

EXHIBIT A

MODEL AGREEMENT FOR DESIGN NOVEMBER 12, 2015 (with updates as of APRIL 13, 2017)

APPLICABILITY AND INSTRUCTIONS:

1. The attached model design agreement (DA) must be used for all cost shared design activities except for projects and programs with Project Partnership Agreements that cover both design and construction, e.g., Continuing Authority Program projects. The responsibility for review and approval of a DA that does not deviate from the approved model has been delegated to the MSC Commander. Division Counsel concurrence that the DA does not deviate from the subject model, and is appropriate for use for design of the particular project, is required prior to approval. In addition, the MSC Commander has been delegated authority to approve non-substantive deviations to the model DA. Division Counsel review of such deviations, with a recommendation to approve such deviations, is required prior to approval by the MSC Commander.
2. The following options, including language for the DA, are addressed in the Attachment:
 - a. Option 1: Sponsor is a Non-Profit Entity (page A-1).
 - b. Option 2: Not An Obligation of Future Appropriations (page A-2).
 - c. Option 3: Multiple Sponsors (page A-3).
 - d. Option 4: Accelerated Funds, following Committee notification (page A-4).
 - e. Option 5: Contributed Funds, following Committee notification (page A-5).
 - f. Option 6: Additional Work (page A-6).
3. Reminder: Make all required insertions, including language associated with an option; remove this cover page; remove the open and close brackets and any instructional text; ensure the spacing and page breaks throughout the DA are appropriate; if more than one option is used, ensure the Article and paragraph numbering are correct; and delete the Attachment.
4. The Certificate of Authority, Certification Regarding Lobbying, and the Non-Federal Sponsor's Self-Certification of Financial Capability should be included as a part of the DA package. These certificates can found at the following Corps website:
http://www.usace.army.mil/Missions/CivilWorks/ProjectPartnershipAgreements/ppa_forms.aspx

DESIGN AGREEMENT
BETWEEN
THE DEPARTMENT OF THE ARMY
AND
[INSERT FULL NAME OF NON-FEDERAL SPONSOR]
FOR
DESIGN
FOR THE
[INSERT FULL NAME OF PROJECT OR ELEMENT]

THIS AGREEMENT is entered into this _____ day of _____, _____, by and between the Department of the Army (hereinafter the “Government”), represented by the U.S. Army Engineer, **[Insert Name of District]** (hereinafter the “District Engineer”) and the **[Insert Full Name of Non-Federal Sponsor]** (hereinafter the “Non-Federal Sponsor”), represented by the **[Insert Title]**.

WITNESSETH, THAT:

WHEREAS, Federal funds were provided in **[Insert appropriations cite]** to initiate design of **[Insert short description of the project or element]**;

[Insert if the project has been authorized for construction: WHEREAS, construction of the Project is authorized by **[Insert cite]**;

WHEREAS, Section 103 of the Water Resources Development Act of 1986, as amended (33 U.S.C. 2213), specifies the cost-sharing requirements applicable to construction of the Project, and Section 105(c) of the Water Resources Development Act of 1986 (33 U.S.C. 2215), provides that the costs of design shall be shared in the same percentages as construction of the Project;

WHEREAS, based on the Project’s primary project purpose of **[Insert, as appropriate, commercial navigation, flood damage reduction, or aquatic ecosystem restoration]**, the parties agree that the Non-Federal Sponsor shall contribute **[Insert cost sharing percentage for primary project purpose, e.g., for commercial navigation, 10, 25, or 50, depending on the depth of the project; for flood risk reduction, hurricane and storm damage risk reduction, or ecosystem restoration 35]** percent of the total design costs under this Agreement;

WHEREAS, pursuant to Section 221(a)(4) of the Flood Control Act of 1970, as amended (42 U.S.C. 1962d-5b(a)), the Non-Federal Sponsor may perform or provide in-kind contributions for credit towards the non-Federal share of the total design costs; and

WHEREAS, the Government and Non-Federal Sponsor have the full authority and capability to perform in accordance with the terms of this Agreement.

NOW, THEREFORE, the parties agree as follows:

ARTICLE I - DEFINITIONS

A. The term “Project” means **[Insert description of the Project]** as generally described in the **[Insert title of the Decision Document]**, dated **[e.g., Month Day, Year]** and approved by **[Insert Title of Approving Official]** on **[Month Day, Year]**.

B. The term “Design” means **[Insert description of the Design work, e.g., perform detailed pre-construction engineering and design, including preparation of plans and specifications for the initial construction contract]** for the Project.

C. The term “total design costs” means the sum of all costs that are directly related to the Design and cost shared in accordance with the terms of this Agreement. Subject to the provisions of this Agreement, the term shall include, but is not necessarily limited to: the Government’s costs for engineering and design, economic and environmental analyses, and evaluation; for contract dispute settlements or awards; for supervision and administration; for Agency Technical Review and other review processes required by the Government; for response to any required Independent External Peer Review; and the Non-Federal Sponsor’s creditable costs for in-kind contributions, if any. The term does not include any costs for dispute resolution; participation in the Design Coordination Team; audits; an Independent External Peer Review panel, if required; or betterments; or the Non-Federal Sponsor’s cost of negotiating this Agreement.

D. The term "in-kind contributions" means those materials or services provided by the Non-Federal Sponsor that are identified as being integral to design of the Project by the Division Engineer for the **[Insert Name of USACE Division, e.g., Mississippi Valley Division]**. To be integral, the material or service must be part of the work that the Government would otherwise have undertaken for design of the Project. In-kind contributions also include any investigations performed by the Non-Federal Sponsor to identify the existence and extent of any hazardous substances that may exist in, on, or under real property interests required for the Project.

E. The term “fiscal year” means one year beginning on October 1st and ending on September 30th of the following year.

F. The term “betterment” means a difference in the design of a portion of the Project that results from the application of standards that the Government determines exceed those that the Government would otherwise apply to the design of that portion.

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

A. In accordance with Federal laws, regulations, and policies, the Government shall conduct the Design using funds appropriated by the Congress and funds provided by the Non-Federal Sponsor. The Non-Federal Sponsor shall perform or provide any in-

kind contributions in accordance with applicable Federal laws, regulations, and policies. If the Government and non-Federal interest enter into a Project Partnership Agreement for construction of the Project, the Government shall include the total design costs in the calculation of construction costs for the Project in accordance with the terms and conditions of the Project Partnership Agreement.

B. The Non-Federal Sponsor shall contribute **[Insert cost sharing percentage for the primary project purpose, e.g., 10, 25, 35, or 50]** percent of total design costs in accordance with the provisions of this paragraph and provide required funds in accordance with Article III.

1. After considering the estimated amount of credit for in-kind contributions, if any, that will be afforded in accordance with paragraph C. of this Article, the Government shall provide the Non-Federal Sponsor with a written estimate of the amount of funds required from the Non-Federal Sponsor for the initial fiscal year of the Design. No later than 15 calendar days after such notification, the Non-Federal Sponsor shall provide the full amount of such funds to the Government.

2. No later than August 1st prior to each subsequent fiscal year of the Design, the Government shall provide the Non-Federal Sponsor with a written estimate of the amount of funds required from the Non-Federal Sponsor during that fiscal year to meet its cost share. No later than September 1st prior to that fiscal year, the Non-Federal Sponsor shall provide the full amount of such required funds to the Government.

C. The Government shall credit towards the Non-Federal Sponsor's share of total design costs, the costs, documented to the satisfaction of the Government, that the Non-Federal Sponsor incurs in providing or performing in-kind contributions integral to the Design, including associated supervision and administration. Such costs shall be subject to audit in accordance with Article VII to determine reasonableness, allocability, and allowability, and crediting shall be in accordance with the following procedures, requirements, and limitations:

1. As in-kind contributions are completed and no later than 60 calendar day after such completion, the Non-Federal Sponsor shall provide the Government appropriate documentation, including invoices and certification of specific payments to contractors, suppliers, and the Non-Federal Sponsor's employees. Failure to provide such documentation in a timely manner may result in denial of credit.

2. No credit shall be afforded for interest charges, or any adjustment to reflect changes in price levels between the time the in-kind contributions are completed and credit is afforded; for the value of in-kind contributions obtained at no cost to the Non-Federal Sponsor; for any items provided or performed prior to the effective date of this Agreement unless covered by an In-Kind Memorandum of Understanding; for any items not identified as integral in the integral determination report; or for costs that exceed the Government's estimate of the cost for such item if it had been performed by the Government.

3. No reimbursement will be provided for any in-kind contributions that exceed the Non-Federal Sponsor's share of the total design costs under this Agreement. As provided in Article II.A., total design costs, including credit for in-kind contributions, shall be included in the calculation of construction costs for the Project in accordance with the terms and conditions of the Project Partnership Agreement.

D. To the extent practicable and in accordance with Federal laws, regulations, and policies, the Government shall afford the Non-Federal Sponsor the opportunity to review and comment on solicitations for contracts prior to the Government's issuance of such solicitations; proposed contract modifications, including change orders; and contract claims prior to resolution thereof. Ultimately, the contents of solicitations, award of contracts, execution of contract modifications, and resolution of contract claims shall be exclusively within the control of the Government.

E. The Non-Federal Sponsor shall not use Federal Program funds to meet any of its obligations under this Agreement unless the Federal agency providing the funds verifies in writing that the funds are authorized to be used for the Project. Federal program funds are those funds provided by a Federal agency, plus any non-Federal contribution required as a matching share therefor.

F. Except as provided in paragraph C. of this Article, the Non-Federal Sponsor shall not be entitled to any credit or reimbursement for costs it incurs in performing its responsibilities under this Agreement.

G. In carrying out its obligations under this Agreement, the Non-Federal Sponsor shall comply with all the requirements of applicable Federal laws and implementing regulations, including, but not limited to: Title VI of the Civil Rights Act of 1964 (P.L. 88-352), as amended (42 U.S.C. 2000d), and Department of Defense Directive 5500.11 issued pursuant thereto; the Age Discrimination Act of 1975 (42 U.S.C. 6102); and the Rehabilitation Act of 1973, as amended (29 U.S.C. 794), and Army Regulation 600-7 issued pursuant thereto.

H. If Independent External Peer Review (IEPR) is required for the Design, the Government shall conduct such review in accordance with Federal laws, regulations, and policies. The Government's costs for an IEPR panel shall not be included in the total design costs.

I. In addition to the ongoing, regular discussions of the parties in the delivery of the Design, the Government and the Non-Federal Sponsor may establish a Design Coordination Team consisting of Government's Project Manager and the Non-Federal Sponsor's counterpart and one senior representative each from the Government and Non-Federal Sponsor to discuss significant issues or actions. Neither the Government's nor the Non-Federal Sponsor's costs for participation on the Design Coordination Team shall be included in the total design costs. The Non-Federal Sponsor's costs for participation

on the Design Coordination Team shall be paid solely by the Non-Federal Sponsor without reimbursement or credit.

J. The Non-Federal Sponsor may request in writing that the Government perform betterments on behalf of the Non-Federal Sponsor. Each request shall be subject to review and written approval by the Division Engineer for the **[Insert Name of USACE Division, e.g., Mississippi Valley Division]**. If the Government agrees to such request, the Non-Federal Sponsor, in accordance with Article III.F., must provide funds sufficient to cover the costs of such work in advance of the Government performing the work.

ARTICLE III - METHOD OF PAYMENT

A. As of the effective date of this Agreement, total design costs are projected to be \$_____, with the Government's share of such costs projected to be \$_____, the Non-Federal Sponsor's share of such costs projected to be \$_____; and the costs for betterments are projected to be \$_____. These amounts are estimates subject to adjustment by the Government, after consultation with the Non-Federal Sponsor, and are not to be construed as the total financial responsibilities of the Government and the Non-Federal Sponsor.

B. The Government shall provide the Non-Federal Sponsor with quarterly reports setting forth the estimated total design costs and the Government's and Non-Federal Sponsor's estimated shares of such costs; costs incurred by the Government, using both Federal and Non-Federal Sponsor funds, to date; the amount of funds provided by the Non-Federal Sponsor to date; the estimated amount of any creditable in-kind contributions; and the estimated remaining cost of the Design.

C. The Non-Federal Sponsor shall provide to the Government required funds by delivering a check payable to "FAO, USAED, **[Insert District and EROC code, e.g., New Orleans (B2)]**" to the District Engineer, or verifying to the satisfaction of the Government that the Non-Federal Sponsor has deposited such required funds in an escrow or other account acceptable to the Government, with interest accruing to the Non-Federal Sponsor, or by providing an Electronic Funds Transfer of such required funds in accordance with procedures established by the Government.

D. The Government shall draw from the funds provided by the Non-Federal Sponsor to cover the non-Federal share of the total design costs as those costs are incurred. If the Government determines at any time that additional funds are needed from the Non-Federal Sponsor to cover the Non-Federal Sponsor's required share of the total design costs, the Government shall provide the Non-Federal Sponsor with written notice of the amount of additional funds required. Within 60 calendar days of such notice, the Non-Federal Sponsor shall provide the Government with the full amount of such additional funds.

E. Upon conclusion of the Design and resolution of all relevant claims and appeals, the Government shall conduct a final accounting and furnish the Non-Federal Sponsor with the written results of such final accounting. Should the final accounting determine that additional funds are required from the Non-Federal Sponsor, the Non-Federal Sponsor, within 60 calendar days of written notice from the Government, shall provide the Government with the full amount of such additional funds. Should the final accounting determine that the Non-Federal Sponsor has provided funds in excess of its required amount, the Government shall refund the excess amount, subject to the availability of funds or if requested by the Non-Federal Sponsor, apply the excess amount towards the non-Federal share of the cost of construction of the Project in the event a Project Partnership Agreement is executed for the Project. Such final accounting does not limit the Non-Federal Sponsor's responsibility to pay its share of total design costs, including contract claims or any other liability that may become known after the final accounting.

