dispute resolution under Article VII of this Agreement. This term also does not include GLNPO's direct labor and indirect costs because Congress has directed EPA "to exercise maximum flexibility to minimize non-Federal match requirements." H.R. Rep. No. 112-151 at 65 (2011).

ARTICLE II - OBLIGATIONS OF GLNPO AND THE NON-FEDERAL SPONSOR

2. Subject to receiving funds appropriated by the United States Congress, GLNPO shall conduct its assigned portions of the Project by applying those procedures usually applied to Clean Water Act projects, pursuant to federal laws, regulations, and policies.

3. Notwithstanding Paragraph 2, if the award of any contract would result in exceeding the Estimated Total Project Costs, GLNPO and the Non-Federal Sponsor shall defer award of that contract and all subsequent contracts for the Project until they mutually agree to amend this Agreement by increasing the Total Project Costs and proceeding with further contract awards.

4. By signing this Agreement, the Non-Federal Sponsor certifies that its financial management systems meet the following standards:

a. Financial reporting. Accurate, current, and complete disclosure of the financial results of financially assisted activities is made according to the financial reporting requirements of this Agreement.

b. Accounting records. The Non-Federal Sponsor maintains records which adequately identify the source and application of funds provided for financially-assisted activities. These records contain information pertaining to authorizations, obligations, unobligated balances, assets, liabilities, outlays or expenditures, and income.

c. Internal control. Effective control and accountability is maintained for all Project Agreement cash, real and personal property, and other assets. The Non-Federal Sponsor adequately safeguards all such property and assures that it is used solely for authorized purposes.

d. Budget control. For each Project Agreement, the Non-Federal Sponsor compares actual expenditures or outlays with budgeted amounts. Financial information is related to performance or productivity data, including developing unit cost information whenever appropriate or specifically required in the Project Agreement. If unit cost data are required, estimates based on available documentation will be accepted whenever possible.

e. Allowable cost. The parties agree that the regulations at 2 CFR Part 200 and the terms of this Agreement will govern in determining the reasonableness, allowability, and allocability of costs.

f. Source documentation. The Non-Federal Sponsor's accounting records are supported by such source documentation as paid bills, payrolls, time and attendance records, contract award documents, etc.

5. The Non-Federal Sponsor shall contribute a share of the Total Project Costs as follows:

a. The Parties have estimated the amount of the Estimated Total Project Costs to be provided by the Non-Federal Sponsor, which may include In-Kind Contributions that are determined to be integral to the Project. In-Kind Contributions can include, but are not limited to the following:

- (1) Lands;
- (2) Equipment;
- (3) Labor;
- (4) Airspace for the disposal of dredged sediment; and

(5) Work or services performed by the Non-Federal Sponsor as set forth in the Statement of Work for the Project.

b. If the amount of the In-Kind Contributions which the Non-Federal Sponsor provides to the Project is less than 50% of the Total Project Costs, the Non-Federal Sponsor shall provide an additional cash contribution, pursuant to Paragraph 19, in the amount necessary to make its total contribution equal to 50% of the Total Project Costs.

6. GLNPO shall perform a final accounting according to Paragraph 21 after work is completed on the Project to determine the value of the Non-Federal Sponsor's contributions under this Agreement to determine whether the Non-Federal Sponsor has met the Non-Federal Proportionate Share of the Total Project Costs under this Agreement.

7. The Non-Federal Sponsor shall not use federal program funds to meet any of its obligations for the Project under this Agreement.

8. The Non-Federal Sponsor certifies that the Non-Federal Sponsor and, to its knowledge, any of its contractors who will execute work under this Agreement:

a. Are not presently or proposed to be debarred or suspended, declared ineligible, or voluntarily excluded from federal, state or local ("public") transactions;

b. Have not within a three-year period preceding this Agreement been convicted of or had a civil judgment rendered against them for (i) fraud or commission of a criminal offense in connection with obtaining, attempting to obtain, or performing a public transaction or contract under a public transaction, (ii) violation of federal or state antitrust laws, or (iii) embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements or receiving stolen property;

c. Are not presently indicted for or otherwise criminally or civilly charged by a public entity with commission of any of the offenses enumerated under Paragraph 8.b; and

d. Have not within the preceding three years had a public transaction terminated for cause or default.

9. The Non-Federal Sponsor will ensure that projects involving collection of environmental data (measurements or information that describe environmental processes, location, or conditions; ecological or health effects and consequences; or the performance of environmental technology) meet the American National Standard requirements and guidance for Quality Management Systems for Environmental Information and Technology Programs; ASQ/ANSI E4:2014, or most current version. "Quality System Documentation" includes a

Quality Management Plan (QMP), applicable project-level quality assurance documentation Quality Assurance Project Plan (QAPP), or other documentation which demonstrates compliance with ASQ/ANSI E4:2014. The Non-Federal Sponsor will ensure that the project follows requirements of EPA Quality Policy 2105/2106 and applicable guidance. The Non-Federal Sponsor will ensure that any primary or secondary environmental data collection supporting GLLA projects/program meet requirements as outlined in the most current version of the "GLLA QA Considerations," and follow GLLA program-specific requirements outlined in the GLLA QMP and GLLA Data Reporting Standard (DRS).

ARTICLE III – ACCESS, LANDS, EASEMENTS, AND RIGHTS-OF-WAY

10. GLNPO, after consulting with the Non-Federal Sponsor, shall determine the access, lands, easements, access agreements, or rights-of-way necessary for conducting the Project. Before work begins, the Non-Federal Sponsor shall acquire or obtain all access agreements, lands, easements, or rights-of-way necessary for the Project as set forth in the Statement of Work. If the Non-Federal Sponsor is unable to secure access to any lands necessary for conducting the Project, then the parties agree to cooperate in determining alternate lands where access can be secured for completing the work.

11. Until GLNPO furnishes the Non-Federal Sponsor with the results of the final accounting pursuant to Paragraph 21, the Non-Federal Sponsor in a timely manner shall provide GLNPO the documents that are necessary for it to determine the value of any contribution provided pursuant to Paragraph 10. Upon receiving these documents, GLNPO shall afford credit for the value of the contribution according to Article IV.

ARTICLE IV - CREDIT FOR VALUE OF LANDS AND RIGHTS-OF-WAY

12. The Non-Federal Sponsor shall receive credit according to this Article for the value of the lands, easements, access agreements, or rights-of-way that it provides pursuant to Article III. However, the Non-Federal Sponsor shall not receive credit for the value of any lands, easements, access agreements, or rights-of-way that it provided previously for another federal project. The Non-Federal Sponsor also shall not receive credit for the value of lands, easements, access agreements, or rights-of-way that were acquired or provided using federal program funds.

13. For the sole purpose of affording credit according to this Agreement, the value of lands, easements, access agreements, and rights-of-way, including those necessary for the borrowing of material, or the disposal of dredged or excavated material, shall be the fair market value of the real property interests, plus certain incidental costs of acquiring those interests, as determined according to this Paragraph.

a. Date of Valuation. The fair market value of lands, easements, access agreements, or rights-of-way owned by the Non-Federal Sponsor on the effective date of this

Agreement shall be the fair market value of the real property interests on the date the Non-Federal Sponsor authorizes GLNPO to enter the property. The fair market value of lands, easements, access agreements, or rights-of-way acquired by the Non-Federal Sponsor after the effective date of this Agreement shall be the fair market value of the real property interests at the time the interests are acquired.

b. General Valuation Procedure. Except as provided in Paragraph 13.c, the fair market value of lands, easements, access agreements, or rights-of-way shall be determined according to Paragraph 13.b.i, unless a different amount is determined later to represent fair market value according to Paragraph 13.b.ii.

i. The Non-Federal Sponsor shall obtain, for that real property interest, an appraisal prepared by a qualified appraiser who is acceptable to the Non-Federal Sponsor and GLNPO. The appraisal shall be prepared according to the applicable rules of just compensation, as specified by GLNPO. The fair market value shall be the amount in the Non-Federal Sponsor's appraisal, if GLNPO approves the appraisal. If GLNPO does not approve the Non-Federal Sponsor's appraisal, GLNPO may obtain an appraisal, and the fair market value shall be the amount in GLNPO's appraisal, if the Non-Federal Sponsor approves the appraisal. If the Non-Federal Sponsor does not approve GLNPO's appraisal, GLNPO, after consultation with the Non-Federal Sponsor, shall consider both parties' appraisals and shall determine the fair market value based on both appraisals.

ii. Where the amount paid or proposed to be paid by the Non-Federal Sponsor for the real property interest exceeds the amount determined pursuant to Paragraph 13.b.i, GLNPO, at the request of the Non-Federal Sponsor, shall consider all factors relevant to determining fair market value and, in its sole discretion, after consulting with the Non-Federal Sponsor, may approve in writing an amount greater than the amount determined pursuant to Paragraph 13.b.i, but not to exceed the amount actually paid or proposed to be paid. If GLNPO approves such an amount, the fair market value shall be the lesser of the approved amount or the amount paid by the Non-Federal Sponsor, but no less than the amount determined pursuant to Paragraph 13.b.i.

c. Waiver of Appraisal. GLNPO may waive the requirement for an appraisal to determine the value of a real property interest for crediting purposes if it determines that an appraisal is unnecessary because the valuation is uncomplicated and that the estimated fair market value of the real property interest is \$10,000 or less based upon a review of available data. In such event, GLNPO and the Non-Federal Sponsor must agree in writing to the value of the real property interest in an amount not to exceed \$10,000.

