



DEPARTMENT OF THE ARMY
CHIEF OF ENGINEERS
2600 ARMY PENTAGON
WASHINGTON, D.C. 20310-2600

JUL 09 2020

DAEN

SUBJECT: South Fork of the South Branch of the Chicago River, Bubbly Creek, Illinois Ecosystem Restoration

THE SECRETARY OF THE ARMY

1. I submit for transmission to Congress my report on ecosystem restoration for the South Fork of the South Branch of the Chicago River, commonly referred to as "Bubbly Creek." It is accompanied by the report of the District Commander. This report is in response to the study resolution adopted by the Committee on Environment and Public Works, United States Senate, July 20, 2005. The resolution requested a review of "the report of the Chief of Engineers on the Illinois River, and other pertinent reports, to determine whether any modifications to the South Fork of the South Branch of the Chicago River (commonly known as Bubbly Creek) for ecosystem restoration is advisable at this time." Preconstruction engineering and design activities, if funded, would be conducted under the authority provided by this resolution.
2. The reporting officers recommend authorization of the National Ecosystem Restoration (NER) Plan which includes the following sustainable and effective measures for restoring the ecosystem: substrate restoration by placing a sand layer and stone armor layer over 30.7 acres within Bubbly Creek; riparian plantings, including the removal of invasive species and planting of native riparian species over 9.3 acres; emergent plantings, including amendment of the substrate with organic material and planting of native emergent species over 1.0 acres; submergent plantings, including amendment of the substrate with organic material and planting native submergent species over 3.3 acres; and woody debris, including the anchoring of trees, rootwads, trunks and large branches in 10 locations within Bubbly Creek. All features are located in the City of Chicago. The NER Plan was developed in coordination and consultation with federal, state, and local agencies.
3. The NER plan incorporates post-construction monitoring and adaptive management for a period of five years at a cost of \$496,000 to ensure project performance. Per the 2003 Memorandum of Agreement between the Federal Aviation Administration (FAA) and other federal agencies to address aircraft-wildlife strikes, the project area would be monitored for hazardous avian species over five years by a qualified airport wildlife biologist as defined in FAA Advisory Circular 150/5200-36A, Qualifications for Wildlife Biologist Conducting Wildlife Hazard Assessments and Training Curricula for Airport Personnel Involved in Controlling Wildlife Hazards on Airports. The estimated cost of this monitoring is \$12,000 for five years. Since the recommended plan would not have any significant adverse effects, no mitigation measures or compensation measures would be required, beyond best management practices and avoidance.

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4. Due to historically contaminated sediment within Bubbly Creek, implementation of the recommended plan requires that the U.S. Army Corps of Engineers and the non-federal sponsor receive protection from liability claims under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), 42 U.S.C. §§ 9601, et seq. In 2015, the feasibility study was suspended pending a CERCLA remedial investigation within the study area. As a result, Section 1110 of the Water Resources Development Act (WRDA) of 2018, Public Law (P.L.) 115-270, 132 Stat. 3765, 3774, directed the Secretary to “enter into a memorandum of understanding with the Administrator of the Environmental Protection Agency to facilitate ecosystem restoration activities” at Bubbly Creek. After several months of negotiation, the U.S. Environmental Protection Agency determined that it was unable to provide CERCLA liability protection to the U.S Army Corps of Engineers through an agreement. CERCLA liability protection would have to be legislated prior to implementation of the proposed NER plan.

5. The non-federal sponsor is the City of Chicago, Illinois. The project first cost of the NER Plan is estimated to be \$17,934,000 at October 2019 price levels. In accordance with the cost sharing provisions of Section 103(c) of WRDA 1986 (P.L. 99-662), as amended by Section 210 of WRDA 1996 (P.L. 104-303), the federal share of the first costs of the ecosystem restoration features would be about \$11,657,000 (65 percent) and the non-federal share would be about \$6,277,000 (35 percent). The total project cost includes project monitoring and adaptive management. The cost of lands, easements, rights-of-way, relocations, and disposal areas (LERRDs) for the project is estimated to be \$801,000. The City of Chicago would be responsible for the operation, maintenance, repair, rehabilitation, and replacement (OMRR&R) of the project after construction. The non-federal sponsor’s responsibility for operation and maintenance of the nonstructural and non-mechanical elements of the ecosystem restoration project ceases 10 years after ecological success has been achieved in accordance with Section 2039 of WRDA 2007 (P.L. 110-114), as amended (33 U.S.C. 2330a). The annual cost for OMRR&R for the period of 10 years after ecological success has been achieved is currently estimated at \$63,000 per year. After 10 years, the annual cost for OMRR&R of the structural elements of the plan is currently estimated at \$50,000 per year.

6. Based on a 2.75 percent federal discount rate and a 50-year period of analysis, the total equivalent average annual costs of the project are estimated to be \$746,000, including OMRR&R. Cost effectiveness and incremental cost analysis techniques were used to evaluate the alternative plans to ensure that an efficient ecosystem restoration plan was recommended. The cost of the recommended aquatic ecosystem restoration features is justified by restoring 816.7 average annual habitat units on 40 acres of aquatic habitat. Implementation of the plan would provide spawning habitat for Illinois state threatened and endangered wetland fishes such as the grass pickerel and banded killifish and critical flyway habitat for globally-significant migratory waterfowl that is

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currently devoid in many parts of the Chicago River system. Over 1.4 million people live within five miles of Bubbly Creek, an area of the city where natural space is lacking. The plan mirrors the City of Chicago's "Chicago's Second Water Front," a vision which has goals for riverine restoration and use.