F. Payment of Costs for Betterments Provided on Behalf of the Non-Federal Sponsor. No later than 30 calendar days after receiving written notice from the Government of the amount of funds required to cover any such costs, as applicable, the Non-Federal Sponsor shall make the full amount of such required funds available to the Government by delivering a check payable to "FAO, USAED, **[Insert District and EROC code, e.g., New Orleans (B2)]**" to the District Engineer, or by providing an Electronic Funds Transfer of such funds in accordance with procedures established by the Government. If at any time the Government determines that additional funds are required to cover any such costs, as applicable, the Non-Federal Sponsor shall provide those funds within 30 calendar days from receipt of written notice from the Government.

ARTICLE IV - TERMINATION OR SUSPENSION

A. If at any time the Non-Federal Sponsor fails to fulfill its obligations under this Agreement, the Government may suspend or terminate Design unless the Assistant Secretary of the Army (Civil Works) determines that continuation of the Design is in the interest of the United States or is necessary in order to satisfy agreements with any other non-Federal interests in connection with the Project.

B. If the Government determines at any time that the Federal funds made available for the Design are not sufficient to complete such work, the Government shall so notify the Non-Federal Sponsor in writing, and upon exhaustion of such funds, the Government shall suspend Design until there are sufficient Federal funds appropriated by the Congress and funds provided by the Non-Federal Sponsor to allow Design to resume.

C. In the event of termination, the parties shall conclude their activities relating to the Design and conduct an accounting in accordance with Article III.E. To provide for this eventuality, the Government may reserve a percentage of available funds as a contingency to pay costs of termination, including any costs of resolution of contract claims and contract modifications.

D. Any suspension or termination shall not relieve the parties of liability for any obligation incurred. Any delinquent payment owed by the Non-Federal Sponsor pursuant to this Agreement shall be charged interest at a rate, to be determined by the Secretary of the Treasury, equal to 150 per centum of the average bond equivalent rate of the 13 week Treasury bills auctioned immediately prior to the date on which such payment became delinquent, or auctioned immediately prior to the beginning of each additional 3 month period if the period of delinquency exceeds 3 months.

ARTICLE V – HOLD AND SAVE

The Non-Federal Sponsor shall hold and save the Government free from all damages arising from the Design, except for damages due to the fault or negligence of the Government or its contractors.

ARTICLE VI - DISPUTE RESOLUTION

As a condition precedent to a party bringing any suit for breach of this Agreement, that party must first notify the other party in writing of the nature of the purported breach and seek in good faith to resolve the dispute through negotiation. If the parties cannot resolve the dispute through negotiation, they may agree to a mutually acceptable method of non-binding alternative dispute resolution with a qualified third party acceptable to the parties. Each party shall pay an equal share of any costs for the services provided by such a third party as such costs are incurred. The existence of a dispute shall not excuse the parties from performance pursuant to this Agreement.

ARTICLE VII - MAINTENANCE OF RECORDS AND AUDIT

A. The parties shall develop procedures for the maintenance by the Non-Federal Sponsor of books, records, documents, or other evidence pertaining to costs and expenses for a minimum of three years after the final accounting. The Non-Federal Sponsor shall assure that such materials are reasonably available for examination, audit, or reproduction by the Government.

B. The Government may conduct, or arrange for the conduct of, audits of the Design. Government audits shall be conducted in accordance with applicable Government cost principles and regulations. The Government's costs of audits for the Design shall not be included in total design costs.

C. To the extent permitted under applicable Federal laws and regulations, the Government shall allow the Non-Federal Sponsor to inspect books, records, documents, or other evidence pertaining to costs and expenses maintained by the Government, or at the request of the Non-Federal Sponsor, provide to the Non-Federal Sponsor or independent auditors any such information necessary to enable an audit of the Non-

Federal Sponsor's activities under this Agreement. The costs of non-Federal audits shall be paid solely by the Non-Federal Sponsor without reimbursement or credit by the Government.

ARTICLE VIII - RELATIONSHIP OF PARTIES

In the exercise of their respective rights and obligations under this Agreement, the Government and the Non-Federal Sponsor each act in an independent capacity, and neither is to be considered the officer, agent, or employee of the other. Neither party shall provide, without the consent of the other party, any contractor with a release that waives or purports to waive any rights a party may have to seek relief or redress against that contractor.

ARTICLE IX - NOTICES

A. Any notice, request, demand, or other communication required or permitted to be given under this Agreement shall be deemed to have been duly given if in writing and delivered personally or mailed by certified mail, with return receipt, as follows:

If to the Non-Federal Sponsor:

[Insert Title and Address of Sponsor representative to receive notices]

If to the Government:

[Insert Title and Address of Government representative to receive notices]

B. A party may change the recipient or address for such communications by giving written notice to the other party in the manner provided in this Article.

ARTICLE X - CONFIDENTIALITY

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 XI - THIRD PARTY RIGHTS, BENEFITS, OR LIABILITIES

Nothing in this Agreement is intended, nor may be construed, to create any rights, confer any benefits, or relieve any liability, of any kind whatsoever in any third person not party to this Agreement.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement,
which shall become effective upon the date it is signed by the District Engineer.

DEPARTMENT OF THE ARMY

[INSERT FULL NAME OF SPONSOR]

BY: _____
[INSERT TYPED NAME]
[Insert Colonel, U.S. Army or
Lieutenant Colonel, U.S. Army, as
applicable]
District Engineer

BY: _____
[INSERT TYPED NAME]
[Insert Full Title]

DATE: _____

DATE: _____

Option 1: Sponsor is a Non-Profit Entity that has the consent of the Local Government. In accordance with ASA(CW) Memorandum, dated April 5, 2012, Subject: Implementation Guidance for Section 2003(b) of the Water Resources Development Act of 2007 – Definition of Non-Federal Interest, confirm eligibility of the non-profit entity to serve as the Non-Federal Sponsor and whether a legally constituted public body must also be a Non-Federal Sponsor on the Agreement.
http://www.usace.army.mil/Portals/2/docs/civilworks/Project%20Planning/wrda/2007/sec_2003b.pdf

Use the Certificate of Authority for a non-profit entity as provided on the Corps' PPA website.

Insert the following two WHEREAS clauses after the second (or third, if applicable) WHEREAS clause in the DA:

“WHEREAS, the **[FULL NAME OF NONPROFIT ENTITY]** is an organization that is incorporated under the applicable laws of the **[Insert State of [Name of State] or Commonwealth of [Name of Commonwealth]]** as a non-profit organization, exempt from paying Federal income taxes under Section 501 of the Internal Revenue Code (26 U.S.C. 501);

WHEREAS, by letter dated **[Month Day, Year]**, the **[FULL NAME OF AFFECTED LOCAL GOVERNMENT]**, the affected local government has consented to the **[FULL NAME OF NON-FEDERAL SPONSOR]**, serving as a Non-Federal Sponsor for the Design;”

Option 2: Not An Obligation of Future Appropriations. Section 221(a) of the Flood Control Act of 1970, as amended (42 U.S.C. 1962d-5b), provides that an agreement may reflect that it does not obligate future appropriations when doing so is inconsistent with constitutional or statutory limitations of a State or political subdivision thereof. However, section 221(a) does NOT provide that the Non-Federal Sponsor's performance and payments are subject to appropriations of funds. The Government retains the right to exercise any legal rights it has to protect the Government's interests. If applicable and requested by the Non-Federal Sponsor, insert into the DA as the last Article the following:

"ARTICLE XII - OBLIGATIONS OF FUTURE APPROPRIATIONS

The Non-Federal Sponsor intends to fulfill fully its obligations under this Agreement. Nothing herein shall constitute, nor be deemed to constitute, an obligation of future appropriations by the **[Insert name of the legislative body that makes the appropriations, e.g., legislature of the State of New York or the New York City Council]**, where creating such an obligation would be inconsistent with **[Insert the specific citation to the constitutional or statutory limitation on committing future appropriations]**. If the Non-Federal Sponsor is unable to, or does not, fulfill its obligations under this Agreement, the Government may exercise any legal rights it has to protect the Government's interests."

Option 3: Multiple Non-Federal Sponsors. While it is preferable that there is one party only as the Non-Federal Sponsor for the DA, it is permissible to have more than one Non-Federal Sponsor and in such case, the DA should be modified to use the term “Non-Federal Sponsors” throughout along with the necessary modifications to change, as appropriate, verbs and pronouns from singular to plural. The Non-Federal Sponsors need to understand that they will be jointly and severally liable for all non-Federal obligations and responsibilities under the agreement. Any proposal to allow for a division of responsibilities between Non-Federal Sponsors will require approval of the HQUSACE. Insert into the DA as the last Article the following:

**“ARTICLE XII – JOINT AND SEVERAL RESPONSIBILITY OF THE
NON-FEDERAL SPONSORS**

The obligations and responsibilities of the Non-Federal Sponsors shall be joint and several, such that each Non-Federal Sponsor shall be liable for the whole performance of the obligations and responsibilities of the Non-Federal Sponsors under the terms and provisions of this Agreement. The Government may demand the whole performance of said obligations and responsibilities from any of the entities designated herein as one of the Non-Federal Sponsors.”

Attachment

Option 4: Accelerated Funds, following Committee notification. Following completion of the Committee notification process, the DA may include the following changes:

1. Delete the “and” at the end of the next to last WHEREAS clause and insert the following WHEREAS clause after the next to last WHEREAS clause in the DA:

“WHEREAS, the Non-Federal Sponsor proposes to accelerate its provision of funds for the immediate use by the Government for the Design; and”

2. Add new paragraph K. to Article II as follows.

“K. The Non-Federal Sponsor understands that execution of this Agreement shall not constitute any commitment by the Government to budget, or the Congress to appropriate, funds for this Design or to match any funds accelerated by the Non-Federal Sponsor; that the funds accelerated by the Non-Federal Sponsor will be credited toward the Non-Federal Sponsor’s cost share only to the extent matching Federal funds are provided; and that the Non-Federal Sponsor is not entitled to any repayment for any of the funds accelerated and obligated by the Government even if Design ultimately is not completed.”

Option 5: Contributed Funds, following Committee notification. The cost of work funded with Contributed Funds is included in total design costs subject to cost sharing. Contributed Funds are applied toward the Federal cost share.

Guidance on Contributed Funds is provided in CECW-P Memorandum, dated February 11, 2015, Subject: Implementation Guidance for Sections 1015 and 1023 of the Water Resources Reform and Development Act of 2014 (WRRDA 2014), Contributed Funds. http://www.usace.army.mil/Portals/2/docs/civilworks/Project%20Planning/wrda/2014/2014_sec_1015_1023.pdf

Following completion of the Committee notification process, the DA may include the following changes:

1. Delete the “and” at the end of the next to last WHEREAS clause and insert the following WHEREAS clause after the next to last WHEREAS clause in the DA:

“WHEREAS, in addition to providing the required non-Federal cost share, the Non-Federal Sponsor considers it to be in its own interest to contribute funds voluntarily (hereinafter the “Contributed Funds”) to be used by the Government for the Design, as authorized pursuant to 33 U.S.C. 701h; and”

2. Add as the third sentence in Article I.C. the following:

“The term also includes the cost of work funded with Contributed Funds.”

3. Add a new paragraph G. to Article I as follows:

“G. The term “Contributed Funds” means those funds above any statutorily required non-Federal cost share that are provided voluntarily by the Non-Federal Sponsor for funding the Design, with no credit or repayment authorized for such funds.”

4. Add a new paragraph K. to Article II as follows:

“K. In addition to providing the funds required pursuant to paragraph B. of this Article, the Non-Federal Sponsor will be providing Contributed Funds currently estimated at \$_____, for the Design. The Non-Federal Sponsor shall make the full amount of such funds available to the Government by delivering a check payable to “FAO, USAED, [Insert District and EROC code, e.g., New Orleans (B2)]” to the District Engineer, or by providing an Electronic Funds Transfer of such funds in accordance with procedures established by the Government. No credit or repayment is authorized, nor shall be provided, for any Contributed Funds provided by the Non-Federal Sponsor that are obligated by the Government. In addition, acceptance and use of Contributed Funds shall not constitute, represent, or imply any commitment to budget or appropriate funds for the Design in the future.”

Option 6: Additional Work. If additional work for design is requested by the Non-Federal Sponsor and approved by the Division Engineer, the DA should include the following changes:

1. Delete the “and” at the end of the next to last WHEREAS clause and insert the following WHEREAS clause after the next to last WHEREAS clause in the DA:

“WHEREAS, 33 U.S.C. 701h authorizes the Government to undertake, at the Non-Federal Sponsor’s full expense, additional work while the Government is carrying out the Design; and”

2. Replace the last sentence in Article I.C. with the following:

“The term does not include any costs for dispute resolution; participation in the Design Coordination Team; audits; an Independent External Peer Review panel, if required; betterments; or additional work; or the Non-Federal Sponsor’s cost of negotiating this Agreement.”

3. Add a new paragraph G. to Article I as follows:

“G. The term “additional work” means items of work related to, but not included in, the Design that the Government will undertake on the Non-Federal Sponsor’s behalf while the Government is carrying out the Design, with the Non-Federal Sponsor responsible for all costs and any liabilities associated with such work.”