ARTICLE V - PROJECT COORDINATION TEAM

14. To provide for consistent and effective communication, the Non-Federal Sponsor and GLNPO, not later than 30 business days after the effective date of this Agreement, shall appoint named senior representatives to a Project Coordination Team. The Project Coordination Team shall meet or talk regularly until the end of the Project period. GLNPO's Project Manager and a counterpart named by the Non-Federal Sponsor shall co-chair the Project Coordination Team.

15. GLNPO's Project Manager and the Non-Federal Sponsor's counterpart shall keep the Project Coordination Team informed of Project progress and significant pending issues and actions, and shall seek the views of the Project Coordination Team on matters that the Project Coordination Team generally oversees.

16. Until Project completion, the Project Coordination Team shall generally oversee the Project including, but not necessarily limited to, matters related to: design; plans and specifications; scheduling; real property, relocation, and removal requirements; real property acquisition; contract costs; the application of and compliance with the Davis-Bacon Act, Contract Work Hours and Safety Standards Act and the Copeland Anti-Kickback Act for relocations; GLNPO's cost projections; final inspection of the entire Project or functional portions of the Project; preparation of the management plan for proposed dredged or excavated material disposal; and other Project-related matters. The Project Coordination Team also shall generally oversee the coordination of Project schedules.

17. The Project Coordination Team may make recommendations to the Project Managers on Project-related matters that the Project Coordination Team generally oversees, including suggestions to avoid potential sources of dispute. GLNPO and the Non-Federal Sponsor in good faith shall consider the recommendations of the Project Coordination Team. GLNPO and the Non-Federal Sponsor may accept or reject, in whole or in part, the Project Coordination Team's recommendations.

ARTICLE VI - METHOD OF PAYMENT

18. As of the effective date of this Agreement, the Estimated Total Project Costs are \$850,000.00, and the Non-Federal Sponsor's contribution required under Paragraph 5 is projected at \$425,000.00. These amounts are subject to adjustment by GLNPO and are not to be construed as the total financial responsibilities of GLNPO and the Non-Federal Sponsor if a modification to this Agreement is signed by GLNPO and the Non-Federal Sponsor that increases the Estimated Total Project Costs.

19. In providing its required share of the Total Project Costs required by Paragraph 5, the Non-Federal Sponsor shall provide in-kind services and cash payment to the Project according to the provisions of this Paragraph.

a. Where the Non-Federal Sponsor is meeting its cost share requirements through in-kind services, the Non-Federal Sponsor shall submit detailed documentation of the work it performs under this Project. The Non-Federal Sponsor shall provide GLNPO with quarterly reports beginning with the first full three-month period after the effective date of this Agreement. The quarterly report shall be submitted within 120 days of the end of the quarter to which that report pertains. The quarterly report shall, at a minimum, include the time period for which costs were incurred, total amount of costs incurred, a summary of work accomplished by the Non-Federal Sponsor in the previous quarter on each element of the Project, and a breakout of costs incurred to date in a tabular form. This report shall also include detailed documentation and certification of the Non-Federal Sponsor's in-kind costs incurred to meet its cost share requirement. The type of records that the Non-Federal Sponsor must submit include, but are not limited to, payroll records to support staff time, a calculated indirect cost rate to document indirect costs, travel vouchers and receipts, invoices that support contractor costs, and proof of payment documentation (such as SAP screen shots and/or Oracle payment history reports). If an entity other than the Non-Federal Sponsor is submitting documentation of in-kind costs incurred to satisfy any portion of the Non-Federal Sponsor's cost share requirement, then the certification shall be signed and submitted by the entity that incurred those costs.

The Non-Federal Sponsor or other entity submitting documentation of in-kind costs incurred to satisfy any portion of the Non-Federal Sponsor's cost share requirement shall sign and submit the following certification with each quarterly report:

I, [insert name of person], [insert name of company/organization] certify that I reviewed all the cost documentation of costs that are being claimed for the in-kind cost share of the [insert name] GLLA project. I verified the work prior to paying these costs. I have also verified that these costs have been paid.

I certify under penalty of law that I have examined and am familiar with the documents and information which support the statements made in this certification. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the statements are, to the best of my knowledge and belief, true and complete. I am aware that there are significant penalties for knowingly submitting false statements and information, including the possibility of fines or imprisonment pursuant to 18 U.S.C. §§ 1001 and 1341.

Upon execution of the Project Agreement, the GLNPO Project Manager will provide the Non-Federal Sponsor with guidance concerning documentation of in-kind costs. If the Non-Federal Sponsor fails to submit a quarterly report GLNPO may send the Non-Federal Sponsor written notice and a request to submit the report. The Non-Federal Sponsor shall submit the quarterly report within 60 days of receiving the written notice from GLNPO. If the Non-Federal Sponsor fails to submit the quarterly report within 60 days following the written notice and request, GLNPO may disallow those in-kind costs incurred by the Non-Federal Sponsor during that

three-month period and GLNPO will not count such costs toward the Non-Federal Sponsor's cost share requirement.

b. Where the Non-Federal Sponsor is meeting its cost share requirements through cash payments/contributions, the Non-Federal Sponsor shall pay in the manner outlined in Paragraph 24, below within 30 days of an invoice provided to the Non-Federal Sponsor by the GLNPO Project Manager.

20. If at any time GLNPO determines that an increase in the Estimated Total Project Costs is necessary to complete the Project and additional funds or in-kind contributions will be needed from the Non-Federal Sponsor to cover the non-federal proportionate share of the increased Estimated Total Project Costs, GLNPO shall notify the Non-Federal Sponsor in writing of the additional funds required and shall explain why they are required. If the parties sign a modification to this Agreement to increase the Estimated Total Project Costs the Non-Federal Sponsor shall, within 90 calendar days from receipt of the notice, pay the additional cash contribution, or shall make the additional in-kind contributions available, required to meet the non-federal proportionate share, in the manner described in Paragraph 19. GLNPO and the Non-Federal Sponsor may continue project expenditures with or without a modification to this Agreement if the Director of GLNPO or the Non-Federal Sponsor, respectively, determines in writing that project expenditures must proceed to demobilize personnel and equipment for the orderly wind down of the Project to comply with law or to protect human life and property.

21. Upon completion of the Project or termination of this Agreement before Project completion and upon resolution of all relevant proceedings, claims, and appeals, GLNPO shall conduct a final accounting, based primarily on the information provided by the Non-Federal Sponsor under Paragraph 19 or at the request of the GLNPO Program Manager, and give the Non-Federal Sponsor the final accounting results. GLNPO may perform an interim accounting on its own or, if requested by the Non-Federal Sponsor.

a. GLNPO's final accounting shall determine the Total Project Cost, each party's total contribution toward the Project, and measure that contribution against each party's required share for the Project.

b. If the final accounting shows that the Non-Federal Sponsor's total contribution is less than its required share of the Total Project Costs, the Non-Federal Sponsor shall, within 90 calendar days after receipt of written notice, pay the amount necessary to meet its required share by delivering a check payable in the manner described in Paragraph 22, below.

22. In the event that the Non-Federal Sponsor has not provided enough funding to meet its required proportionate share of Total Project Costs, GLNPO will provide the Non-Federal Sponsor with an invoice for the balance required and the Non-Federal Sponsor shall submit a check, made payable to the order of the "Treasurer, United States

of America," to the address specified on the invoice. The check shall contain a notation referencing a Budget Organization account number that GLNPO shall provide after this Agreement is executed. In the case of an Electronic Fund Transfer (EFT), the Non-Federal Sponsor shall contact EPA to obtain the appropriate instructions on payment submittal.

ARTICLE VII - DISPUTE RESOLUTION

23. Unless otherwise expressly provided for in this Agreement, the dispute resolution procedures of this Article are the exclusive mechanism to resolve disputes arising under or with respect to this Agreement.

24. Any dispute which arises under or with respect to this Agreement initially shall be the subject of informal negotiations between the parties to the dispute. The period for informal negotiations shall not exceed 20 business days from the time the dispute arises, unless extended by written agreement of the parties to the dispute. The informal dispute period arises when the party not in dispute receives the other party's written notice of dispute. For purposes of this Agreement, a "business day" shall include only Mondays, Tuesdays, Wednesdays, Thursdays and Fridays and shall not include any federal holiday.