7. In accordance with U.S. Army Corps of Engineer policy on the review of decision documents, all technical, engineering and scientific work underwent an open, dynamic and rigorous review process to ensure technical quality. This included District Quality Control, Agency Technical Review, Independent External Peer Review (IEPR), and a headquarters policy and legal review. The IEPR was completed by Battelle Memorial Institute. All comments from the above referenced reviews have been addressed and incorporated into the final documents.

8. Washington level review indicates that the project recommended by the reporting officers is technically sound, environmentally and socially acceptable, and cost effective. The plan complies with all essential elements of the U.S. Water Resources Council's Economic and Environmental Principles and Guidelines for Water and Land Related Resources Implementation Studies and complies with other administrative and legislative policies and guidelines. The views of interested parties, including federal, state and local agencies, have been considered.

9. I concur with the findings, conclusions, and recommendations of the reporting officers. Accordingly, I recommend that the plan to restore the ecosystem for Bubbly Creek be authorized at an estimated project first cost of \$17,934,000, contingent upon the provision of CERLCA liability protection and with such modifications as in the discretion of the Chief of Engineers may be advisable. My recommendation is subject to cost sharing, financing, and other applicable requirements of federal and state laws and policies, including Section 103 of WRDA 1986, as amended (33 U.S.C. 2213). The non-federal sponsor would provide the non-federal share of costs and all LERRDs, and be responsible for all OMR&R. This recommendation is subject to the non-federal sponsor agreeing to comply with all applicable federal laws and policies, including that they will:

a. Provide a minimum of 35 percent of initial project costs assigned to ecosystem restoration as further specified below:

(1) Provide, during design, 35 percent of design costs allocated to ecosystem restoration in accordance with the terms of a design agreement entered into prior to commencement of design work for the project;

(2) Provide all lands, easements, rights-of-way, and perform or assure performance of all relocations, including utility relocations, as determined by the Federal Government to be necessary for the initial construction, operation, and maintenance of the project(s), all in compliance with applicable provisions of the Uniform Relocation and

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Assistance and Real Property Acquisition Policies Act of 1970, as amended (42 U.S.C. 4601-4655) and the regulations contained in 49 C.F.R. Part 24; and

(3) Provide, during construction, any additional amounts necessary to make its total contribution equal to 35 percent of initial project costs assigned to ecosystem restoration;

b. Hold and save the United States free from all damages arising from the construction, operation, maintenance, repair, rehabilitation, and replacement of the project and any betterments, except for damages due to the fault or negligence of the United States or its contractors;

c. Shall not use the ecosystem restoration features or lands, easements, and rights-of-way required for such features as a wetlands bank or mitigation credit for any other project;

d. Prevent obstructions or encroachments on the project (including prescribing and enforcing regulations to prevent such obstructions or encroachments) such as any new developments on project lands, easements, and rights-of-way or the addition of facilities which might reduce the outputs produced by the ecosystem restoration features, hinder operation and maintenance of the project, or interfere with the project's proper function;

e. For so long as the project remains authorized, operate, maintain, repair, rehabilitate, and replace the project, or functional portions of the project, including any mitigation features, at no cost to the Government, in a manner compatible with the project's authorized purposes and in accordance with applicable federal and state laws and regulations and any specific directions prescribed by the Government;

f. Perform, or ensure performance of, any investigations for hazardous substances that are determined necessary to identify the existence and extent of any hazardous substances regulated under CERCLA, Public Law 96-510, as amended (42 U.S.C. 9601-9675), that may exist in, on, or under lands, easements, or rights-of-way that the Federal Government determines to be required for construction, operation, and maintenance of the project. However, for lands that the Federal Government determines to be subject to the navigation servitude, only the Federal Government shall perform such investigations unless the Federal Government 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;

g. Assume, as between the Federal Government and the non-federal sponsor, complete financial responsibility for all necessary cleanup and response costs of any hazardous substances regulated under CERCLA that are located in, on, or under lands, easements, or rights-of-way that the Federal Government determines to be required for construction, operation, and maintenance of the project;

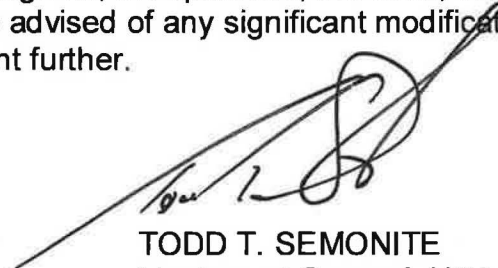
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h. Agree, as between the Federal Government and the non-federal sponsor, that the non-federal sponsor shall be considered the operator of the project for the purpose of CERCLA liability, and to the maximum extent practicable, operate, maintain, repair, rehabilitate, and replace the project in a manner that will not cause liability to arise under CERCLA.

10. The recommendation contained herein reflects the information available at this time and current departmental policies governing formulation of individual projects. It does not reflect program and budgeting priorities inherent in the formulation of a national civil works construction program or the perspective of higher review levels within the Executive Branch. Consequently, the recommendation may be modified before it is transmitted to the Congress as a proposal for authorization and implementation funding. However, prior to transmittal to Congress, the sponsors, the state, interested federal agencies, and other parties will be advised of any significant modifications and will be afforded an opportunity to comment further.

*Let's keep
restoring Chicago's
environment. Really need
your help in providing
CERCLA liability protection!*



TODD T. SEMONITE
Lieutenant General, USA
Chief of Engineers