4. Replace Article II.J. in its entirety with the following:

“J. The Non-Federal Sponsor may request in writing that the Government perform betterments or additional work on behalf of the Non-Federal Sponsor. Each request shall be subject to review and approval by the Division Engineer for the **[Insert Name of USACE Division, e.g., Mississippi Valley Division]**. If the Government agrees to such request, the Non-Federal Sponsor, in accordance with Article III.F., must provide funds sufficient to cover the costs of such work in advance of the Government performing the work.”

5. Replace the first sentence in Article III.A. with the following:

“As of the effective date of this Agreement, total design costs are projected to be \$_____, with the Government’s share of such costs projected to be \$_____, the Non-Federal Sponsor’s share of such costs projected to be \$_____; the costs for betterments are projected to be \$_____; and the costs for additional work are projected to be \$_____.”

Attachment

6. Replace the heading for Article III.F. with the following.

“F. Payment of Costs for Betterments and Additional Work Provided on Behalf of the Non-Federal Sponsor.”



EXHIBIT B

**MODEL AGREEMENT
FOR
SPECIFICALLY AUTHORIZED
ECOSYSTEM RESTORATION PROJECTS
JANUARY 18, 2017
(with updates as of MAY 9, 2018)**

APPLICABILITY AND INSTRUCTIONS:

1. The attached model agreement is for a specifically authorized ecosystem restoration project where the sponsor has agreed to waive any reimbursement for real property interests and relocations that exceed its 35% non-Federal cost share. Implementation guidance for Section 1161 of WRDA 2016, dated October 19, 2017, addresses the cessation of O&M activities on nonstructural and nonmechanical elements of ecosystem restoration projects or features. The OMRR&R manual prepared by the Government should address this matter.
2. The responsibility for review and approval of an Ecosystem Restoration PPA that does not deviate from the approved model, or for an amendment to the January 18, 2017 model to include an approved option to the model, has been delegated to the MSC Commander. Division Counsel concurrence that the PPA does not deviate from the subject model, and is appropriate for use for the particular project, is required prior to approval. In addition, the MSC Commander has been delegated authority to approve non-substantive deviations to the model PPA. Division Counsel review of such deviations, with a recommendation to approve such deviations, is required prior to approval by the MSC Commander.
3. The following options, including language for the agreement, are addressed in the Attachment:
 - a. Option 1: Sponsor is a Non-Profit Entity (page A-1).
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 - d. Option 4: Accelerated Funds, following Committee notification (page A-4).
 - e. Option 5: Contributed Funds, following Committee notification (page A-5).
 - f. Option 6: Additional Work (page A-6).
 - g. Option 7: Projects with Recreation Features (page A-7).
 - h. Option 8: Projects in American Samoa, Guam, the Northern Mariana Islands, the Virgin Islands, or Puerto Rico, or involving an Indian Tribe (page A-9).
4. Reminder: Make all required insertions, including language associated with an option; remove this cover page; remove the open and close brackets and any instructional text; ensure the spacing and page breaks throughout the agreement are appropriate; and delete the Attachment.
5. The Certificate of Authority, Certification Regarding Lobbying, and the Non-Federal Sponsor's Self-Certification of Financial Capability should be included as a part of the

agreement package. These certificates can found on the Corps' "Project Partnership Agreements" website under the "Forms" tab.

PROJECT PARTNERSHIP AGREEMENT
BETWEEN
THE DEPARTMENT OF THE ARMY
AND
[FULL NAME OF NON-FEDERAL SPONSOR]
FOR
[FULL NAME OF THE PROJECT]

THIS AGREEMENT is entered into this _____ day of _____, _____, by and between the Department of the Army (hereinafter the “Government”), represented by the [INSERT TITLE] and the [FULL NAME OF THE NON-FEDERAL SPONSOR] (hereinafter the “Non-Federal Sponsor”), represented by its [INSERT TITLE].

WITNESSETH, THAT:

WHEREAS, construction of the [Insert Full Name of the Project] (hereinafter the “Project”, as defined in Article I.A. of this Agreement) was authorized by [Insert cite];

WHEREAS, Section 103 of the Water Resources Development Act of 1986, Public Law 99-662, as amended (33 U.S.C. 2213), specifies the cost-sharing requirements applicable to the Project;

WHEREAS, the Non-Federal Sponsor has waived reimbursement for the value of real property interests and relocations that exceeds 35 percent of construction costs; and

WHEREAS, the Government and the Non-Federal Sponsor have the full authority and capability to perform in accordance with the terms of this Agreement and acknowledge that Section 221 of the Flood Control Act of 1970, as amended (42 U.S.C. 1962d-5b), provides that this Agreement shall be enforceable in the appropriate district court of the United States.

NOW, THEREFORE, the parties agree as follows:

ARTICLE I - DEFINITIONS

A. The term “Project” means [DESCRIBE FEATURES], as generally described in the [FULL TITLE OF DECISION DOCUMENT], dated _____, _____ and approved by the [TITLE OF APPROVING OFFICIAL, e.g., Chief of Engineers, Division Commander for Mississippi Valley Division, etc.] on [Month Day, Year] (hereinafter the “Decision Document”).

B. The term “construction costs” means all costs incurred by the Government and Non-Federal Sponsor in accordance with the terms of this Agreement that are directly related to design and construction of the Project and cost shared. The term includes, but is not necessarily limited to: the Government’s costs and the Non-Federal Sponsor’s creditable contributions

pursuant to the terms of the Design Agreement executed on **[Month Day, Year]**; the costs of historic preservation activities except for data recovery for historic properties; the Government's costs of engineering, design, and construction, including cost shared monitoring and adaptive management, if any; the Government's supervision and administration costs; the Non-Federal Sponsor's creditable costs for providing real property interests and relocations and for providing in-kind contributions, if any. The term does not include any costs for operation, maintenance, repair, rehabilitation, or replacement; dispute resolution; participation in the Project Coordination Team; or audits; or the Non-Federal Sponsor's cost of negotiating this Agreement.

C. The term "real property interests" means lands, easements, and rights-of-way, including those required for relocations and borrow and dredged material placement areas. Acquisition of real property interests may require the performance of relocations.

D. The term "relocation" means the provision of a functionally equivalent facility to the owner of a utility, cemetery, highway, railroad, or public facility when such action is required in accordance with applicable legal principles of just compensation. Providing a functionally equivalent facility may include the alteration, lowering, raising, or replacement and attendant demolition of the affected facility or part thereof.

E. The term "functional portion thereof" means a portion of the Project that has been completed and that can function independently, as determined in writing by the District Commander for **[Insert Name of USACE District, e.g., New Orleans District]** (hereinafter the "District Commander"), although the remainder of the Project is not yet complete.

F. The term "cost shared monitoring" means those activities, including the collection and analysis of data, for a period not to exceed 10 years, that the Government identifies as necessary to determine if predicted outputs of the Project are being achieved and to determine if adaptive management is necessary, as generally described in the Decision Document. The term does not include monitoring after the Division Commander for **[Insert Name of USACE Division, e.g., Mississippi Valley Division]** (hereinafter the "Division Commander") has determined that ecological success has been achieved or monitoring beyond the 10-year period, with any such monitoring the responsibility of the Non-Federal Sponsor, at no cost to the Government.

G. The term "cost shared adaptive management" means physical modifications to the Project, in response to the cost shared monitoring results to ensure the functionality and benefits of the Project are garnered, as explicitly described in the performance standards section of the adaptive management plan or other sections in the Decision Document. The term does not include operational changes, which are the responsibility of the Non-Federal Sponsor, at no cost to the Government, as part of operation and maintenance of the Project.

H. The term "in-kind contributions" means those materials or services provided by the Non-Federal Sponsor that are identified as being integral to the Project by the Division Commander. To be integral to the Project, the material or service must be part of the work that the Government would otherwise have undertaken for design and construction of the Project. The in-kind contributions also include any investigations performed by the Non-Federal Sponsor

to identify the existence and extent of any hazardous substances that may exist in, on, or under real property interests required for the Project.

I. The term “fiscal year” means one year beginning on October 1st and ending on September 30th of the following year.

J. The term “Maximum Cost Limit” means the statutory limitation on the total cost of the Project, as determined by the Government in accordance with Section 902 of the Water Resources Development Act of 1986, as amended, if applicable to the Project, and Government regulations issued thereto.

ARTICLE II - OBLIGATIONS OF THE PARTIES

A. In accordance with Federal laws, regulations, and policies, the Government shall undertake construction of the Project using funds appropriated by the Congress and funds provided by the Non-Federal Sponsor.

B. The Non-Federal Sponsor shall contribute 35 percent of construction costs, as follows:

1. In accordance with Article III, the Non-Federal Sponsor shall provide the real property interests and relocations required for construction, operation, and maintenance of the Project.

2. In providing in-kind contributions, if any, the Non-Federal Sponsor shall obtain all applicable licenses and permits necessary for such work. As functional portions of the work are completed, the Non-Federal Sponsor shall begin operation and maintenance of such work. Upon completion of the work, the Non-Federal Sponsor shall so notify the Government and provide the Government with a copy of as-built drawings for the work.

3. After considering the estimated amount of credit that will be afforded to the Non-Federal Sponsor pursuant to paragraphs B.1. and B.2., above, the Government shall determine the estimated amount of funds required from the Non-Federal Sponsor to meet its 35 percent cost share for the then-current fiscal year. No later than 30 calendar days after receipt of notification from the Government, the Non-Federal Sponsor shall provide the full amount of such required funds to the Government in accordance with Article VI.

4. No later than August 1st prior to each subsequent fiscal year, the Government shall provide the Non-Federal Sponsor with a written estimate of the full amount of funds required from the Non-Federal Sponsor during that fiscal year to meet its cost share. Not later than September 1st prior to that fiscal year, the Non-Federal Sponsor shall provide the full amount of such required funds to the Government in accordance with Article VI.

C. To the extent practicable and in accordance with Federal law, regulations, and policies, the Government shall afford the Non-Federal Sponsor the opportunity to review and

comment on solicitations for contracts, including relevant plans and specifications, prior to the Government's issuance of such solicitations; proposed contract modifications, including change orders; and contract claims prior to resolution thereof. Ultimately, the contents of solicitations, award of contracts, execution of contract modifications, and resolution of contract claims shall be exclusively within the control of the Government.

D. The Government, as it determines necessary, shall undertake actions associated with historic preservation, including, but not limited to, the identification and treatment of historic properties as those properties are defined in the National Historic Preservation Act (NHPA) of 1966, as amended. All costs incurred by the Government for such work (including the mitigation of adverse effects other than data recovery) shall be included in construction costs and shared in accordance with the provisions of this Agreement. If historic properties are discovered during construction and the effect(s) of construction are determined to be adverse, strategies shall be developed to avoid, minimize or mitigate these adverse effects. In accordance with 54 U.S.C. 312507, up to 1 percent of the total amount authorized to be appropriated for the Project may be applied toward data recovery of historic properties and such costs shall be borne entirely by the Government. In the event that costs associated with data recovery of historic properties exceed 1 percent of the total amount authorized to be appropriated for the Project, the Government and Non-Federal Sponsor shall consult with each other and reach an agreement on how to fund such data recovery costs. Upon agreement in accordance with 54 U.S.C. 312508, the Government may seek a waiver from the 1 percent limitation under 54 U.S.C. 312507.

E. When the District Commander determines that construction of the Project, excluding cost shared monitoring and adaptive management, or a functional portion thereof, is complete, the District Commander shall so notify the Non-Federal Sponsor in writing and the Non-Federal Sponsor, at no cost to the Government, shall operate, maintain, repair, rehabilitate, and replace the Project, or such functional portion thereof. The Government shall furnish the Non-Federal Sponsor with an Operation, Maintenance, Repair, Rehabilitation, and Replacement Manual (hereinafter the "OMRR&R Manual") and copies of all as-built drawings for the completed work. The Government shall provide the Non-Federal Sponsor with an updated OMRR&R Manual and as-built drawings, as necessary, based on the cost shared monitoring and adaptive management.

1. The Non-Federal Sponsor shall conduct its operation, maintenance, repair, rehabilitation, and replacement responsibilities in a manner compatible with the authorized purpose of the Project and in accordance with applicable Federal laws and specific directions prescribed by the Government in the OMRR&R Manual and any subsequent updates or amendments thereto.

2. The Government may enter, at reasonable times and in a reasonable manner, upon real property interests that the Non-Federal Sponsor now or hereafter owns or controls to inspect the Project, and, if necessary, to undertake any work necessary to the functioning of the Project for its authorized purpose. If the Government determines that the Non-Federal Sponsor is failing to perform its obligations under this Agreement and the Non-Federal Sponsor does not correct such failures within a reasonable time after notification by the Government, the Government, at its sole discretion, may undertake any operation, maintenance, repair,

rehabilitation, or replacement of the Project. No operation, maintenance, repair, rehabilitation, or replacement by the Government shall relieve the Non-Federal Sponsor of its obligations under this Agreement or preclude the Government from pursuing any other remedy at law or equity to ensure faithful performance of this Agreement.

F. The Non-Federal Sponsor shall prevent obstructions or encroachments on the Project (including prescribing and enforcing regulations to prevent such obstructions or encroachments) that might reduce the outputs produced, hinder operation and maintenance, or interfere with the proper function of the Project.

G. The Non-Federal Sponsor shall not use the Project, or real property interests required for construction, operation, and maintenance of the Project, as a wetlands bank or mitigation credit for any other project.

H. The Non-Federal Sponsor shall not use Federal Program funds to meet any of its obligations under this Agreement unless the Federal agency providing the funds verifies in writing that the funds are authorized to be used for the Project. Federal program funds are those funds provided by a Federal agency, plus any non-Federal contribution required as a matching share therefor.