25. Statements of Position.

a. If the parties cannot resolve a dispute by informal negotiations under the preceding Paragraph, the position advanced by GLNPO shall be binding unless, within 10 business days after the conclusion of the informal negotiations, the Non-Federal Sponsor invokes the formal dispute resolution procedures of this Article by serving on GLNPO a written statement of position on the matter in dispute. The statement of position shall include, but is not limited to, any factual data, analysis, or opinion supporting that position and any supporting documentation relied upon by the Non-Federal Sponsor.

b. Within 30 business days after receiving the Non-Federal Sponsor's statement of position, GLNPO shall serve on the Non-Federal Sponsor its statement of position, including, but not limited to, any factual data, analysis, or opinion supporting that position and all supporting documentation relied upon by GLNPO. Within 20 business days after receiving GLNPO's statement of position, the Non-Federal Sponsor may submit a reply.

c. GLNPO shall maintain an administrative record of the dispute that contains all statements of position, including supporting documentation, submitted pursuant to this Paragraph. Where appropriate, GLNPO may allow submission of supplemental statements of position by the parties to the dispute.

d. The Director of GLNPO will issue a final administrative decision resolving the dispute based on the administrative record described above. This decision shall bind the Non-

Federal Sponsor; however, shall not, in any manner, restrict the Non-Federal Sponsor's right to appeal the Director's decision pursuant to any applicable federal laws and shall not, in any manner, restrict the Non-Federal Sponsor's right to terminate this Agreement.

ARTICLE VIII - OPERATION AND MAINTENANCE

26. Subject to applicable federal laws and regulations, the Non-Federal Sponsor, at no cost to GLNPO, shall operate and maintain the elements of the Project constructed pursuant to this Agreement in a manner compatible with the authorized purposes of the Project including the operation and maintenance of the dredged sediment from the Project. The Non-Federal Sponsor shall be responsible for taking all actions necessary to undertake the operation and maintenance for the Project as set forth in the attached Project description.

27. The Non-Federal Sponsor authorizes GLNPO to enter, at reasonable times and in a reasonable manner, upon property that the Non-Federal Sponsor owns or controls for the purpose of monitoring the effectiveness of the operation and maintenance of the Project. However, nothing in this Agreement conveys to GLNPO any interest in real property owned or controlled by the Non-Federal Sponsor.

28. The Non-Federal Sponsor authorizes GLNPO or its agent to perform all activities on the lands, easements, access agreements, and rights-of-way provided by the Non-Federal Sponsor to enable the disposal of dredged or excavated material that, in GLNPO's sole discretion, are necessary for operating, maintaining, or managing the disposal facilities including, but not necessarily limited to, construction, operation, and maintenance of the dredged or excavated material disposal facilities; and disposal of dredged or excavated material associated with the construction, operation, and maintenance of the Project.

ARTICLE IX - SEVERABILITY CLAUSE

29. If a court issues an order that invalidates any provision of this Agreement, the parties shall remain bound to comply with all provisions of this Agreement not invalidated.

ARTICLE X - MAINTENANCE OF RECORDS AND AUDIT

30. GLNPO and the Non-Federal Sponsor shall maintain such books, records, documents, or other evidence related to this Project and the work performed for at least five years after the completion of the Final Accounting discussed in Paragraph 21, above. To the extent permitted under applicable federal laws and regulations, GLNPO and the Non-Federal Sponsor shall each allow the other to inspect the books, records, documents, or other evidence.

31. The parties agree that the Non-Federal Sponsor is responsible for complying with any auditing requirements imposed upon its organization. As part of this Project Agreement, the

Non-Federal Sponsor agrees to provide GLNPO with financial information in the form of a publicly-available annual report or similar document that provides the total amount of equity for the Non-Federal Sponsor for each year during which work was performed under this Project Agreement within 30 days of the availability of that document. Upon request of the Non-Federal Sponsor and to the extent permitted under applicable federal laws and regulations, GLNPO shall give the Non-Federal Sponsor and independent auditors any information necessary to enable an audit of the Non-Federal Sponsor's activities under this Agreement. The costs of any non-federal audits performed pursuant to this Paragraph before GLNPO furnishes the Non-Federal Sponsors with the results of the final accounting shall be allocated according to the provisions of 2 CFR Part 200, and the costs that are allocated to the Project shall be included in Total Project Costs and shared according to the provisions of this Agreement.

32. In accordance with 31 U.S.C. § 7503, GLNPO may conduct audits in addition to any audit that the Non-Federal Sponsor already conducts. The costs of GLNPO audits performed pursuant to this Paragraph before GLNPO furnishes the Non-Federal Sponsor with the results of the final accounting shall be included in the Total Project Costs, and shared according to the provisions of this Agreement.

ARTICLE XI - FEDERAL LAWS AND REGULATIONS

33. In the exercise of their respective rights and obligations under this Agreement, the Non-Federal Sponsor and GLNPO agree to comply with all applicable federal laws and regulations, including, but not limited to:

a. Section 601 of the Civil Rights Act of 1964, Public Law 88-352 (42 U.S.C. § 2000d); and all applicable federal labor standards requirements including, but not limited to 40 U.S.C. §§ 3141-3148 and 40 U.S.C. §§ 3701-3708 (revising, codifying and enacting without substantive change);

b. The provisions of the Davis-Bacon Act (formerly 40 U.S.C. § 276a *et seq.*);

c. The Contract Work Hours and Safety Standards Act (formerly 40 U.S.C. § 327 *et seq.*), debarment and suspension requirements (40 C.F.R. Part 32);

d. The Copeland Anti-Kickback Act (formerly 40 U.S.C. § 276c) and the Endangered Species Act (16 U.S.C. § 1534 to 1544);

e. Executive Order 11246, Equal Employment Opportunity, and implementing regulations at 41 C.F.R. Part 60-4 relating to federally-assisted construction contracts.

ARTICLE XII - RELATIONSHIP OF PARTIES

34. In the exercise of their respective rights and obligations under this Agreement, GLNPO and the Non-Federal Sponsor each act in an independent capacity, and neither is considered the officer, agent, or employee of the other.

35. In the exercise of their rights and obligations under this Agreement, neither party shall provide, without the consent of the other party, any contractor with a release that waives or purports to waive any rights the other party may have to seek relief or redress against that contractor.

ARTICLE XIV - TERMINATION OR SUSPENSION

36. If the Non-Federal Sponsor fails to fulfill its obligations under this Agreement, or if the Director of GLNPO, in his sole discretion, determines it would be impractical to continue work for any reason, but particularly if continuing the work is not expected to achieve the objectives of the Project, the Director shall terminate this Agreement or suspend future performance under this Agreement unless he determines that continuation of work on the Project is in the interest of the United States, or is necessary to satisfy agreements with any other non-federal interests in connection with the Project.

37. If GLNPO does not receive annual appropriations sufficient to meet its share of scheduled expenditures for the Project for the then-current or upcoming fiscal year, GLNPO shall notify the Non-Federal Sponsor in writing, and GLNPO may without penalty terminate this Agreement or suspend future performance under this Agreement. If GLNPO suspends future performance pursuant to this Paragraph, the suspension shall remain in effect until GLNPO receives sufficient appropriations or until GLNPO terminates this Agreement, whichever occurs first.

38. If the Non-Federal Sponsor, in its sole discretion, determines that it would be impractical to continue work for any reason, the Non-Federal Sponsor may terminate this Agreement or suspend future performance under this Agreement without penalty, provided however, the Non-Federal Sponsor notifies GLNPO in writing at least thirty (30) days prior to the date of termination of this Agreement.

39. If either GLNPO or the Non-Federal Sponsor terminates this Agreement pursuant to this Article, both parties shall proceed to a final accounting pursuant to Paragraph 21.

40. Any termination of this Agreement or suspension of future performance under this Agreement shall not relieve the parties of liability for any obligation previously incurred. Interest shall accrue on any delinquent payment owed by the Non-Federal Sponsor at a rate, to be determined by the Secretary of the Treasury, equal to 150 percent of the average bond equivalent rate of the 13-week Treasury bills auctioned immediately before the payment became delinquent,

or auctioned immediately before the beginning of each additional 3-month period if the period of delinquency exceeds 3 months.

ARTICLE XV -HISTORIC PRESERVATION

41. The Non-Federal Sponsor shall evaluate the Project's impact on historic property. The costs of identification, survey and evaluation of historic properties shall be included in Total Project Costs and shared according to this Agreement.

ARTICLE XVI - NOTICES

42. Unless otherwise specified here, any notice, request, demand or other communication required or permitted under this Agreement between the parties shall be in writing and addressed as follows:

to the Non-Federal Sponsor:

Jane Patarcity
Project Manager
Beazer East, Inc.
c/o Three Rivers Management, Inc.
Manor Oak One, Suite 200
1910 Cochran Road
Pittsburgh, PA 15220
(412) 208-8813

to GLNPO:

Brenda Jones
Project Manager
Great Lakes National Program Office
77 West Jackson Blvd.
Chicago, IL 60604
(312) 886-7188

43. Either party may change its notice address provided in Paragraph 42 by written notice to the other party.

44. The addressee shall be deemed to have received any notice given pursuant to this Agreement at the earlier of the date it is actually received, or seven calendar days after it is mailed.

ARTICLE XVII - CONFIDENTIALITY

45. To the extent permitted by the laws governing each party, the parties agree to maintain the confidentiality of exchanged information when requested to do so by the providing party.

ARTICLE XVIII - RESPONSIBLE PARTIES

46. If it is discovered through any investigation for hazardous substances or other means that CERCLA liability, or liability under any other federal or state authority, for hazardous substances addressed by the Project can be attributed to a potentially responsible party, the Non-Federal Sponsor and GLNPO shall provide prompt written notice to each other. The Non-Federal Sponsor and GLNPO shall consult according to Article V in an effort to ensure that potentially responsible parties bear their fair share of clean up and response costs as defined in CERCLA or other federal or state law. Implementation of the Project shall not relieve any party from any liability that may arise under CERCLA or other federal or state law.

ARTICLE XIX - THIRD PARTY RIGHTS, BENEFITS, OR LIABILITIES

47. This Agreement does not create any rights, confer any benefits, or relieve any liability, for any third person not party to this Agreement.

ARTICLE XX - NON-LIABILITY OF OFFICERS AND EMPLOYEES

48. No officer, agent, consultant, or employee of the Non-Federal Sponsor or of GLNPO, may be charged personally, or held liable, under this Agreement because of any breach, attempted breach, or alleged breach of this Agreement.

49. If signed by all parties, this Agreement will become effective on the date the GLNPO representative signs this Agreement.

ARTICLE XXI - AUTHORITY OF SIGNATORY TO BIND AND AVAILABILITY OF FUNDS

50. Each undersigned representative of the Non-Federal Sponsor and GLNPO certifies that he or she is fully authorized to enter into the terms of this Agreement and to execute and legally bind such Party to this Agreement.

51. Each undersigned representative of the Non-Federal Sponsor certifies that the Non-Federal Sponsor has the funds and financial capability to meet its required proportionate share of the Total Project Costs under this Agreement.

52. This Agreement may be executed in one or more counterparts and by facsimile, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument.

Focused Feasibility Study for Crawford Creek and Tributary Remediation and Restoration Project Agreement between GLNPO and Beazer East, Inc.

By: Cathy Stepp

Cathy Stepp
Regional Administrator
U.S. Environmental Protection Agency, Region 5

Date: 5-21-18

By: Gregory J Ronczka

Gregory J Ronczka, MPH, P.G.
President
Beazer East, Inc.

Date: 4/2/2018

**Scope of Work for the
“Focused Feasibility Study for Crawford Creek and
Tributary Remediation and Restoration”
Great Lakes Legacy Act Project**

Superior, Wisconsin

St. Louis River Area of Concern

March 29, 2018

1. INTRODUCTION AND OBJECTIVES

This Scope of Work (SOW) provides a description of the work to be performed as part of the Great Lakes Legacy Act (GLLA) Project Agreement (PA) between Beazer East, Inc. (Beazer) and the United State Environmental Protection Agency, represented by the Great Lakes National Program Office (USEPA GLNPO), to complete a Focused Feasibility Study (FFS) for the Crawford Creek and Tributary Site in Superior, Wisconsin (the Site; Figure 1).

The overall objective of this project is to identify a consensus remedy that, upon implementation, will support beneficial use impairment (BUI) removal and also satisfy applicable State requirements for the Site. Project-specific objectives consist of the following:

1. Evaluate and address data gaps, if any, to complete the FFS;
2. Evaluate a defined set of remedial/restoration alternatives in an FFS Report; and
3. Document project team consensus on a remedial/restoration approach.

Details regarding the work to be performed and the roles and responsibilities of each party are provided in the sections below, along with the project schedule and budget.

2. BACKGROUND

This section describes the Site, presents relevant background/history information, and summarizes previous investigations and beneficial use impairments (BUIs).

2.1 Site Description and Background/History

The Site, located within the St. Louis River Area of Concern (SLRAOC), consists of a Tributary to Crawford Creek (Tributary) and associated floodplains, and the portion of Crawford Creek from the Tributary confluence downstream to the Nemadji River and associated floodplains (Figure 1). The Site is divided into four Sub-Areas (Figure 1) (all distances measured along centerline of flow path):

- Sub-Area A – Tributary Upstream of Crawford Creek Floodplain (approximately 2,600 linear feet and 9 acres);
- Sub-Area B – Tributary Within Crawford Creek Floodplain (approximately 600 linear feet and 2 acres);
- Sub-Area C – Crawford Creek from Tributary to Railroad Embankment (approximately 3,500 linear feet and 16 acres); and
- Sub-Area D – Crawford Creek from Railroad Embankment to Nemadji River (approximately 2,800 linear feet and 18 acres).

The Site is located in a rural, sparsely populated setting in northwestern Wisconsin, approximately five miles southeast of the City of Superior. The Site and surrounding area is predominantly undeveloped and vegetated with trees, shrubs, and grasses. National Wetland Inventory maps and a wetland delineation conducted in 2008 indicate that much of the Site contains wetlands. No county parks, state parks, or fish hatcheries are present within the Site

boundaries. Some private residences are located nearby along Hammond Avenue and County Road A. Property owners include Beazer, Douglas County, BNSF Railway Company, Soo Line Railroad, and three private land owners.

The Tributary to Crawford Creek receives runoff from a Former Koppers Inc. Wood-Treating Facility¹ (Figure 1). Investigations between 1996 and 2014 detected constituents from historical wood-treating operations in the sediments and/or floodplain materials of the Tributary and Crawford Creek. In 2014, Beazer prepared a Focused Corrective Measures Study (FCMS; Arcadis 2014b) for the Tributary and portion of Crawford Creek upstream of the railroad embankment (Sub-Areas A through C). This GLLA FFS project will expand upon the 2014 FCMS to include the portion of Crawford Creek downstream of the railroad embankment (Sub-Area D) and the development and evaluation of additional remediation/restoration alternatives.

This GLLA FFS project is a culmination of a series of meetings and discussions between Beazer, USEPA GLNPO, and the Wisconsin Department of Natural Resources (WDNR), including a meeting on May 12, 2016 where potential remediation/restoration alternatives were discussed, and a meeting on November 29, 2016 where potential remedial action objectives (RAOs) were discussed. The outcomes of those meetings have been incorporated into this SOW. The RAOs outlined in Section 3 reflect the RAOs that were discussed and agreed to at the November 29, 2016 project meeting, and the remedial/restoration alternatives outlined in Section 4.2.1 reflect the alternatives that were discussed and agreed to at the May 12, 2016 project meeting.

2.2 Summary of Previous Investigations

A series of environmental investigations of the Site were completed by Beazer between 1996 and 2014. In 2014, USEPA GLNPO conducted a supplemental investigation of Sub-Area D. In 2016, Beazer conducted a supplemental investigation to better characterize the extent of visible impacts in Crawford Creek in Sub-Area D (downstream of the railroad embankment). The results of these investigations are summarized in the following documents:

- *Off-Property Investigation Data Summary Report* (Blasland, Bouck & Lee, Inc. [BBL] 2006) (this document summarizes results of investigations completed between 1996 and 2006);
- *Human Health and Ecological Risk Assessment* (HHERA; AMEC Earth and Environmental, Inc. [AMEC] 2009);
- *Supplemental Off-Property Investigation Summary Report* (Arcadis 2014a);
- *Final Site Characterization Report – Assessment of Contaminated Sediments in the Crawford Creek/Nemadji River near Superior, Wisconsin, St. Louis River and Bay Area of Concern* (CH2M Hill 2014);
- *Comments on Final Site Characterization Report – Assessment of Contaminated Sediments in the Crawford Creek/Nemadji River near Superior, Wisconsin, St. Louis River and Bay Area of Concern* (Beazer 2015); and
- *Crawford Creek (Sub-Area D) Supplemental Sediment Investigation Findings* (Arcadis 2017).

¹ Corrective actions were implemented in 2010 and 2011 to address surface soils and drainage ditch sediments at the Former Koppers Inc. Wood-Treating Facility.

Constituents of potential concern (COPCs) at the Site identified during previous investigations include polycyclic aromatic hydrocarbons (PAHs) and dioxins/furans, and to a lesser extent, pentachlorophenol. In addition, creosote-like product (dense non-aqueous phase liquid [DNAPL] visible in blebs, globules, and coating in clay cracks/fractures), staining, and sheens have been observed in sediments and floodplain materials within portions of the Site.

The HHERA (AMEC 2009) evaluated risks to potential human receptors (recreational visitor, hunter, trapper) from potential exposures to COPCs in channel sediment, surface water, and floodplain materials. Ecological risks were evaluated for benthic macroinvertebrates, fish, and higher trophic level receptors (meadow vole, little brown bat, tree swallow, American robin, mink, and belted kingfisher), based on potential exposures to COPCs in channel sediment, surface water, floodplain materials, flying insects, and forage fish. Sub-Areas B through D were evaluated in the HHERA. The HHERA was prepared in consultation with the WDNR, but was never formally approved by WDNR or by USEPA.