I. In carrying out its obligations under this Agreement, the Non-Federal Sponsor shall comply with all the requirements of applicable Federal laws and implementing regulations, including, but not limited to: Section 601 of the Civil Rights Act of 1964 (P.L. 88-352), as amended (42 U.S.C. 2000d), and Department of Defense Directive 5500.11 issued pursuant thereto; the Age Discrimination Act of 1975 (42 U.S.C. 6102); and the Rehabilitation Act of 1973, as amended (29 U.S.C. 794), and Army Regulation 600-7 issued pursuant thereto.

J. In addition to the ongoing, regular discussions of the parties in the delivery of the Project, the Government and the Non-Federal Sponsor may establish a Project Coordination Team to discuss significant issues or actions. The Government's costs for participation on the Project Coordination Team shall not be included in construction costs that are cost shared but shall be included in calculating the Maximum Cost Limit. The Non-Federal Sponsor's costs for participation on the Project Coordination Team shall not be included in construction costs that are cost shared and shall be paid solely by the Non-Federal Sponsor without reimbursement or credit by the Government.

[Insert any additional paragraphs necessary to reflect additional items of non-Federal cooperation specifically required for the Project in the Chief's Report or other authorization document.]

ARTICLE III - REAL PROPERTY INTERESTS, RELOCATIONS, AND COMPLIANCE WITH PUBLIC LAW 91-646, AS AMENDED

A. The Government, after consultation with the Non-Federal Sponsor, shall determine the real property interests needed for construction, operation, and maintenance of the Project.

The Government shall provide the Non-Federal Sponsor with general written descriptions, including maps as appropriate, of the real property interests that the Government determines the Non-Federal Sponsor must provide for construction, operation, and maintenance of the Project, and shall provide the Non-Federal Sponsor with a written notice to proceed with acquisition. The Non-Federal Sponsor shall acquire the real property interests and shall provide the Government with authorization for entry thereto in accordance with the Government's schedule for construction of the Project. The Non-Federal Sponsor shall ensure that real property interests provided for the Project are retained in public ownership for uses compatible with the authorized purposes of the Project.

B. The Government, after consultation with the Non-Federal Sponsor, shall determine the relocations necessary for construction, operation, and maintenance of the Project, and shall provide the Non-Federal Sponsor with general written descriptions, including maps as appropriate, of such relocations and shall provide the Non-Federal Sponsor with a written notice to proceed with such relocations. The Non-Federal Sponsor shall perform or ensure the performance of these relocations in accordance with the Government's construction schedule for the Project.

C. To the maximum extent practicable, not later than 30 calendar days after the Government provides to the Non-Federal Sponsor written descriptions and maps of the real property interests and relocations required for construction, operation, and maintenance of the Project, the Non-Federal Sponsor may request in writing that the Government acquire all or specified portions of such real property interests, or perform the necessary relocations. If the Government agrees to such a request, the Non-Federal Sponsor, in accordance with Article VI.F., must provide funds sufficient to cover the costs of the acquisitions, or relocations in advance of the Government performing the work. The Government shall acquire the real property interests, and perform the relocations, applying Federal laws, policies, and procedures. The Government shall acquire real property interests in the name of the Non-Federal Sponsor except, if acquired by eminent domain, the Government shall convey all of its right, title and interest to the Non-Federal Sponsor by quitclaim deed or deeds. The Non-Federal Sponsor shall accept delivery of such deed or deeds. The Government's providing real property interests or performing relocations on behalf of the Non-Federal Sponsor does not alter the Non-Federal Sponsor's responsibility under Article IV for the costs of any cleanup and response related thereto.

D. As required by Sections 210 and 305 of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, Public Law 91-646, as amended (42 U.S.C. 4630 and 4655), and Section 24.4 of the Uniform Regulations contained in 49 C.F.R. Part 24, the Non-Federal Sponsor assures that (1) fair and reasonable relocation payments and assistance shall be provided to or for displaced persons, as are required to be provided by a Federal agency under Sections 4622, 4623 and 4624 of Title 42 of the U.S. Code; (2) relocation assistance programs offering the services described in Section 4625 of Title 42 of the U.S. Code shall be provided to such displaced persons; (3) within a reasonable period of time prior to displacement, comparable replacement dwellings will be available to displaced persons in accordance with Section 4625(c)(3) of Title 42 of the U.S. Code; (4) in acquiring real property, the Non-Federal Sponsor will be guided, to the greatest extent practicable under State law, by the land acquisition policies in Section 4651 and the provision of Section 4652 of Title 42 of the U.S. Code; and (5) property

owners will be paid or reimbursed for necessary expenses as specified in Sections 4653 and 4654 of Title 42 of the U.S. Code.

ARTICLE IV - HAZARDOUS SUBSTANCES

A. The Non-Federal Sponsor shall be responsible for undertaking any investigations to identify the existence and extent of any hazardous substances regulated under the Comprehensive Environmental Response, Compensation, and Liability Act (hereinafter “CERCLA”) (42 U.S.C. 9601-9675), that may exist in, on, or under real property interests required for construction, operation, and maintenance of the Project. However, for real property interests that the Government determines to be subject to the navigation servitude, only the Government shall perform such investigations unless the District Commander provides the Non-Federal Sponsor with prior specific written direction, in which case the Non-Federal Sponsor shall perform such investigations in accordance with such written direction.

B. In the event it is discovered that hazardous substances regulated under CERCLA exist in, on, or under any of the required real property interests, the Non-Federal Sponsor and the Government, in addition to providing any other notice required by applicable law, shall provide prompt written notice to each other, and the Non-Federal Sponsor shall not proceed with the acquisition of such real property interests until the parties agree that the Non-Federal Sponsor should proceed.

C. If hazardous substances regulated under CERCLA are found to exist in, on, or under any required real property interests, the parties shall consider any liability that might arise under CERCLA and determine whether to initiate construction, or if already initiated, whether to continue construction, suspend construction, or terminate construction.

1. Should the parties initiate or continue construction, the Non-Federal Sponsor shall be responsible, as between the Government and the Non-Federal Sponsor, for the costs of cleanup and response, including the costs of any studies and investigations necessary to determine an appropriate response to the contamination. Such costs shall be paid solely by the Non-Federal Sponsor without reimbursement or credit by the Government.

2. In the event the parties cannot reach agreement on how to proceed or the Non-Federal Sponsor fails to provide any funds necessary to pay for cleanup and response costs or to otherwise discharge the Non-Federal Sponsor’s responsibilities under this Article upon direction by the Government, the Government may suspend or terminate construction, but may undertake any actions it determines necessary to avoid a release of such hazardous substances.

D. The Non-Federal Sponsor and the Government shall consult with each other in an effort to ensure that responsible parties bear any necessary cleanup and response costs as defined in CERCLA. Any decision made pursuant to this Article shall not relieve any third party from any liability that may arise under CERCLA.

E. As between the Government and the Non-Federal Sponsor, the Non-Federal Sponsor shall be considered the operator of the Project for purposes of CERCLA liability. To the maximum extent practicable, the Non-Federal Sponsor shall operate, maintain, repair, rehabilitate, and replace the Project in a manner that will not cause liability to arise under CERCLA.

ARTICLE V - CREDIT FOR REAL PROPERTY INTERESTS, RELOCATIONS, AND IN-KIND CONTRIBUTIONS

A. The Government shall include in construction costs, and credit towards the Non-Federal Sponsor's share of such costs, the value of Non-Federal Sponsor provided real property interests and relocations, and the costs of in-kind contributions determined by the Government to be required for the Project.

B. To the maximum extent practicable, no later than 6 months after it provides the Government with authorization for entry onto a real property interest or pays compensation to the owner, whichever occurs later, the Non-Federal Sponsor shall provide the Government with documents sufficient to determine the amount of credit to be provided for the real property interest in accordance with paragraphs C.1. of this Article. To the maximum extent practicable, no less frequently than on a semi-annual basis, the Non-Federal Sponsor shall provide the Government with documentation sufficient for the Government to determine the amount of credit to be provided for other creditable items in accordance with paragraph C. of this Article.

C. The Government and the Non-Federal Sponsor agree that the amount of costs eligible for credit that are allocated by the Government to construction costs shall be determined and credited in accordance with the following procedures, requirements, and conditions. Such costs shall be subject to audit in accordance with Article X.B. to determine reasonableness, allocability, and allowability of costs.

1. Real Property Interests.

a. General Procedure. The Non-Federal Sponsor shall obtain, for each real property interest, an appraisal of the fair market value of such interest that is prepared by a qualified appraiser who is acceptable to the parties. Subject to valid jurisdictional exceptions, the appraisal shall conform to the Uniform Standards of Professional Appraisal Practice. The appraisal must be prepared in accordance with the applicable rules of just compensation, as specified by the Government.

(1) Date of Valuation. For any real property interests owned by the Non-Federal Sponsor on the effective date of this Agreement and required for construction performed after the effective date of this Agreement, the date the Non-Federal Sponsor provides the Government with authorization for entry thereto shall be used to determine the fair market value. For any real property interests required for in-kind contributions covered by an In-Kind Memorandum of Understanding, the date of initiation of construction shall be used to determine the fair market value. The fair market value of real property interests acquired by the Non-

Federal Sponsor after the effective date of this Agreement shall be the fair market value of such real property interests at the time the interests are acquired.

(2) Except for real property interests acquired through eminent domain proceedings instituted after the effective date of this Agreement, the Non-Federal Sponsor shall submit an appraisal for each real property interest to the Government for review and approval no later than, to the maximum extent practicable, 60 calendar days after the Non-Federal Sponsor provides the Government with an authorization for entry for such interest or concludes the acquisition of the interest through negotiation or eminent domain proceedings, whichever occurs later. If, after coordination and consultation with the Government, the Non-Federal Sponsor is unable to provide an appraisal that is acceptable to the Government, the Government shall obtain an appraisal to determine the fair market value of the real property interest for crediting purposes.

(3) The Government shall credit the Non-Federal Sponsor the appraised amount approved by the Government. Where the amount paid or proposed to be paid by the Non-Federal Sponsor exceeds the approved appraised amount, the Government, at the request of the Non-Federal Sponsor, shall consider all factors relevant to determining fair market value and, in its sole discretion, after consultation with the Non-Federal Sponsor, may approve in writing an amount greater than the appraised amount for crediting purposes.

b. Eminent Domain Procedure. For real property interests acquired by eminent domain proceedings instituted after the effective date of this Agreement, the Non-Federal Sponsor shall notify the Government in writing of its intent to institute such proceedings and submit the appraisals of the specific real property interests to be acquired for review and approval by the Government. If the Government provides written approval of the appraisals, the Non-Federal Sponsor shall use the amount set forth in such appraisals as the estimate of just compensation for the purpose of instituting the eminent domain proceeding. If the Government provides written disapproval of the appraisals, the Government and the Non-Federal Sponsor shall consult to promptly resolve the issues that are identified in the Government's written disapproval. In the event the issues cannot be resolved, the Non-Federal Sponsor may use the amount set forth in its appraisal as the estimate of just compensation for purpose of instituting the eminent domain proceeding. The fair market value for crediting purposes shall be either the amount of the court award for the real property interests taken or the amount of any stipulated settlement or portion thereof that the Government approves in writing.

c. Waiver of Appraisal. Except as required by paragraph C.1.b. of this Article, the Government may waive the requirement for an appraisal pursuant to this paragraph if, in accordance with 49 C.F.R. Section 24.102(c)(2):

(1) the owner is donating the real property interest to the Non-Federal Sponsor and releases the Non-Federal Sponsor in writing from its obligation to appraise the real property interest, and the Non-Federal Sponsor submits to the Government a copy of the owner's written release; or

(2) the Non-Federal Sponsor determines that an appraisal is unnecessary because the valuation problem is uncomplicated and the anticipated value of the real property interest proposed for acquisition is estimated at \$25,000 or less, based on a review of available data. When the Non-Federal Sponsor determines that an appraisal is unnecessary, the Non-Federal Sponsor shall prepare the written waiver valuation required by 49 C.F.R. Section 24.102(c)(2) and submit a copy thereof to the Government for approval. When the anticipated value of the real property interest exceeds \$10,000, the Non-Federal Sponsor must offer the owner the option of having the Non-Federal Sponsor appraise the real property interest.

d. Incidental Costs. The Government shall include in construction costs and credit towards the Non-Federal Sponsor's share of such costs, the incidental costs the Non-Federal Sponsor incurred in acquiring any real property interests required pursuant to Article III for the Project within a five-year period preceding the effective date of this Agreement, or at any time after the effective date of this Agreement, that are documented to the satisfaction of the Government. Such incidental costs shall include closing and title costs, appraisal costs, survey costs, attorney's fees, plat maps, mapping costs, actual amounts expended for payment of any relocation assistance benefits provided in accordance with Article III.D., and other payments by the Non-Federal Sponsor for items that are generally recognized as compensable, and required to be paid, by applicable state law due to the acquisition of a real property interest pursuant to Article III.

2. Relocations. The Government shall include in construction costs and credit towards the Non-Federal Sponsor's share of such costs, the value of any relocations performed by the Non-Federal Sponsor that are directly related to construction, operation, and maintenance of the Project.

a. For a relocation other than a highway, the value shall be only that portion of relocation costs that the Government determines is necessary to provide a functionally equivalent facility, reduced by depreciation, as applicable, and by the salvage value of any removed items.

b. For a relocation of a highway, which is any highway, roadway, or street, including any bridge thereof, that is owned by a public entity, the value shall be only that portion of relocation costs that would be necessary to accomplish the relocation in accordance with the design standard that the **[State of _____ or Commonwealth of _____]** would apply under similar conditions of geography and traffic load, reduced by the salvage value of any removed items.

c. Relocation costs include actual costs of performing the relocation; planning, engineering, and design costs; supervision and administration costs; and documented incidental costs associated with performance of the relocation, as determined by the Government. Relocation costs do not include any costs associated with betterments, as determined by the Government, nor any additional cost of using new material when suitable used material is available.