There are no fish consumption advisories for the Site, and dioxin/furan levels in fish samples collected from the Site are below the Wisconsin advisory threshold level of 10 parts per trillion (toxicity equivalent quotient [TEQ]) (WDNR 2014).

2.3 Beneficial Use Impairments

Three BUIs have been identified for the Site:

- BUI 7 – Beach Closings and Body Contact. The SLRAOC 2015 Remedial Action Plan Update (MPCA and WDNR 2016) lists BUI 7 for the Site, due to the presence of “Warning” signs (against direct contact) that are posted in Sub-Areas A through C.
- BUI 8 – Degradation of Aesthetics. USEPA removed BUI 8 for the SLRAOC in August 2014. However, the presence of sheens and DNAPL in surface waters at the Site is an aesthetic impairment.
- BUI 9 – Loss of Fish and Wildlife Habitat. The July 2013 SLRAOC Implementation Framework: Roadmap to Delisting (Remedial Action Plan Update) (LimnoTech 2013) identifies BUI 9 for the Site, and states that remediation of contaminated sediments and restoration of habitat within stream, wetland, and floodplain areas was needed to achieve removal of BUI 9.

This GLLA FFS project is anticipated to yield a consensus remedy that can subsequently be designed and implemented, which will facilitate removal of the BUIs for the Site, and contribute to eventual delisting of the SLRAOC.

3. REMEDIAL OBJECTIVES

Remedial action objectives (RAOs) for this project are as follows (as discussed and agreed to by Beazer and USEPA during a project meeting on November 29, 2016):

1. Address potential surface water quality impacts of COCs
2. Address the potential for exposure to DNAPL and sheens
3. Minimize the current and/or future potential for direct exposure by human and ecological receptors to COCs in Crawford Creek/Tributary sediment and floodplain materials

4. Address the potential for future transport of COCs within the Crawford Creek/Tributary Site

These RAOs will be used as the basis for evaluating the existing data set and identifying data gaps, as well as for determining media/areas/volumes for remediation. Based on discussions at prior project meetings, it is anticipated that a "weight of evidence" approach (e.g., habitat value, constructability, etc.) will be used for determining media/areas/volumes for remediation for this project.

4. TASKS, RESPONSIBILITIES, AND DELIVERABLES

Project tasks, responsibilities, and deliverables are summarized below. While lead roles have been identified to divide the work between Beazer and USEPA, it is noted that Beazer and USEPA will jointly share responsibilities for review, evaluation, and comment on draft work products. The project coordinators for USEPA and Beazer may agree to shift the lead roles for completion of various tasks, through mutual written agreement. WDNR has elected not to be a signatory party to the PA for this GLLA FFS Project; however both Beazer and USEPA will invite WDNR contribution to the project by providing WDNR the opportunity to review draft work products, participate in key technical discussions, and participate in the development of the remedy consensus memorandum, as further described below.

4.1 Task 1. Data Gap Evaluation/Investigation

Existing data will be evaluated in conjunction with the established remedial objectives (See Section 3 above) to determine if there are any data gaps that are necessary to be filled prior to preparing the FFS Report. A focused supplemental field investigation will be conducted, if needed, to address any identified data gaps that are agreed to by the Project Team (Beazer and USEPA).

This task also includes delineation and mapping of the Ordinary High-Water Mark (OHWM), which demarcates sediment (below the OHWM) and soil (above the OHWM), as well as delineation and mapping of wetlands at the Site.

Task 1 is anticipated to include the following sub-tasks (lead role in parentheses):

1. Task kick-off meeting (Beazer/USEPA shared lead). The Project Team will discuss available data and format/submittal guidelines. The Project Team will also discuss and agree to a specific approach as to how the data will be reviewed and criteria that will be used to identify data gaps (i.e., remedial objectives; see Section 3). Meeting minutes will be prepared to document agreements reached and action items, including roles/responsibilities/schedule for each action item.
2. Compile and provide existing reports and data to USEPA (Beazer lead). Reports and analytical/visual observation data (e.g., databases, tables, figures) will be compiled and submitted electronically to USEPA.
3. Review and evaluate existing data using the approach/criteria discussed and agreed to at the kick-off meeting, and identify potential data gaps (USEPA lead).
4. Meeting to discuss data gaps and need for/scope of supplemental investigations (Beazer/USEPA shared lead). The Project Team will discuss USEPA's review of the data and any identified data gaps. The objective of this meeting will be to discuss and agree to a list of data gaps, if any, that require supplemental investigation. Meeting minutes will be

prepared to document agreements reached and action items, including roles/responsibilities/schedule for each action item.

5. Data gap investigation work plan development (Beazer lead). Beazer will develop a work plan that presents the scope of work and procedures for addressing the agreed upon data gaps. A draft work plan will be provided to USEPA for review prior to being finalized. In addition, a copy will be provided to WDNR.
6. Property access coordination (Beazer lead). Beazer will be responsible for obtaining written access agreements as required by the PA, for itself and its agents as well as EPA and its agents, with the owners of the properties where the supplemental investigation, OHWM delineation/mapping, and wetland delineation/mapping field work will occur.
7. Data gap investigation field work (Beazer lead). Following finalization of the work plan and execution of the necessary property access agreements, Beazer will implement the supplemental investigation field work. This subtask may include the collection of samples for laboratory analysis, if that is part of the scope.
8. Data gap investigation reporting (Beazer lead). Beazer will prepare a report summarizing the scope and findings of the supplemental data gap investigation. A draft report will be provided to USEPA for review prior to being finalized. In addition, a copy will be provided to WDNR.
9. Beazer will provide all deliverables, including the entire data set in original file format, (Word, Excel, gis shapefiles, databases, etc.) and in Adobe Acrobat format. All datasets must meet GLNPO's current QA deliverable requirements. These requirements will be provided separately by GLNPO.
10. OHWM delineation/mapping (Beazer lead). Beazer (and USEPA if desired), will conduct a Site reconnaissance to delineate and map the OHWM along the Tributary and Crawford Creek. It is anticipated that WDNR will assist in the delineation and will place flagging to demarcate the OHWM, and Beazer will survey the flags after they are placed. Beazer will provide an updated Site Plan showing the surveyed OHWM to the Project Team.
11. Wetland delineation/mapping (Beazer lead, presumably with WDNR verification). Beazer will confirm the wetland boundaries that were previously delineated in Sub-Areas A through C in 2008 (the accuracy of the previously delineated wetlands will be evaluated and any modifications to the boundaries resulting from changes in Site conditions will be identified and documented) and conduct a full wetland delineation in Sub-Area D. Wetlands will be delineated using the methodology presented in the 1987 United States Army Corps of Engineers (USACE) *Wetlands Delineation Manual* (Environmental Laboratory 1987), *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region* (USACE 2012), and applicable WDNR regulations and guidance. A wetland delineation report will be prepared to summarize the scope and findings of the field work.

4.2 Task 2. FFS Report

Beazer and USEPA have developed an approach to promote collaboration between and review/input by all Project Team members (Beazer, USEPA) during development of the FFS Report. As part of this approach, certain components of the FFS Report will be initially developed by Beazer, certain components will be initially developed by USEPA, and certain other

components will be initially developed by both parties. The outline/table of contents for the FFS Report agreed to by all parties, identifying the specific leads for each component, is provided in Attachment 1. WDNR will be invited to review and comment on draft FFS Report work products and participate in key technical discussions. USEPA will have the overall responsibility for assembling and issuing the final FFS Report, following Project Team consensus. Existing information/evaluations, including but not limited to the documents listed above in Section 2.2, will be utilized during development of the FFS Report.

Additional information regarding remediation/restoration alternatives and evaluation criteria are provided below in Sections 4.2.1 and 4.2.2, respectively. Section 4.2.3 outlines the proposed work process and sequencing for the FFS Report Task.

4.2.1 Remedial/Restoration Alternatives

At a minimum, remedial/restoration alternatives to be evaluated in the FFS Report will include the following, as discussed and agreed to between Beazer and USEPA during a May 12, 2016 project meeting:

- Sub-Area A – Tributary to Crawford Creek Upstream of Crawford Creek Floodplain
 - Beazer 2014 FCMS Alternative A1: Channel and Bank Cover
 - Beazer 2014 FCMS Alternative A2: Channel and Bank Cover, with DNAPL Collection Provisions
 - Beazer 2014 FCMS Alternative A3: Extended Channel and Bank Excavation/Backfill
- Sub-Area B – Tributary to Crawford Creek Within Crawford Creek Floodplain
 - Beazer 2014 FCMS Alternative B1: Partial Channel Excavation/Backfill, 1-foot Floodplain Cover
 - Beazer 2014 FCMS Alternative B2: Partial Channel Excavation/Backfill, 1-foot Floodplain Excavation/Backfill
 - Beazer 2014 FCMS Alternative B3: Extended Channel and Floodplain Excavation/Backfill
 - WDNR's "Mass Removal" Alternative discussed during the May 12, 2016 and November 29, 2016 Project Team meetings
- Sub-Area C – Crawford Creek from Tributary to Railroad Embankment
 - Beazer 2014 FCMS Alternative C1: Channel Relocation with Armored Channel
 - Beazer 2014 FCMS Alternative C2: Channel Relocation with Clay-Lined Channel
 - Beazer 2014 FCMS Alternative C3: Partial Channel Excavation/Backfill
 - Beazer 2014 FCMS Alternative C4: Extended Channel and Floodplain Excavation/Backfill
 - Lined/Capped Channel Relocation Alternative discussed during the May 12, 2016 and November 29, 2016 Project Team meetings
 - WDNR's "Mass Removal" Alternative discussed during the May 12, 2016 and November 29, 2016 Project Team meetings

Remedial/restoration alternatives for Sub-Area D (Crawford Creek from Railroad Embankment to Nemadji River) have not been discussed to date, and will be developed/discussed by the Project Team as part of this task (see Section 4.2.3 for details).