3. In-Kind Contributions. The Government shall include in construction costs and credit towards the Non-Federal Sponsor's share of such costs, the value of in-kind contributions that are integral to the Project.

a. The value shall be equivalent to the costs, documented to the satisfaction of the Government, that the Non-Federal Sponsor incurred to provide the in-kind contributions. Such costs shall include, but not necessarily be limited to, actual costs of constructing the in-kind contributions; engineering and design costs; supervision and administration costs; and documented incidental costs associated with providing the in-kind contributions, but shall not include any costs associated with betterments, as determined by the Government. Appropriate documentation includes invoices and certification of specific payments to contractors, suppliers, and the Non-Federal Sponsor's employees.

b. No credit shall be afforded for interest charges, or any adjustment to reflect changes in price levels between the time the in-kind contributions are completed and credit is afforded; for the value of in-kind contributions obtained at no cost to the Non-Federal Sponsor; for any in-kind contributions performed prior to the effective date of this Agreement unless covered by an In-Kind Memorandum of Understanding between the Government and Non-Federal Sponsor; or for costs that exceed the Government's estimate of the cost for such in-kind contributions if they had been provided by the Government.

4. Compliance with Federal Labor Laws. Any credit afforded under the terms of this Agreement is subject to satisfactory compliance with applicable Federal labor laws covering non-Federal construction, including, but not limited to, 40 U.S.C. 3141-3148 and 40 U.S.C. 3701-3708 (labor standards originally enacted as the Davis-Bacon Act, the Contract Work Hours and Safety Standards Act, and the Copeland Anti-Kickback Act), and credit may be withheld, in whole or in part, as a result of the Non-Federal Sponsor's failure to comply with its obligations under these laws.

D. Notwithstanding any other provision of this Agreement, the Non-Federal Sponsor shall not be entitled to credit for real property interests and relocations that exceed 35 percent of construction costs or real property interests that were previously provided as an item of local cooperation for another Federal project.

ARTICLE VI – PAYMENT OF FUNDS

A. As of the effective date of this Agreement, construction costs, excluding cost shared monitoring and adaptive management, are projected to be \$_____, with the Government's share of such costs projected to be \$_____ and the Non-Federal Sponsor's share of such costs projected to be \$_____, which includes creditable real property interests and relocations projected to be \$_____, creditable in-kind contributions projected to be \$_____, and the amount of funds required to meet its 35 percent cost share projected to be \$_____. Construction costs for cost shared monitoring and adaptive management are projected to be \$_____, with the Government's share of such costs projected to be \$_____ and the Non-Federal Sponsor's share of such

costs projected to be \$ _____. These amounts are estimates only that are subject to adjustment by the Government and are not to be construed as the total financial responsibilities of the Government and the Non-Federal Sponsor.

B. The Government shall provide the Non-Federal Sponsor with quarterly reports setting forth the estimated construction costs and the Government's and Non-Federal Sponsor's estimated shares of such costs; costs incurred by the Government, using both Federal and Non-Federal Sponsor funds, to date; the amount of funds provided by the Non-Federal Sponsor to date; the estimated amount of any creditable real property interests and relocations; the estimated amount of any creditable in-kind contributions; and the estimated amount of funds required from the Non-Federal Sponsor during the upcoming fiscal year.

C. The Non-Federal Sponsor shall provide the funds required to meet its share of construction costs by delivering a check payable to "FAO, USAED, **[INSERT DISTRICT AND EROC CODE, e.g., New Orleans (B2)]**" to the District Commander, or verifying to the satisfaction of the Government that the Non-Federal Sponsor has deposited such required funds in an escrow or other account acceptable to the Government, with interest accruing to the Non-Federal Sponsor, or by providing an Electronic Funds Transfer of such required funds in accordance with procedures established by the Government.

D. The Government shall draw from the funds provided by the Non-Federal Sponsor to cover the non-Federal share of construction costs as those costs are incurred. If the Government determines at any time that additional funds are needed from the Non-Federal Sponsor to cover the Non-Federal Sponsor's required share of such construction costs, the Government shall provide the Non-Federal Sponsor with written notice of the amount of additional funds required. Within 60 calendar days from receipt of such notice, the Non-Federal Sponsor shall provide the Government with the full amount of such additional required funds.

E. Upon completion of construction, except for cost shared monitoring and adaptive management, and resolution of all relevant claims and appeals and eminent domain proceedings, the Government shall conduct a final accounting and furnish the Non-Federal Sponsor with the written results of such final accounting. The Government shall conduct another final accounting after completion of cost shared monitoring and adaptive management and furnish the Non-Federal Sponsor with the written results of such final accounting. Should either final accounting determine that additional funds are required from the Non-Federal Sponsor, the Non-Federal Sponsor, within 60 calendar days of receipt of written notice from the Government, shall provide the Government with the full amount of such additional required funds. A final accounting does not limit the Non-Federal Sponsor's responsibility to pay its share of construction costs, including contract claims or any other liability that may become known after the final accounting. If the final accounting after cost shared monitoring and adaptive management determines that funds provided by the Non-Federal Sponsor exceed the amount of funds required to meet its share of construction costs, the Government shall refund such excess amount, subject to the availability of funds for the refund. In addition, if that final accounting determines that the Non-Federal Sponsor's credit for real property interests and relocations combined with credit for in-kind contributions exceed its share of construction costs for the Project, the Government,

subject to the availability of funds for the reimbursement, shall enter into a separate agreement to reimburse the difference to the Non-Federal Sponsor.

F. If there are real property interests or relocations, provided on behalf of the Non-Federal Sponsor, the Government shall provide written notice to the Non-Federal Sponsor of the amount of funds required to cover such costs. No later than 30 calendar days of receipt of such written notice, the Non-Federal Sponsor shall make the full amount of such required funds available to the Government by delivering a check payable to “FAO, USAED, **[INSERT DISTRICT AND EROC CODE, e.g., New Orleans (B2)]**” to the District Commander, or by providing an Electronic Funds Transfer of such funds in accordance with procedures established by the Government. If at any time the Government determines that additional funds are required to cover such costs, the Non-Federal Sponsor shall provide those funds within 30 calendar days from receipt of written notice from the Government.

ARTICLE VII - TERMINATION OR SUSPENSION

A. If at any time the Non-Federal Sponsor fails to fulfill its obligations under this Agreement, the Government may suspend or terminate construction of the Project unless the Assistant Secretary of the Army (Civil Works) determines that continuation of such work is in the interest of the United States or is necessary in order to satisfy agreements with other non-Federal interests.

B. If the Government determines at any time that the Federal funds made available for construction of the Project are not sufficient to complete such work, the Government shall so notify the Non-Federal Sponsor in writing, and upon exhaustion of such funds, the Government shall suspend construction until there are sufficient funds appropriated by the Congress and funds provided by the Non-Federal Sponsor to allow construction to resume. In addition, the Government may suspend construction if the Maximum Cost Limit is exceeded.

C. If hazardous substances regulated under CERCLA are found to exist in, on, or under any required real property interests, the parties shall follow the procedures set forth in Article IV.

D. In the event of termination, the parties shall conclude their activities relating to construction of the Project. To provide for this eventuality, the Government may reserve a percentage of available funds as a contingency to pay the costs of termination, including any costs of resolution of real property acquisition, resolution of contract claims, and resolution of contract modifications.

E. Any suspension or termination shall not relieve the parties of liability for any obligation incurred. Any delinquent payment owed by the Non-Federal Sponsor pursuant to this Agreement shall be charged interest at a rate, to be determined by the Secretary of the Treasury, equal to 150 per centum of the average bond equivalent rate of the 13 week Treasury bills auctioned immediately prior to the date on which such payment became delinquent, or auctioned immediately prior to the beginning of each additional 3 month period if the period of delinquency exceeds 3 months.

ARTICLE VIII - HOLD AND SAVE

The Non-Federal Sponsor shall hold and save the Government free from all damages arising from design, construction, operation, maintenance, repair, rehabilitation, and replacement of the Project, except for damages due to the fault or negligence of the Government or its contractors.

ARTICLE IX - DISPUTE RESOLUTION

As a condition precedent to a party bringing any suit for breach of this Agreement, that party must first notify the other party in writing of the nature of the purported breach and seek in good faith to resolve the dispute through negotiation. If the parties cannot resolve the dispute through negotiation, they may agree to a mutually acceptable method of non-binding alternative dispute resolution with a qualified third party acceptable to the parties. Each party shall pay an equal share of any costs for the services provided by such a third party as such costs are incurred. The existence of a dispute shall not excuse the parties from performance pursuant to this Agreement.

ARTICLE X - MAINTENANCE OF RECORDS AND AUDITS

A. The parties shall develop procedures for the maintenance by the Non-Federal Sponsor of books, records, documents, or other evidence pertaining to costs and expenses for a minimum of three years after the final accounting. The Non-Federal Sponsor shall assure that such materials are reasonably available for examination, audit, or reproduction by the Government.

B. The Government may conduct, or arrange for the conduct of, audits of the Project. Government audits shall be conducted in accordance with applicable Government cost principles and regulations. The Government's costs of audits shall not be included in construction costs, but shall be included in calculating the Maximum Cost Limit.

C. To the extent permitted under applicable Federal laws and regulations, the Government shall allow the Non-Federal Sponsor to inspect books, records, documents, or other evidence pertaining to costs and expenses maintained by the Government, or at the request of the Non-Federal Sponsor, provide to the Non-Federal Sponsor or independent auditors any such information necessary to enable an audit of the Non-Federal Sponsor's activities under this Agreement. The costs of non-Federal audits shall be paid solely by the Non-Federal Sponsor without reimbursement or credit by the Government.

ARTICLE XI - RELATIONSHIP OF PARTIES

In the exercise of their respective rights and obligations under this Agreement, the Government and the Non-Federal Sponsor each act in an independent capacity, and neither is to

be considered the officer, agent, or employee of the other. Neither party shall provide, without the consent of the other party, any contractor with a release that waives or purports to waive any rights a party may have to seek relief or redress against that contractor.

ARTICLE XII - NOTICES

A. Any notice, request, demand, or other communication required or permitted to be given under this Agreement shall be deemed to have been duly given if in writing and delivered personally or mailed by registered or certified mail, with return receipt, as follows:

If to the Non-Federal Sponsor:

[TITLE]

[ADDRESS]

If to the Government:

District Commander

_____ District

[ADDRESS]

B. A party may change the recipient or address to which such communications are to be directed by giving written notice to the other party in the manner provided in this Article.

ARTICLE XIII - CONFIDENTIALITY

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 XIV - THIRD PARTY RIGHTS, BENEFITS, OR LIABILITIES

Nothing in this Agreement is intended, nor may be construed, to create any rights, confer any benefits, or relieve any liability, of any kind whatsoever in any third person not a party to this Agreement.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement, which shall become effective upon the date it is signed by the **[INSERT TITLE OF THE GOVERNMENT REPRESENTATIVE]**.

DEPARTMENT OF THE ARMY

[FULL NAME OF NON-FEDERAL SPONSOR]

BY: _____
 [TYPED NAME]
 [FULL TITLE]

BY: _____
 [TYPED NAME]
 [FULL TITLE]

DATE: _____

DATE: _____

Attachment

Option 1: Sponsor is a Non-Profit Entity that has the consent of the Local Government. In accordance with ASA(CW) Memorandum, dated April 5, 2012, Subject: Implementation Guidance for Section 2003(b) of the Water Resources Development Act of 2007 – Definition of Non-Federal Interest, confirm eligibility of the non-profit entity to serve as the Non-Federal Sponsor and whether a legally constituted public body must also be a Non-Federal Sponsor on the Agreement. This memorandum can be found on the Corps’ “Project Partnership Agreements” website under the “Guidance” tab.

Use the Certificate of Authority for a Non-Profit Entity as provided on the Corps’ PPA website under the “Forms” tab.

Delete the “and” at the end of the third WHEREAS clause and insert the following WHEREAS clauses after the third WHEREAS clause in the PPA:

“WHEREAS, the **[FULL NAME OF NON-PROFIT ENTITY]** is an organization that is incorporated under the applicable laws of the **[Insert State of [Name of State] or Commonwealth of [Name of Commonwealth]]** as a non-profit organization, exempt from paying Federal income taxes under Section 501 of the Internal Revenue Code (26 U.S.C. 501);

WHEREAS, by letter dated **[Month Day, Year]**, the **[FULL NAME OF AFFECTED LOCAL GOVERNMENT]**, the affected local government has consented to the **[FULL NAME OF NON-PROFIT ENTITY]**, serving as a Non-Federal Sponsor for the Project; and”

Attachment

Option 2: Not An Obligation of Future Appropriations. Section 221(a) of the Flood Control Act of 1970, as amended (42 U.S.C. 1962d-5b), provides that an agreement may reflect that it does not obligate future appropriations when doing so is inconsistent with constitutional or statutory limitations of a State or political subdivision thereof. However, Section 221(a) does NOT provide that the Non-Federal Sponsor's performance and payments are subject to appropriations of funds. The Government retains the right to exercise any legal rights it has to protect the Government's interests. If applicable and requested by the Non-Federal Sponsor, insert into the PPA as the last Article the following:

“ARTICLE XV - OBLIGATIONS OF FUTURE APPROPRIATIONS

The Non-Federal Sponsor intends to fulfill fully its obligations under this Agreement. Nothing herein shall constitute, nor be deemed to constitute, an obligation of future appropriations by the **[Insert name of the legislative body that makes the appropriations, e.g., legislature of the State of New York or the New York City Council]**, where creating such an obligation would be inconsistent with **[Insert the specific citation to the constitutional or statutory limitation on committing future appropriations]**. If the Non-Federal Sponsor is unable to, or does not, fulfill its obligations under this Agreement, the Government may exercise any legal rights it has to protect the Government's interests.”