The final list of alternatives to be evaluated in the FFS Report may include additional alternatives or modified versions of the alternatives listed above, pending consensus by the Project Team.

4.2.2 Evaluation Criteria

The following criteria will be used to evaluate alternatives in the FFS Report²:

- Long-term effectiveness (including ability to achieve RAOs and address BUIs)
 - In accordance with NR 722.07(4)(a)(1), this criterion will take into account the degree to which toxicity, mobility and volume is expected to be reduced; and the degree to which public health, safety and welfare, and the environment, are protected over time.
 - In addition, this criterion will also address the following WDNR-identified considerations discussed between Beazer, USEPA, and WDNR during project meetings on May 12 and November 29, 2016:
 - The extent to which the alternatives include institutional controls/land use restrictions following implementation to provide for long-term protection.
 - The extent to which the alternatives rely on hard structures (e.g., armoring) to provide for long-term protection.
 - The extent to which the alternatives maintain the connection between the stream, bank, and floodplain.
 - The extent to which the alternatives maintain a natural channel as close as possible in form and dimensions to the exiting channel.
 - The extent to which the alternatives are effective/protective under a range of expected flow conditions (e.g., low flow, flooding, ice conditions).
- Short-term effectiveness
 - In accordance with NR 722.07(4)(a)(2), this criterion will consider the potential for and magnitude of adverse impacts on public health, safety, welfare and the environment during the construction and implementation period. Such impacts may include, but are not limited to, noise, dust generation, potential for releases, and potential risks associated with on- and off-Site equipment traffic. Potential impacts on workers and the community are assessed, as well as the length of time the impacts are expected to last, and the extent to which engineering and/or operational controls can be used to mitigate potential impacts.
- Implementability
 - In accordance with NR 722.07(4)(a)(3), this criterion considers the relative ease or difficulty of implementing the various corrective action alternatives in accordance with

² These criteria are based on WDNR's requirements under Wisconsin Administrative Code, Chapters NR 722.07(4) and NR 722.09(2), and are consistent with the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) requirements for remedy evaluation in the feasibility study process (40 Code of Federal Regulation [CFR] 300.430). Detailed descriptions of these criteria can be found on NR 722 and the NCP. Additional details for the long-term effectiveness and stakeholder acceptance criterion have been provided herein, based on discussions during prior meetings between Beazer, USEPA and WDNR.

alternative- and Site-specific considerations. Both technical and administrative implementability are considered. Specific implementability considerations anticipated to be included in this evaluation are:

- Technical feasibility of construction and implementation
 - Availability of materials, equipment, technologies and workers
 - Potential difficulties and constraints associated with construction activities
 - Difficulties associated with any required post-construction monitoring
 - Administrative feasibility, including activities and time needed to obtain any necessary licenses, permits or approvals
 - Presence of any federal or state threatened or endangered species
 - Technical feasibility of recycling, treatment, engineering controls or disposal
- Restoration time frame
 - In accordance with NR 722.07(4)(a)(4), this criterion considers the time required until RAOs for the various media are achieved, based on construction and implementation time frames, as well as the time required to restore trees that need to be cleared to access the work areas and conduct the work.
 - Economic feasibility
 - In accordance with NR 722.07(4)(b), this criterion considers the economic feasibility by considering its alternative-specific costs relative to the long-term effectiveness, short-term effectiveness, implementability, and restoration time frame. Cost components considered include capital costs (including both direct and indirect costs), initial costs (including design and testing costs), and annual operation and maintenance costs.
 - Compliance with laws, standards and permitting requirements
 - In accordance with NR 722.09(2), this criterion considers the extent to which the corrective action alternatives are expected to comply with applicable laws, standards and permits.
 - Sustainability
 - In accordance with NR 722.09(2m) and the WDNR's January 2012 Green & Sustainable Remediation Manual (Pub-RR-911), the sustainability criterion includes a qualitative evaluation of the following "Green and Sustainable Remediation Drivers":
 - Energy Consumption: Considers total energy use and the potential to use renewable energy.
 - Greenhouse Gas Generation: Considers the generation of air pollutants, including particulate matter and greenhouse gas (GHG) emissions.
 - Water Use and Reuse: Considers water use and the impacts to water resources.

- Land Use: Considers the future land use and enhancement of ecosystems, including minimizing unnecessary soil and habitat disturbance and destruction.
 - Waste and Material Use and Recycling: Considers reducing, reusing and recycling materials and wastes, including investigative or sampling wastes and considers concerns regarding limited landfill space, introduction of pollution into the environment and the need to conserve natural resources.
- Stakeholder acceptance
 - This criterion will evaluate at a minimum, but not limited to, any known concerns or limitations associated with property owners' willingness to provide access agreements for implementation/construction of the alternatives, and/or other stakeholder concerns.

4.2.3 Work Process/Sequencing

A breakdown of the work process/sequencing for the FFS Report Task is as follows:

1. Task kick-off meeting. Beazer and USEPA will participate in a meeting to discuss the overall approach for preparing the FFS Report. WDNR will be invited to participate in this meeting. At this initial meeting, the team will also discuss the specific approach for preparing draft FFS Sections 5 (Conceptual Site Model) and 7 (Identification of Media/Areas/Volumes Potentially Requiring Remediation). As discussed in Step 2 below, both USEPA and Beazer will be preparing separate drafts of these FFS Report sections. Meeting minutes will be prepared to document agreements reached, action items, and roles/responsibilities/schedule for each action item.
2. Prepare drafts of FFS Sections 1 through 7, and associated tables/figures. Per the Outline/Table of Contents provided in Attachment 1, USEPA will draft Sections 1 (Introduction), 2 (Purpose/Objectives), and 6 (Remedial Action Objectives); Beazer will draft Sections 3 (Site Description, Land Use, and History), and 4 (Summary of Previous Investigations/Evaluations); and both USEPA and Beazer will draft Sections 5 (Conceptual Site Model) and 7 (Identification of Media/Areas/Volumes Potentially Requiring Remediation). Note that for Section 6, the remedial objectives will have already been discussed and agreed to during the Task 1 (Data Gap Evaluation/Investigation) kick-off meeting. When completed, Beazer and USEPA will exchange their draft sections for review. In addition, copies will be provided to WDNR.
3. Meeting to discuss draft FFS Sections 1 through 7, and associated tables/figures. Beazer and USEPA will participate in a meeting (or multiple meetings, if necessary) to discuss comments on draft Sections 1 through 7 of the FFS Report. WDNR will be invited to participate in this meeting. Each participant will share its comments to draft Sections 1 through 7 with all other participants at least one week in advance of the first meeting. The objective of these meetings will be to resolve any technical issues for Sections 1 through 7. In particular, it is anticipated that more in-depth technical discussions will be necessary to complete Sections 5 (Conceptual Site Model) and 7 (Identification of Media/Areas/Volumes Potentially Requiring Remediation). It is anticipated that Beazer and USEPA will reach agreement on the media/areas/volumes to be remediated, and use that information to collaboratively finalize the list of remedial/restoration alternatives to be evaluated in the FFS. Any changes considered during FFS preparation will be discussed and agreed to between

Beazer and USEPA. Meeting minutes will be prepared to document agreements reached, action items, and roles/responsibilities/schedule for each action item (including who [Beazer or USEPA] will take the lead on revising/finalizing draft FFS Sections 5 and 7). Revise and finalize draft FFS Sections 1 through 7, and associated tables/figures. Following the meeting described above, it is anticipated that revisions will be required to address Project Team comments on FFS Sections 1 through 7. When completed, Beazer and USEPA will exchange their draft sections for review. In addition, copies will be provided to WDNR. Any additional comments/revisions can be discussed via a conference call.

4. Meeting to identify remedial/restoration alternatives, and FFS Sections 8 through 11. Following completion of FFS Sections 1 through 7, Beazer and USEPA will participate in a meeting to discuss and complete the list of remedial/restoration alternatives that will be evaluated in the FFS Report, and preparation of FFS Sections 8 through 11. WDNR will be invited to participate in this meeting. The list of agreed-upon alternatives in Section 4.2.1 of this SOW will be used as a starting point. Meeting minutes will be prepared to document agreements reached, action items, and roles/responsibilities/schedule for each action item.
5. Prepare drafts of FFS Sections 8 through 11, and associated tables/figures. Per the Outline/Table of Contents provided in Attachment 1, USEPA will draft Sections 8 (Screening of Candidate Remedial Technologies) and 11 (Identification/Description of Evaluation Criteria); and Beazer will draft Sections 9 (Disposal Options Analysis) and 10 (Identification/Description of Remedial Alternatives). When completed, Beazer and USEPA will exchange their draft sections for review. In addition, copies will be provided to WDNR.
6. Conference call (or meeting, if necessary) to discuss draft FFS Sections 8 through 11, and associated tables/figures. Beazer and USEPA will participate in a conference call to discuss comments on draft Sections 8 through 11 of the FFS Report. WDNR will be invited to participate in this call. Each participant will share its comments to draft Sections 8 through 11 with all other participants at least one week in advance of the conference call (or meeting). The objective of this conference call/meeting will be to resolve any technical issues for Sections 8 through 11. Conference call minutes will be prepared to document agreements reached, action items, and roles/responsibilities/schedule for each action item.
7. Revise and finalize draft FFS Sections 8 through 11, and associated tables/figures. Following the conference call described above, it is anticipated that revisions will be required to address Project Team comments on FFS Sections 8 through 11. When completed, Beazer and USEPA will exchange their draft sections for review. In addition, copies will be provided to WDNR. Any additional comments/revisions can be discussed via a second conference call.
8. Meeting to discuss the remedial alternatives evaluation process and preparation of cost estimates. Following completion of FFS Sections 8 through 11, Beazer and USEPA will participate in a meeting to discuss the process to be used to evaluate the remedial alternatives in the FFS Report, and preparation of FFS Section 12 and the remedial alternative cost estimates. WDNR will be invited to participate in this meeting. The evaluation criteria listed in Section 4.2.2 of this SOW will be used to guide the discussion of the remedial alternative evaluation process. Meeting minutes will be prepared to document agreements reached, action items, and roles/responsibilities/schedule for each action item.

9. Prepare draft FFS Section 12 and remedial/restoration alternative cost estimates. Following completion of FFS Sections 8 through 11, USEPA will prepare a draft of Section 12 (Evaluation of Remedial Alternatives); and both Beazer and USEPA will prepare remedial alternative cost estimates. When completed, Beazer and USEPA will exchange their draft materials for review. In addition, copies will be provided to WDNR.
10. Meeting to discuss draft FFS Section 12 and associated tables/figures, cost estimates, and FFS Report finalization. Beazer and USEPA will participate in a meeting to discuss comments on draft Section 12 of the FFS Report and the draft remedial/restoration alternative cost estimates. WDNR will be invited to participate in this meeting. Each participant will share its comments to draft Section 12 and associated tables/figures and cost estimates with all other participants at least one week in advance of the meeting. The objective of this meeting will be to resolve any technical issues for Section 12 and the cost estimates, and discuss the approach/schedule for finalizing the FFS Report. Meeting minutes will be prepared to document agreements reached, action items, and roles/responsibilities/schedule for each action item (including who [Beazer or USEPA] will take the lead on revising/finalizing draft remedial/restoration alternative cost estimates).
11. Revise and finalize draft FFS Section 12 and associated tables/figures, and cost estimates. Following the meeting described above, it is anticipated that revisions will be required to address Project Team comments on FFS Section 12 and the remedial/restoration cost estimates. When completed, Beazer and USEPA will exchange their draft materials for review. In addition, copies will be provided to WDNR. Any additional comments/revisions can be discussed via a conference call.
12. Prepare final draft FFS Report, including all associated tables, figures and attachments. Once all FFS Report text and associated tables, figures, and attachments have been prepared, reviewed, and finalized, USEPA will take the lead on compiling all of the completed items into a final draft FFS Report, and distribute it to Beazer for final review and comment. In addition, a copy will be provided to WDNR.
13. Hold public meeting to request and consider public input on the proposed remedy. The meeting could take a variety of forms including public availability sessions, public presentations, or other formats that Beazer and GLNPO agree to.
14. Meeting to discuss final draft FFS Report. Beazer and USEPA will participate in a meeting to discuss comments on the final draft FFS Report. WDNR will be invited to participate in this meeting. Meeting minutes will be prepared to document agreements reached, action items, and roles/responsibilities/schedule for each action item.
15. Finalize FFS Report. USEPA will address any remaining comments on the final draft, and then finalize the FFS Report.

4.3 Task 3. Project Management and Coordination

This task includes project coordination and management activities by the Project Team (Beazer and USEPA) as well as the stakeholders (e.g., affected property owners) and public outreach. These activities may include, but are not limited to, the following:

1. Periodic conference calls and/or meetings to discuss project progress, results, potential issues, and reach resolution/agreement (Beazer to coordinate these calls and draft agenda and call/meeting minutes). Several specific conference calls and meetings are identified in Sections 4.1 (Task 1), 4.2 (Task 2), and 4.3 (Task 3). Additional project coordination calls and/or meetings will be scheduled as needed. At a minimum, it is assumed that monthly conference calls will be held throughout the course of the project.
2. Maintaining data/project files (USEPA and Beazer).
3. Monthly status reports to keep Project Team updated on project activities and findings (Beazer lead).
4. Stakeholder and public outreach/communications (USEPA lead; exact scope to-be-determined, but may include a public meeting).
5. Beazer to provide USEPA with cost accounting reports, per the requirements in the PA.

All communications between USEPA/Beazer and WDNR/other stakeholders will be received jointly by both USEPA and Beazer.

4.4 Task 4. Remedy Consensus Memorandum

After completion of the FFS Report, Beazer and USEPA will participate in a meeting to discuss and agree to a consensus remedy for the Site. WDNR will be invited to participate in this meeting. Following this meeting, the Project Team will prepare a memorandum to describe and document consensus among Beazer, USEPA, and WDNR (if possible), on the selected remedy. If a public meeting is held as part of this process, the consensus memorandum will reflect input obtained during that meeting. Beazer and USEPA will share primary responsibility for completion of this task, with input/review invited from WDNR.

5. PHASING OF WORK

Tasks 1, 2 and 4 will be completed sequentially. For Task 1, existing data will be evaluated in conjunction with the established remedial objectives to identify any data gaps for the FFS. After completion of Task 1, including any additional data collection, preparation of the FFS Report (Task 2) will be initiated. Following completion of the FFS, a memorandum will be prepared to document consensus on a selected remedy (Task 4). Project management and coordination activities (Task 3) will be conducted throughout the project, as needed, as described above in Section 4. Refer to Sections 4.1 and 4.2.3 above for additional details regarding sub-task sequencing for Task 1 (Data Gap Evaluation/Investigation) and Task 2 (FFS Report), respectively.

6. SCHEDULE

The estimated timeline of key milestones for the project is as follows:

Task/Milestone	Estimated Duration
Routine project calls and status reports	Monthly (minimum) for the duration of the project

Task/Milestone	Estimated Duration
Data gap evaluation	3 months
Implement supplemental investigations to support FFS development	5 months (pending access agreements and weather/field conditions)
Prepare FFS, including technical meetings and Project Team reviews	9 months
Conduct public meeting	1 month
Conduct meeting among Project Team to discuss/select consensus remedy	1 month
Prepare consensus remedy memorandum (Consensus document among USEPA GLNPO, Beazer and WDNR [if possible])	1 month
Total estimated duration:	20 months

7. PROJECT BUDGET

The total estimated budget for this project is \$850,000. Task-level cost estimates and associated assumptions are as follows:

Task/Assumptions	Estimated Cost
Task 1: Data Gap Evaluation/ Investigation – evaluate existing data, conduct supplemental investigations to address identified data gaps, OHWM/wetland delineation and mapping	\$440,000
Task 2: FFS Report – prepare draft and final versions of FFS Report	\$250,000
Task 3: Project Management and Coordination –routine project team calls and status reports, project team meetings, public meeting	\$140,000
Task 4: Remedy Consensus Memorandum – prepare memorandum documenting Beazer, USEPA, and WDNR (if possible), consensus on the selected remedy	\$20,000
Total:	\$850,000

As the non-federal sponsor, Beazer will provide 50% of the project costs as in-kind services.

8. REFERENCES

AMEC. 2008. Human Health and Ecological Risk Assessment. January.