Attachment

Option 3: Multiple Non-Federal Sponsors. It is strongly preferred that there is one party only as the Non-Federal Sponsor for the PPA. Nonetheless, it is permissible to have more than one Non-Federal Sponsor if the Non-Federal Sponsors are jointly and severally responsible for all non-Federal obligations and responsibilities under the PPA. (Any proposal to allow for a division of responsibilities will require Headquarters approval and should be coordinated with the full vertical team in advance of submission of the draft PPA for review and approval.) The PPA should be modified to use the term “Non-Federal Sponsors” throughout along with the necessary modifications to change, as appropriate, verbs and pronouns from singular to plural. In addition, insert into the PPA as the last Article the following:

“ARTICLE XV – JOINT AND SEVERAL RESPONSIBILITY OF THE NON-FEDERAL SPONSORS

The obligations and responsibilities of the Non-Federal Sponsors shall be joint and several, such that each Non-Federal Sponsor shall be liable for the whole performance of the obligations and responsibilities of the Non-Federal Sponsors under the terms and provisions of this Agreement. The Government may demand the whole performance of said obligations and responsibilities from any of the entities designated herein as one of the Non-Federal Sponsors.”

Attachment

Option 4: Accelerated Funds, following Committee notification. Following completion of the Committee notification process, the PPA may include the following changes:

1. Delete the “and” at the end of the third WHEREAS clause and insert the following WHEREAS clause after the third WHEREAS clause in the PPA:

“WHEREAS, the Non-Federal Sponsor proposes to accelerate its provision of funds (hereinafter “accelerated funds”) for the immediate use by the Government for the Project; and”

2. Add a new paragraph K. to Article I as follows:

“K. The term “accelerated funds” means non-Federal funds out of proportion with Federal funds but within the ultimate non-Federal cash contribution.”

3. Add a new paragraph K. to Article II as follows.

“K. In addition to providing the funds required by paragraph B. of this Article, the Non-Federal Sponsor may provide accelerated funds for immediate use of the Government. The Non-Federal Sponsor understands that use of accelerated funds shall not constitute any commitment by the Government to budget, or the Congress to appropriate, funds for this Project or to match any accelerated funds provided by the Non-Federal Sponsor; that any accelerated funds will be credited toward the Non-Federal Sponsor’s cost share only to the extent matching Federal funds are provided; and that the Non-Federal Sponsor is not entitled to any repayment for any accelerated funds obligated by the Government even if the Project ultimately is not completed.”

Attachment

Option 5: Contributed Funds, following Committee notification. The cost of work funded with Contributed Funds is included in construction costs subject to cost sharing. Contributed Funds are applied toward the Federal cost share.

Guidance on Contributed Funds is provided in CECW-P Memorandum, dated February 11, 2015, Subject: Implementation Guidance for Sections 1015 and 1023 of the Water Resources Reform and Development Act of 2014 (WRRDA 2014), Contributed Funds.

This memorandum can be found on the Corps' "Project Partnership Agreements" website under the "Guidance" tab.

Following completion of the Committee notification process, the PPA may include the following changes:

1. Delete the "and" at the end of the third WHEREAS clause and insert the following WHEREAS clause after the third WHEREAS clause in the PPA:

"WHEREAS, in addition to providing the required non-Federal cost share, the Non-Federal Sponsor considers it to be in its own interest to contribute funds voluntarily (hereinafter the "Contributed Funds") to be used by the Government for the Project, as authorized pursuant to 33 U.S.C. 701h; and"

2. Add as the third sentence in Article I.B. the following:

"The term also includes the cost of work funded with Contributed Funds."

3. Add a new paragraph K. to Article I as follows:

"K. The term "Contributed Funds" means those funds above any statutorily required non-Federal cost share that are provided voluntarily by the Non-Federal Sponsor for funding the Project, with no credit or repayment authorized for such funds."

4. Add a new paragraph K. to Article II as follows:

"K. In addition to providing the funds required pursuant to paragraph B. of this Article, the Non-Federal Sponsor will be providing Contributed Funds, currently estimated at \$_____, for the Project. The Non-Federal Sponsor shall make the full amount of such funds available to the Government by delivering a check payable to "FAO, USAED, [**Insert District and EROC code, e.g., New Orleans (B2)**]" to the District Commander, or by providing an Electronic Funds Transfer of such funds in accordance with procedures established by the Government. No credit or repayment is authorized, nor shall be provided, for any Contributed Funds provided by the Non-Federal Sponsor that are obligated by the Government. In addition, acceptance and use of Contributed Funds shall not constitute, represent, or imply any commitment to budget or appropriate funds for the Project in the future."

Attachment

Option 6: Additional Work. If additional work for the Project is requested by the Non-Federal Sponsor and approved by the Division Commander, make the following changes:

1. Delete the “and” at the end of the third WHEREAS clause and insert the following WHEREAS clause after the third WHEREAS clause in the PPA:

“WHEREAS, 33 U.S.C. 701h authorizes the Government to undertake, at the Non-Federal Sponsor’s full expense, additional work while the Government is carrying out the Project; and”

2. Replace the last sentence in Article I.B. with the following:

“The term does not include any costs for operation, maintenance, repair, rehabilitation, or replacement; dispute resolution; participation in the Project Coordination Team; audits; or additional work; or the Non-Federal Sponsor’s cost of negotiating this Agreement.”

3. Add a new paragraph K. to Article I as follows:

“K. The term “additional work” means items of work related to, but not cost shared as a part of, the Project that the Government will undertake on the Non-Federal Sponsor’s behalf while the Government is carrying out the Project, with the Non-Federal Sponsor responsible for all costs and any liabilities associated with such work.”

4. Add a new paragraph K. to Article II as follows:

“K. The Non-Federal Sponsor may request in writing that the Government perform additional work on behalf of the Non-Federal Sponsor. Each request shall be subject to review and written approval by the Division Commander. If the Government agrees to such request, the Non-Federal Sponsor, in accordance with Article VI.F., must provide funds sufficient to cover the costs of such work in advance of the Government performing the work.”

5. Replace the first sentence in Article VI.F. with the following:

“If there are real property interests, relocations, or additional work provided on behalf of the Non-Federal Sponsor, the Government shall provide written notice to the Non-Federal Sponsor of the amount of funds required to cover such costs.”

Attachment

Option 7: Projects with Recreation Features. For Projects that also include recreation features, make the following changes:

1. Replace Article I.A. in its entirety with the following:

“A. The term “Project” means ecosystem restoration features consisting **[DESCRIBE ECOSYSTEM RESTORATION FEATURES]** and recreation features consisting of **[DESCRIBE RECREATION FEATURES]**, as generally described in the **[FULL TITLE OF DECISION DOCUMENT]**, dated _____, _____ and approved by the **[TITLE OF APPROVING OFFICIAL, e.g., Chief of Engineers, Division Commander for Mississippi Valley Division, etc.]** on **[Month Day, Year]** (hereinafter the “Decision Document”).”

2. Replace Article II.B. in its entirety with the following:

“B. The Non-Federal Sponsor shall contribute 35 percent of construction costs allocated by the Government to ecosystem restoration; and 50 percent of construction costs allocated by the Government to recreation, as follows:

1. In accordance with Article III, the Non-Federal Sponsor shall provide the real property interests and relocations required for construction, operation, and maintenance of the Project.

2. In providing in-kind contributions, if any, the Non-Federal Sponsor shall obtain all applicable licenses and permits necessary for such work. As functional portions of the work are completed, the Non-Federal Sponsor shall begin operation and maintenance of such work. Upon completion of the work, the Non-Federal Sponsor shall so notify the Government and provide the Government with a copy of as-built drawings for the work.

3. After considering the estimated amount of credit based on costs allocated by project purpose that will be afforded to the Non-Federal Sponsor pursuant to paragraphs B.1. and B.2., above, the Government shall determine the estimated amount of funds required from the Non-Federal Sponsor to meet its 35 percent cost share for ecosystem restoration and its 50 percent cost share for recreation for the then-current fiscal year. No later than 30 calendar days after receipt of notification from the Government, the Non-Federal Sponsor shall provide the full amount of such required funds to the Government in accordance with Article VI.

4. No later than August 1st prior to each subsequent fiscal year, the Government shall provide the Non-Federal Sponsor with a written estimate of the full amount of funds required from the Non-Federal Sponsor during that fiscal year to meet its cost share based on costs allocated by project purpose. Not later than September 1st prior to that fiscal year, the Non-Federal Sponsor shall provide the full amount of such required funds to the Government in accordance with Article VI.”

3. Replace Article VI.A. in its entirety with the following:

Attachment

“A. As of the effective date of this Agreement, total construction costs are projected to be \$ _____, with the Government’s share of such costs projected to be \$ _____ and the Non-Federal Sponsor’s share of such costs projected to be \$ _____. Construction costs allocated to ecosystem restoration, excluding cost shared monitoring and adaptive management, are projected to be \$ _____, with the Government’s share of such costs projected to be \$ _____ and the Non-Federal Sponsor’s share of such costs projected to be \$ _____, which includes creditable real property interests and relocations projected to be \$ _____, creditable in-kind contributions projected to be \$ _____, and the amount of funds required to meet its 35 percent cost share projected to be \$ _____. Construction costs for monitoring and adaptive management are projected to be \$ _____, with the Government’s share of such costs projected to be \$ _____ and the Non-Federal Sponsor’s share of such costs projected to be \$ _____. Construction costs allocated to recreation are projected to be \$ _____, with the Government’s share of such costs projected to be \$ _____ and the Non-Federal Sponsor’s share of such costs projected to be \$ _____. These amounts are estimates only that are subject to adjustment by the Government and are not to be construed as the total financial responsibilities of the Government and the Non-Federal Sponsor.”

Attachment

Option 8: Projects in American Samoa, Guam, the Northern Mariana Islands, the Virgin Islands, or Puerto Rico, or involving an Indian Tribe (as defined in section 102 of the Federal Recognized Indian Tribe List Act of 1994, 25 U.S.C. 5130). In accordance with Section 1156 of the Water Resources Development Act of 1986, Public Law 99-662, as amended (33 U.S.C. 2310), up to \$455,000 in non-Federal cost-sharing is waived. The following changes to the PPA should be made:

1. Replace Article II.B. with the following:

“B. The Non-Federal Sponsor shall contribute 35 percent of construction costs, subject to a reduction of up to \$455,000, as follows:”

2. Replace Article II.B.3. in its entirety with the following:

“3. After considering the estimated amount of credit that will be afforded to the Non-Federal Sponsor pursuant to paragraphs B.1. and B.2., above, the Government shall determine the estimated amount of funds required from the Non-Federal Sponsor to meet its 35 percent cost share for the then-current fiscal year. In accordance with Section 1156 of the Water Resources Development Act of 1986, as amended (33 U.S.C. 2310), the Government shall reduce the amount of funds required from the Non-Federal Sponsor by up to \$455,000 and notify the Non-Federal Sponsor of funds required for the then-current fiscal year. No later than 30 calendar days after receipt of notification from the Government, the Non-Federal Sponsor shall provide the full amount of such required funds to the Government in accordance with Article VI.”



**US Army Corps
of Engineers®**

OPERATION AND MAINTENANCE MANUAL

Westmoreland Park Section 206 Ecosystem Restoration



City of Portland Multnomah County, Oregon

March 2017 (revised)

**WESTMORELAND PARK
SECTION 206 ECOSYSTEM RESTORATION
OPERATIONS AND MAINTENANCE MANUAL**

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Section 1. General

1.1 References

This manual applies to the federally sponsored Section 206 project and was developed in accordance with the following references below:

ER 1110-2-401 Operation, Maintenance, Repair, Replacement, and Rehabilitation Manual for Projects and Separable Elements Managed by Project Sponsors

ER 1130-2-500 Partners and Support (Work Management Policies)

ER 1110-2-1156 Safety of Dams – Policy and Procedures

U.S. Army Corps of Engineers, Portland District. June 2012. Westmoreland Phase II Plans and Specifications Design Documentation Report.

U.S. Army Corps of Engineers, Portland District. March 2011. Westmoreland Park Section 206 Restoration Project Ecosystem Restoration Report with Environmental Assessment.

1.2 General Project Description

The project improves 9 acres of fish and wildlife habitat in Crystal Springs Creek, in and around Westmoreland Park in Portland, Oregon. Specifically, the project improves juvenile fish passage from the mouth of Crystal Springs Creek to 1 mile upstream, enhances adult salmon holding, improves aquatic habitat for salmon rearing and refuge, provides a riparian corridor and diverse wetland habitat for wildlife species, and improves water quality conditions.

Specific improvements include:

- 1) Replacing small culverts with larger fish passage culverts at Umatilla, Tenino, and Tacoma Streets, and removing a private carport culvert.
- 2) Remove concrete lining along creek and restore a riparian corridor on both banks, including streambank stabilization measures.
- 3) Remove pond area and place fill to create a mix of emergent and scrub-shrub wetlands.
- 4) Remove fine sediment from channel, excavate pools, and add spawning gravel riffles.
- 5) Install Large Woody Debris (LWD) in channel and wetlands.
- 6) Install an irrigation system.
- 7) Install boardwalks and viewing platforms.
- 8) Install pedestrian paths and picnic tables.
- 9) Install lighting and electrical upgrades.