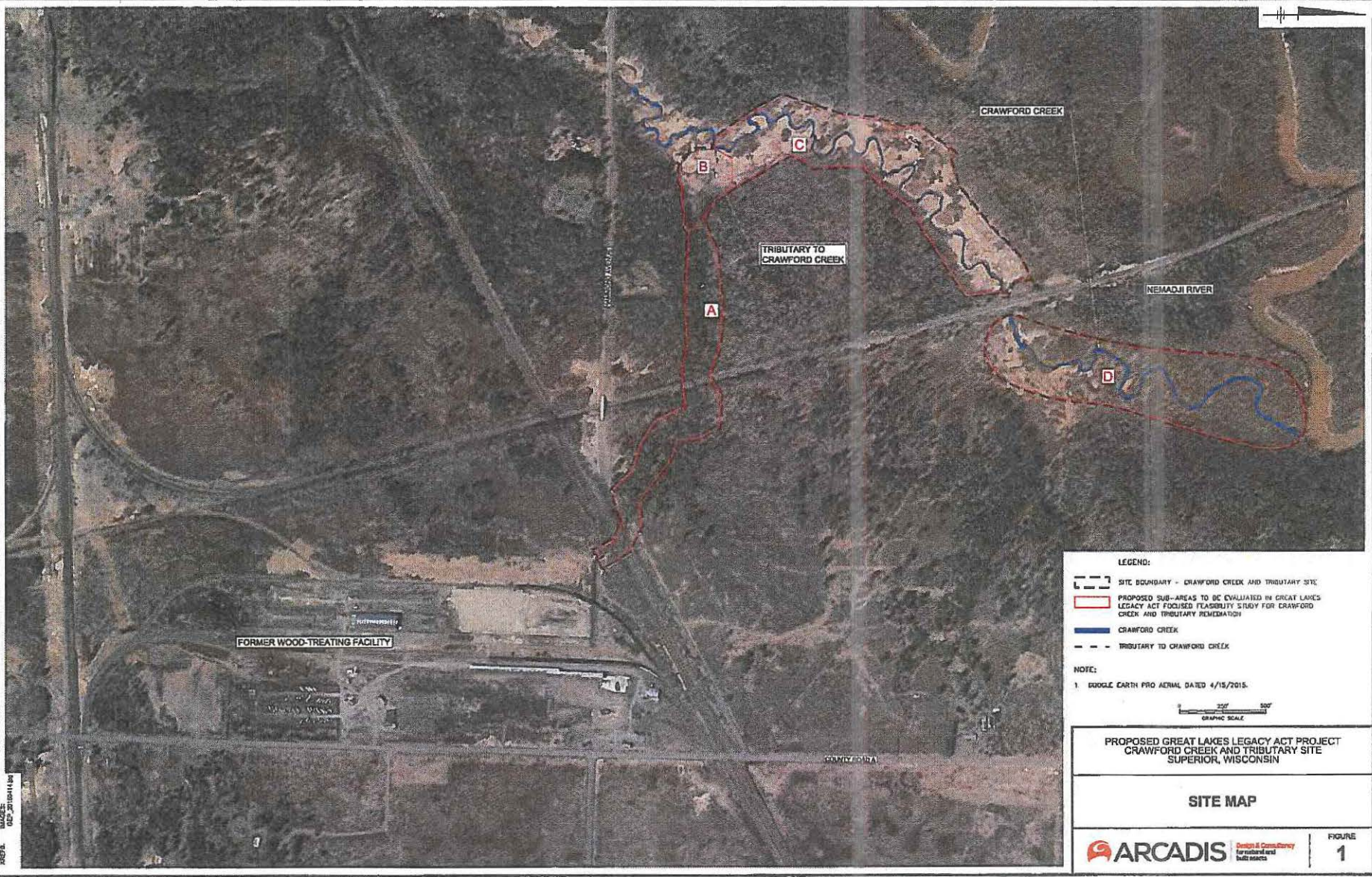
Arcadis. 2014a. Supplemental Off-Property Investigation Summary Report. April.

Arcadis. 2014b. Off-Property Focused Corrective Measures Study. August.

- Arcadis. 2017. Crawford Creek (Sub-Area D) Supplemental Sediment Investigation Findings. August.
- BBL. 2006. Off-Property Investigation Data Summary Report. February.
- Beazer. 2015. Comments on Final Site Characterization Report – Assessment of Contaminated Sediments in the Crawford Creek/Nemadji River near Superior, Wisconsin, St. Louis River and Bay Area of Concern. May.
- Beazer. 2017. Response to Great Lakes Legacy Act Request for Projects - Focused Feasibility Study for Crawford Creek and Tributary Remediation and Restoration. Superior, Wisconsin. February 23.
- CH2M Hill. 2014. Final Site Characterization Report – Assessment of Contaminated Sediments in the Crawford Creek/Nemadji River near Superior, Wisconsin, St. Louis River and Bay Area of Concern. December.
- LimnoTech. 2013. St. Louis River Area of Concern Implementation Framework: Roadmap to Delisting (Remedial Action Plan Update). July. Available at: <http://stlouisriver.org/wp-content/uploads/2015/08/Roadmap-to-Delisting.pdf>
- MPCA and WDNR. 2016. St. Louis River Area of Concern 2015 Remedial Action Plan Update. February. Available at: <http://dnr.wi.gov/topic/greatlakes/documents/SLRAOCRAP2015.pdf>
- WDNR. 2014. Wisconsin's Fish Contaminant Monitoring Program and Advisory Program 1970-2010. January. Available at: <http://dnr.wi.gov/files/PDF/pubs/fh/AdminReports/FH073.pdf>

Figure 1. Site Map

CITY OF SUPERIOR, WISCONSIN - ENVIRONMENTAL SERVICES DIVISION - 1000 W. SUPERIOR ST. - SUPERIOR, WI 54985 - PHONE: 715.485.1111 - FAX: 715.485.1112
 PROJECT: SUPERIOR WOOD-TREATING FACILITY REMEDIATION - PHASE 1 - 1000 W. SUPERIOR ST. - SUPERIOR, WI 54985 - DATE: 4/15/2015
 DRAWN BY: J. HARRIS - CHECKED BY: J. HARRIS - DATE: 4/15/2015



LEGEND:

- SITE BOUNDARY - CRAWFORD CREEK AND TRIBUTARY SITE
- PROPOSED SUB-AREAS TO BE EVALUATED IN GREAT LAKES LEGACY ACT FOCUSED FEASIBILITY STUDY FOR CRAWFORD CREEK AND TRIBUTARY REMEDIATION
- CRAWFORD CREEK
- TRIBUTARY TO CRAWFORD CREEK

NOTE:

1. GOOGLE EARTH PRO AERIAL, DATED 4/15/2015.

GRAPHIC SCALE

PROPOSED GREAT LAKES LEGACY ACT PROJECT
CRAWFORD CREEK AND TRIBUTARY SITE
SUPERIOR, WISCONSIN

SITE MAP

Design & Consultancy
for natural and built assets

FIGURE
1

Attachment 1. FFS Report Outline/Table of Contents

FFS Outline/Table of Contents

Crawford Creek and Tributary Remediation and Restoration, Superior, WI

Key¹:

Yellow shading: Initial draft by USEPA, with review/input by Beazer and WDNR

Green shading: Initial draft by Beazer, with review/input by USEPA and WDNR

Blue shading: Initial draft by both USEPA and Beazer, with review/input by all parties

1. Introduction
2. Purpose/Objectives
3. Site Description, Land Use, and History
4. Summary of Previous Investigations/Evaluations (Including Supplemental Data Gap Investigations²)
5. Conceptual Site Model Summary
6. Remedial Action Objectives/Goals
7. Identification of Media/Areas/Volumes Potentially Requiring Remediation
8. Screening of Candidate Remedial Technologies
9. Disposal Options Analysis
10. Identification/Description of Remedial Alternatives
 - 10.1. Remedial Alternatives for Area A – Tributary from Former KI Property to Crawford Creek Floodplain
 - 10.2. Remedial Alternatives for Area B – Tributary within Crawford Creek Floodplain
 - 10.3. Remedial Alternatives for Area C – Crawford Creek from Tributary to Railroad Embankment
 - 10.4. Remedial Alternatives for Area D – Crawford Creek Downstream of Railroad Embankment
11. Identification/Description of Evaluation Criteria
12. Evaluation of Remedial Alternatives
 - 12.1. Detailed Evaluation of Alternatives
 - 12.2. Comparative Evaluation of Alternatives
 - 12.3. Alternatives Evaluation Summary

Tables

- Summary of Prior Investigations/Evaluations
- Areas and Volumes Potentially Requiring Remediation
- Technology Screening Summary
- Potentially Applicable Environmental Laws, Standards and Permits
- Summary of Remedial Alternative Preliminary Cost Estimates
- Summary of Comparative Evaluation of Remedial Alternatives

¹ "Beazer" means Beazer and/or Beazer's consultants. "USEPA" means USEPA and/or USEPA's contractor.

² A data gap evaluation will be conducted at the onset of the project, led by USEPA, with review/input by Beazer and WDNR. Any associated data gap investigations agreed to by these parties will be performed by Beazer, and the results will be incorporated into this section of the FFS Report.

FFS Outline/Table of Contents

Crawford Creek and Tributary Remediation and Restoration, Superior, WI

Figures

Site Location Map

Site Plan and Property Ownership/Parcel Boundaries

Remediation Areas/Limits

Figures Depicting each Remedial Alternative

Appendices

Remedial Alternative Preliminary Cost Estimates