Section 2. Authorization

This project was completed under the authority of Section 206 of the Water Resources Development Act of 1996 (Public Law 104-303), as amended. Section 206 authorizes the Secretary of the Army to construct aquatic ecosystem restoration and protection projects. The City of Portland, by letters dated 4 November 1999 and 8 February 2000, requested Federal assistance in restoring fish and wildlife habitat within Westmoreland Park, Portland, Oregon. The Project Partnership Agreement between the Department of the Army and the City of Portland, Oregon for the design and construction of the Westmoreland Park Section 206 Ecosystem Restoration Project is dated April 1st, 2011.

Section 3. Location

The Project is located in and around Westmoreland Park in Portland, Oregon along approximately 3,800 feet of Crystal Springs Creek. The project restores Crystal Springs Creek and adjacent park land between SE Bybee Street and SE Lambert Street from north to south and SE 22nd Avenue and McLoughlin Boulevard from west to east. Additionally, culverts were replaced at Umatilla, Tenino, and Tacoma Streets and a private culvert was removed south of Tenino on 21st. See Figures 1, 2, and 3.



Figure 1. Westmoreland Restoration Area Map

Westmoreland Park - Section 206 Restoration Project
Westmoreland Park Improvements

BYBEE
KNAPP
21ST
22ND
23RD
MCLOUGHLIN
LEXINGTON

Legend

- Phase II - Asphalt Pathway
- Phase II - Boardwalk
- Phase II - Wood Fiber Pathway
- Crystal Springs Creek

0 0.025 0.05 0.1 Miles
NORTH

Portland
Ross Island
Taylor Ferry Rd
Lewis & Clark College
SE Milwauite Ave
SE Hawthorne Blvd
SE Powell Blvd
Reed College
E Burnside St
Burnside St
405
84

Figure 2. Westmoreland Park Project Features

Westmoreland Park - Section 206 Restoration Project

Culvert Improvements

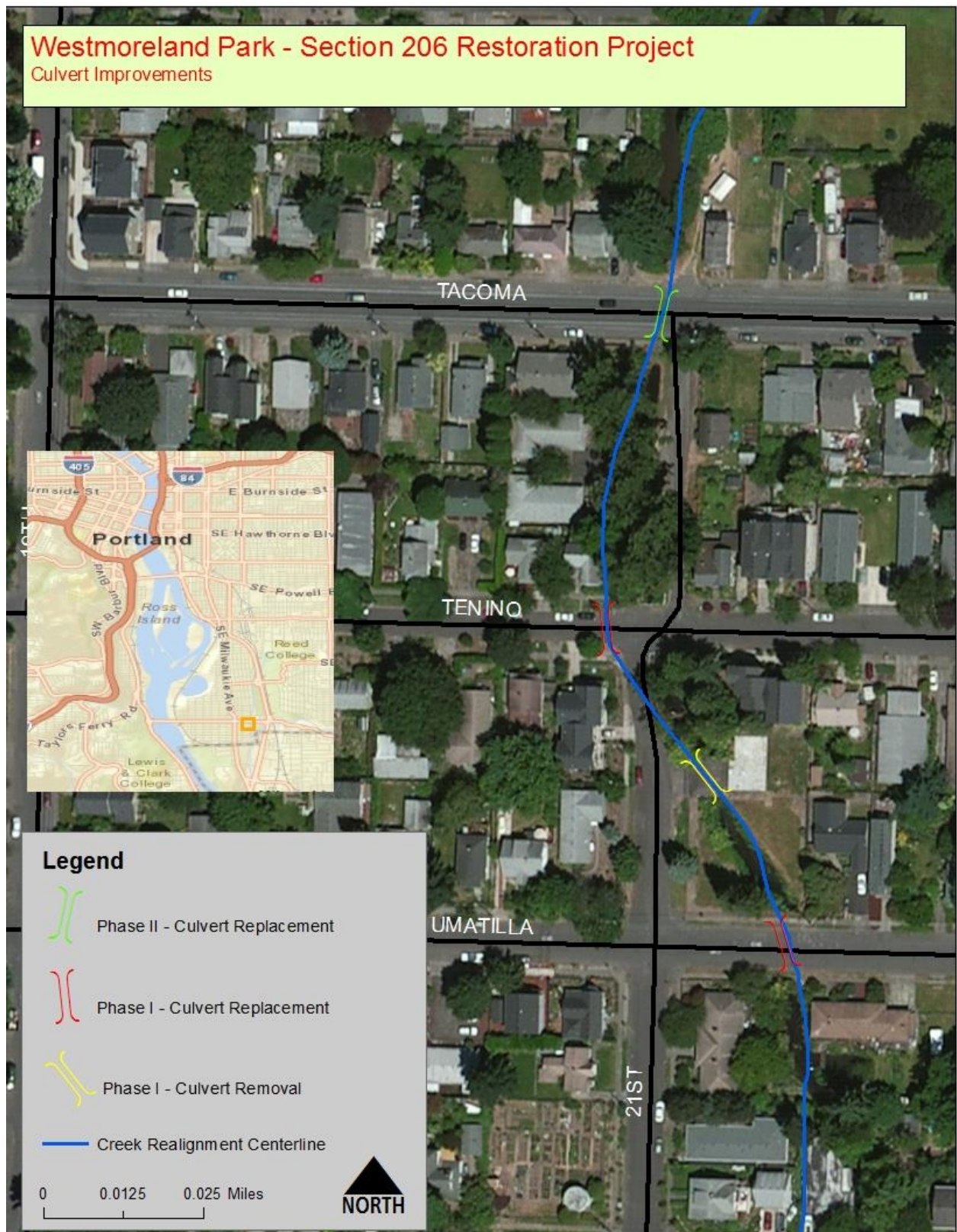


Figure 3. Westmoreland Park Culvert Improvements

Section 4. Pertinent Information

Historically, the Crystal Springs Creek corridor and Westmoreland Park were a complex system of braided channels and wetlands that may have periodically been a flood overflow channel of the Willamette River.

The wetlands were drained and the creek was channelized for farming and residential development purposes in the late 1800s. The Union Pacific Railroad (UPRR) was also constructed through the corridor at approximately the same time. Crystal Springs Lake and Reed Lake were artificially created through damming the creek to provide water supply and also for aesthetic reasons. As the City of Portland developed through the first half of the 20th century, further modifications were made to the creek alignment and the watershed became almost completely urbanized. As a result of adjacent development and modifications to the stream channel, Crystal Springs Creek is confined to a uniform channel with minimal aquatic habitat. The significant loss of floodplain and aquatic habitat throughout the Johnson Creek basin is a primary factor of decline for salmon and native wildlife species in the basin. The remaining poor quality habitat cannot sustain these threatened species in the long-term without habitat restoration.

Crystal Springs Creek and Westmoreland Park can provide critical rearing and refuge habitat for juvenile salmon produced within the creek and from Johnson Creek and the Lower Willamette River. Furthermore, habitat restoration along Crystal Springs Creek will significantly improve water quality and benefit Johnson Creek with cool water flows during summer and fall.

Section 5. Construction History

The project was constructed in 2 phases over 5 years. Phase 1 began in 2011. Phase 2 was completed in 2015. Below is a summary of the awarded contracts.

Table 1. Summary of Project Contracts

| Contract | Start Date ¹ | Completion Date | Approximate Cost | Personnel (Contractor, Contracting Officer, Resident Engineer) |
|--|-------------------------|-----------------|------------------|--|
| Phase I W9127N-11-C-0018 Culvert Replacements at SE Tenino St. and SE Umatilla St. Driveway culvert removal at 8220 SE 21 st Ave. | August 2011 | October 2012 | \$1.46M | Contractor: Hamilton Construction CO: Mark F Heiller RE: John Schwartzbeck / John Easton |
| Phase II W9127N-12-C-0019 Culvert Replacement at SE Tacoma St. Westmoreland Park Improvements. | September 2012 | March 2015 | \$3.49M | Contractor: Hamilton Construction CO: Mark F Heiller RE: Albert Wright / Violet Albright |

¹ Indicates Contract award

Section 6. Project Performance

Restoration in Westmoreland Park and along Crystal Springs Creek have a high likelihood of success for the following reasons:

- 1) Restoration measures specifically address high water temperature which is one of the primary limiting factors in the system
- 2) Because the creek is spring-fed, it has a relatively stable flow regime and annual flow variations are not likely to damage restoration measures;
- 3) This project will significantly supplement the larger watershed restoration effort in Crystal Springs Creek to specifically implement the restoration of unhindered fish passage, adding habitat complexity, restoring riparian areas, and reducing water temperatures;
- 4) The project is designed to be self-sustaining after vegetation is established, but will require maintenance efforts since it is in a developed park;
- 5) The City of Portland owns or has easements on the lands required for the project;
- 6) The City of Portland will provide all maintenance necessary to sustain the project over the long-term;

Protection of project benefits is a primary objective of Operation and Maintenance, Repair, Replacement and Rehabilitation (OMRR&R).

Section 7. Project Partnership Agreement

The Department of the Army, represented by the U.S. Army Engineer for the Portland District and the City of Portland represented by the Bureau of Environmental Services and Portland Parks and Recreation entered into a Project Partnership Agreement (PPA) for this project on April 1, 2011 as required by Public Law 104-303. A copy of the duly executed PPA is included as Appendix H of this manual.

In this agreement, and for so long as the project remains authorized, the City is expected to operate, maintain, repair, replace and rehabilitate the entire project or functional portion of the project in a manner compatible with the project's authorized purposes and in accordance with applicable Federal and State laws, and specific directions prescribed by this Operation, Maintenance, Repair, Rehabilitation, and Replacement Manual (OMRR&R) and any other subsequent amendments thereto. Additionally, the City agrees to allow USACE access to the project area for purposes of inspection and if necessary for the purpose of completing, operating, maintaining repairing, replacing or rehabilitating the project.

Section 8. Operation

Operation is required by the City of Portland so long as the project remains authorized (Reference Appendix H, Article VIII.A).

Irrigation and electrical lighting are the only operational components of the Westmoreland Park improvements. The other features are intentionally passive. Irrigation and lighting shop drawings are located in Appendix G of this manual.

The operation of irrigation is crucial for the plants to become established. Irrigation is expected to be required the first 3-5 years after construction. The specifics of operating the irrigation system will be per the sponsor's adaptive management to keep the plants healthy.

Lighting is not expected to have a large effect on the project benefits. Lighting operation will be per the sponsor's requirements.

Section 9. Emergency Operations

All emergency management will comply with current Portland Fire and Rescue procedures.

Contact Information:

Portland Fire and Rescue
55 SW Ash Street,
Portland, OR 97204
Ph: 503-823-3700
Fx: 503-823-3710

Local emergency response assistance:

- Fire, police, medical: Dial 911
- Oregon Trail Chapter of the Red Cross
3131 N. Vancouver Ave.
Portland, Oregon 97227
(503) 284-1234

Section 10. Maintenance and Inspection

Periodic inspections are recurrent engineering inspections conducted, by the City, at civil works structures whose failure or partial failure could jeopardize the operational integrity of the project, endanger the lives and safety of the public or cause substantial property damage to ensure their structural stability, safety, and operational adequacy (ER 1110-2-1156). Inspections for improvements 10.1 through 10.3 should be conducted with a licensed professional engineer present. Inspections for improvements 10.4 through 10.9 do not require a professional engineer to be present. Additional inspections will occasionally be performed by USACE to assess the condition of civil works structures and overall project condition. Results will be submitted to the City.

The City of Portland, as the operating entity of the project constructed by USACE, is responsible for inspections and maintenance so long as the project remains authorized. USACE may conduct subsequent inspections and write a report on behalf of the Project Sponsor, provided appropriate procedural and financial reimbursement arrangements are made. Refer to the PPA provided in Appendix H for additional agreements made between USACE and the project sponsor. The

District Commander, in conjunction with the project sponsor, may revise inspection and maintenance requirements at any time.

Inspect the following improvements annually (unless noted otherwise) and after each flood event for damages that may reduce the stability of those improvements. Flood events are defined as any event in which the creek leaves the channel and overtops the banks at the project improvement. Inspection reports should include the date, description, inspector, and any repairs or maintenance performed.

10.1 Tenino Street Culvert (Phase 1), Umatilla Street Culvert (Phase 1), and Tacoma Street Culvert (Phase 2)

Work included replacing undersized culverts with larger concrete culverts. The open bottom culvert allows unhindered juvenile fish passage.



Figure 4. Tenino Street Culvert



Figure 5. Umatilla Street Culvert



Figure 6. Tacoma Street Culvert

Routine inspections include, but are not limited to the following:

- 1) Inspect the culvert for accumulated sediment, vegetation, and debris that would restrict full flow capacity and/or fish passage. Note that the culvert has large rocks installed underneath for fish passage and are not to be removed. Perform any and all maintenance and repair needed to maintain intent of all culvert functions.
- 2) Inspect the culvert for scour of rock protecting the footing. Replace rock with a size that will not scour under force of high flows.
- 3) Inspect for, and remove trees (or other vegetation) growing near the culverts with root systems that could potentially cause the culvert structure to move.
- 4) Inspect the slopes adjacent to the culvert structure for caving which may affect the stability, seepage, and degradation of the slope protection on both upstream and downstream slope. Repair damage back to design conditions.
- 5) Inspect all steel surfaces and welded and bolted connections for cracks and corrosion. Repair as needed.
- 6) Inspect safety rails, handrails, rubrails for structural integrity. Check for sharp edges or protrusions that could be a hazard, and remove. Inspect anchor bolts for damage and see that they are secure.
- 7) Inspect deck surfaces for excessive gaps, cracks, or projections that could create a trip hazard, and remove.
- 8) Inspect the deck or street pavement above the culverts for signs of settlement, such as depressions in the pavement.
- 9) Inspect the ends of the culvert for any damage which may have been caused by vehicular impact. Repair or replace as needed.
- 10) The expansion joints at the ends of the culvert must be checked to see that they are moving freely and are clear of all foreign material. Check for creeping of teflon pads, if present. Remove foreign material and monitor any damage caused by expansion joints not moving freely.
- 11) Concrete structures should be inspected for cracking. The size and possible determination of cracks should be noted for future comparison.

10.2 Large Woody Debris (LWD) Installation (Phase 1 and 2)

Work included installation of LWD and boulders placed between Umatilla and Tenino Streets, and LWD in Westmoreland Park.



Figure 7. Large Woody Debris – Phase 1



Figure 8. Large Woody Debris – Phase 2

Routine inspections include, but are not limited to the following:

- 1) Inspect for scour and channel degradation near LWD. Remove or trim LWD that causes erosion that will undermine nearby structures, and repair eroded area to design conditions. Some scour and erosion is acceptable as long as it does not affect nearby structures.
- 2) Inspect for signs of flooding upstream of project. If water levels consistently rise above historic averages on private property, remove LWD that is causing the water level increase.
- 3) It is not anticipated that it would be desirable to replace the LWD as it decays or is damaged due to the disturbance it would cause.

10.3 Stream Bank Stabilization (Phase 2)

Work included stream stabilization elements such as coir logs and coir fabric that are designed to be stable over the range of design flows.



Figure 9. Coir Logs

Routine inspections include, but are not limited to the following:

- 1) Inspect for damage to coir logs and stakes. The coir logs are designed to biodegrade over time. Once vegetation is established, the coir logs will no longer be necessary to prevent erosion, and therefore will not be required to be replaced. Until vegetation is established, repair or replace coir logs and stakes to prevent erosion if necessary.

10.4 Hardened Water Access (Phase 2)

Work included installation of a concrete block retaining wall that extends to the edge of Crystal Springs Creek for City access.



Figure 10. Water Access

Routine inspections include, but are not limited to the following:

- 1) Inspect the wall for scour of rock. Replace rock with a size that will not scour under force of high flows.
- 2) Inspect deck (or paved) surfaces for excessive gaps, cracks, or projections that could create a trip hazard. Remove trip hazards and repair deck (or paved) surfaces.
- 3) Concrete structures should be inspected for cracking. The size and possible determination of cracks should be noted for future comparison and necessary repairs.

10.5 Landscaping (Phase 2)

Work included planting trees, shrubs, groundcover, and seed mixes.



Figure 11. Landscaping

Routine inspections include, but are not limited to the following:

- 1) Inspect for, and remove, noxious weeds and invasive species. Non-desired vegetation must be controlled manually or with herbicides approved for use adjacent to and potentially over open water. All herbicide use must follow Portland Parks and Recreation's Integrated Pest Management Plan (IPM). Contact John Reed (503-823-1991) to establish and implement the IPM plan. This maintenance is expected to take place over the life of the project.
- 2) Inspect for, and replace, dead or dying plants. The native plants have been selected and are planted in locations appropriate to the specific species requirements; however, additional irrigation may be required for plant success depending on growing season weather requirements. 10% of the plants are expected to require replacement in the first 2 years.
- 3) Inspect for integrity of human and animal barriers to the vegetation. The fences and wire mesh screens around plants shall be repaired or replaced immediately. Removal of barriers is acceptable after plants have established (approximately 5 years).
- 4) Inspect landscaping to ensure that it does not pose a safety hazard or potential property damage hazard. Trim or remove trees and shrubs as needed to remove hazards and maintain site lines from the park and street.

10.6 Irrigation (Phase 2)

Work included installing irrigation to support the new native landscaping, as well as retrofitting the existing park irrigation system to properly irrigate the lawn areas remaining outside of the new native landscaping. Irrigation is expected to be necessary for native plant establishment the first 3 to 5 years after construction. After this time, irrigation may only be needed for park aesthetics or in unseasonably dry years in the native planting areas. The new and retrofitted irrigation system watering the lawn outside the native planting areas will be a permanent system that is used every year.

- 1) Spring Start-Up:
 - a) A qualified irrigation technician shall open the main valve(s), inspect and adjust all sprinkler heads, re-program and check battery back up in controllers, and troubleshoot the entire system. Start-up typically occurs around April 15, however dryer than normal conditions may necessitate starting the system earlier.
 - b) Verify the proper operation of each zone valve by manually activating it from the controller.
 - c) Walk through each station on the controller, checking for proper operation of the zone. Check for proper operating pressure, proper rotation and adjustment of sprinkler heads, adequate coverage, lateral line breaks, damaged heads, or anything else that would indicate any malfunction of the irrigation system. Check and clean the filters on poorly performing sprinklers.
- 2) Irrigation Checks. A qualified irrigation technician shall inspect the entire irrigation system once per month. Irrigation inspections shall include the following:
 - a) Activate each zone to inspect for valve function, lateral breaks, damaged heads, coverage, or anything else that would indicate any malfunction of the irrigation system.
 - b) Adjust irrigation heads for proper coverage.
 - c) Adjust automatic controller programs to establish frequency and length of watering periods for seasonal requirements and water restrictions.
- 3) Winterization:
 - a) A qualified irrigation technician shall completely drain the sprinkler system to prevent freeze damage to underground pipes and sprinkler heads. Close all valves and shut down the controllers for the winter around October 15, or before first freeze.

10.7 Boardwalk and Viewing Platforms (Phase 2)

Work included installation of two boardwalk and viewing platforms. The boardwalk is constructed of rot resistant redwood and has a design life of 15 to 25 years. However, individual boards may require replacement (approximately every 5 years).



Figure 12. Boardwalk

This inspection should include, but not be limited to the following:

- 1) Inspect safety rails, handrails, rubrails for structural integrity. Check for, and remove, sharp edges or protrusions that could be a hazard.
- 2) Inspect deck surfaces for projections that could create a trip hazard. Remove trip hazards.
- 3) Inspect the wood material for rot or damage. Replace boards as needed.

10.8 Pedestrian Paths and Picnic Table Pads (Phase 2)

Work included construction of porous asphalt trails, wood fiber trail, and concrete pads for picnic tables.



Figure 13. Wood Fiber Trail

This inspection should include, but not be limited to the following:

- 1) Check to make sure the depth of the wood fiber (Fibar) material does not fall below 4 inches. The Fibar depth shall be topped off as needed to maintain the 4 inch depth. Areas identified to have significant wear should be raked level to maintain the proper system depth.
- 2) Remove any debris, foreign objects, or weeds from the paths and pads.
- 3) Inspect for erosion around outer edge of paths and pads. Stabilize as needed, and repair damaged paths and pads.

10.9 Electrical (Phase 2)

Work included construction of light poles and supporting electrical equipment.



Figure 14. Light Pole

This inspection should include, but not be limited to the following:

- 1) Set an annual inspection schedule.
- 2) Inspect junction boxes and wire connections, poles and fixtures, and remove debris.
- 3) Set a regular lamp replacement schedule, typically once per year.
- 4) Check ballast at time of lamp replacement, and replace ballast if needed.
- 5) Clean fixtures and lenses with a damp cloth at every relamping, at a minimum.

Section 11. Surveillance / Monitoring

Following construction, the project will be monitored by the City of Portland to determine if the habitat improvement goals have been met. Monitoring is required until October 17, 2019.

Monitoring is required for 5 years after USACE's notification to the City of Portland that the project is complete (Reference Appendix H, Article II.F and L). Notification has not yet been given at the date of this manual. The City began monitoring the project after beneficial occupancy. Therefore, USACE will amend the monitoring start date to beneficial occupancy of the entire project (October 17, 2014).

The project goals and the monitoring elements are:

- 1) Provide an effective migratory corridor for juvenile salmon – monitor water velocity in culverts and fish presence/absence.
- 2) Increase salmonid refuge and rearing habitat through improved instream and riparian habitat quality and complexity – monitor riparian growth and survival and instream physical habitat.
- 3) Restore a natural riparian corridor and wetland habitats within the park and downstream reaches for wildlife habitat for neotropical birds and native amphibians – monitor riparian growth and survival.
- 4) Provide suitable conditions for fish usage and food web productivity by removal of the duck pond to reduce high water temperatures – monitor water temperatures.
- 5) Monitor beaver activity according to the City of Portland Beaver Guidance Decision Tree, as referenced in Appendix I.

11.1 Water Temperature

Proposed Method: In order to determine if suitable conditions for fish usage and food web productivity are being met, water temperature will be measured at 2 locations during years 3 and 5 following construction. The installation of continuous recording thermographs will likely be the selected method. Thermographs will be installed on the downstream side of Bybee Street, and on the Lambert Street bridge.

Target Goal: The temperature measured at the downstream location should not exceed 1 degree Celsius higher than the temperature monitored at the next upstream location as a 7-day running average.

Trigger for Adaptive Management: If the Lambert St. thermograph exceeds the 1 degree Celsius limit above the next upstream thermograph, then the City will implement supplemental riparian plantings intended to provide shading over the stream channel (particularly willows and other overhanging shrub and tree species).

11.2 Riparian Growth and Survival

Proposed Method: Percent cover and survival of plants will be monitored during years 2, 3 and 5 following construction. Four vegetation plots will be established to be representative of the plant communities and areas within the project area; three permanent plots within Westmoreland Park, and one at the day-lighted former carport culvert reach. Percent cover will be estimated in the permanent 11.7 foot diameter circular plots for each species in each strata (herbaceous, shrub, tree) and summed and recorded for each strata and total percent cover for the plot (for all layers). Will also record any dead plants and compare to plant design and records from construction to determine percent survival for each species planted.

Target Goal: Percent survival of woody seedlings planted should be a minimum of 80% of initial plant numbers during each monitoring period. Percent cover of native groundcovers should be a minimum of 40% in year 2, 50% in year 3, and 75% in year 5.

Trigger for Adaptive Management: If percent survival is below 80% during any monitoring period, then the City will provide supplemental plantings; species to be determined most appropriate based on percent cover by strata and survival. If percent cover does not meet the thresholds specified during any monitoring period then the City will provide supplemental plantings; species to be determined most appropriate based on percent cover by strata and overall survival. If non-native invasive species cover exceeds 30% cover in any of the monitoring years (excluding ornamental trees such as flowering cherries previously present within the park) then the City will undertake invasive species removal actions such as pulling, mowing, and spot application of herbicide.

11.3 Water Velocity

Proposed Method: Velocities will be measured at each of the replaced culvert locations in year 3 following construction; location at Tacoma Street, Tenino Street, and Umatilla Street. Velocity will be measured using a digital or analog hand-held velocity meter accurate to 0.1 ft/s or less. Velocity will be measured at 6/10 depth in the water column at two points each on the upstream and downstream faces of the new culvert structure.

Target Goal: Velocity should not exceed 2 feet per second (to an accuracy of 0.1 ft/s) when averaged across the four measurement points around each culvert.

Trigger for Adaptive Management: If the average velocity within any of the culverts exceeds 2.5 ft/s then the City will install additional roughness features within the culvert that has the exceedance. Roughness could include additional boulders or pieces of large wood.

11.4 Fish Presence/Absence

Proposed Method: The presence or absence of juvenile salmonids will be assessed during years 3 and 5 following construction. A juvenile salmon survey will be conducted in a minimum of 3 locations in the creek during the months March through July in years 3 and 5. Potential locations include two locations in Westmoreland Park (wetland and channel), and one location downstream of Umatilla Street. Sampling techniques could include fyke nets, seining, and/or electroshocking. Sampling will occur two times during the sampling period. All fish species collected will be identified and measured for length.

Target Goal: Similar presence of juvenile salmonids upstream and downstream of replaced culverts.

Trigger for Adaptive Management: If salmonids are collected at the downstream of Umatilla Street site, but not collected in the upstream locations, then the City will install additional roughness features in the culvert replacement locations to provide additional hydraulic diversity and cover to allow juvenile salmonids to migrate upstream.

Section 12. Repair, Replacement, and Rehabilitation (RR&R)

Repair is considered to entail those activities of a routine nature that maintain the project in a well kept condition. Replacement covers those activities taken when a worn-out element or portion thereof is replaced. Rehabilitation refers to a set of activities as necessary to bring a deteriorated project back to its original condition. RR&R actions are to conform to the project as-built plans and specifications unless other arrangements are made with the USACE District Commander. These activities are the responsibility of the project sponsor.

Section 13. Notification of Distress

A project is considered under distress when features or components of the project are at risk of a failure. Features of this project that have the potential to enter into a state of distress include the various weirs, culverts, pedestrian bridges and significant impacts to the channel and wetlands. The City of Portland is responsible for the operation and maintenance of all features listed in this manual and will refer to their Emergency Management Plan for guidance on repair of features constructed in this area. Notify USACE of Distress as outlined in ER 1110-2-1156.

Section 14. Adaptive Management

Adaptive Management shall be used as new information becomes available and best practices evolve within the scientific and natural area operations community.

As described in the Surveillance / Monitoring section above, if the specific goals of temperature reduction within the park and downstream channel are not met to provide suitable fish habitat or there is not sufficient survival and growth of the riparian and wetland vegetation, then additional plantings will be installed by the City. Also, if juvenile salmonids are collected downstream of the project area, but are not collected upstream in the restored areas, then the City will install additional roughness features at the replaced culvert locations to further reduce velocities and increase hydraulic diversity to more effectively allow fish passage.

If LWD is causing undesired erosion or flooding, the City will remove or alter the LWD to alleviate the situation. LWD was installed closer to the center of the channel than designed.

Any adaptive management changes to the project require USACE approval.