



DEPARTMENT OF THE ARMY
CHIEF OF ENGINEERS
2600 ARMY PENTAGON
WASHINGTON, DC 20310-2600

DAEN

AUG 05 2019

SUBJECT: Rio Grande, Environmental Management Program, CO, NM, TX, Sandia Pueblo to Isleta Pueblo, New Mexico Ecosystem Restoration Feasibility Study and Environmental Assessment

THE SECRETARY OF THE ARMY

1. I submit for transmission to Congress my report on Sandia Pueblo to Isleta Pueblo, New Mexico Ecosystem Restoration. It is accompanied by the reports of the district and division engineer. This report is in partial response to Section 5056 of the Water Resources Development Act of 2007, Public Law 110-114, as amended by Section 4006 of the Water Resources Reform and Development Act of 2014, Public Law 113-121. Section 5056, as amended, authorizes the Secretary to carry out an Environmental Management Program (EMP) in the Rio Grande Basin, including its headwaters and tributaries in Colorado, New Mexico, and Texas, for the planning, construction, and evaluation of measures for fish and wildlife habitat rehabilitation and enhancement; and for the implementation of a long-term monitoring, computerized data inventory and analysis, applied research, and adaptive management program.
2. The Sandia Pueblo to Isleta Pueblo Feasibility Study carried out under this authority investigated ecosystem problems and restoration opportunities along the Middle Rio Grande (MRG) near Albuquerque, New Mexico. Because the feasibility report addresses ecosystem restoration in only a portion of the authorized study area, it is identified as an interim report.
3. The reporting officers recommend authorizing the National Ecosystem Restoration (NER) Plan for the restoration of 261 acres of riparian forest habitat (bosque) that parallels the Rio Grande in Bernalillo County, New Mexico. As a result of flow regulation in part from U.S. Army Corps of Engineers (Corps) dam and levee systems, devastating wildfires, and an influx of invasive species, the bosque habitat has been reduced or converted from the desired cottonwood and willow matrix to a more degraded state. Habitat loss, fragmentation, and alteration have caused the loss of 12 fish species from the Middle Rio Grande (MRG), two of which are now extinct. The federally listed Rio Grande silvery minnow naturally occurs only in this reach of river, which is approximately ten percent of its historic range. The Rio Grande and the bosque forest that lines it, is part of an important cultural landscape that is an integral part of constructing social identity and transmission and retention of historical knowledge for Albuquerque and adjacent pueblo communities.
4. The recommended plan includes measures to: a) improve hydrologic connectivity between the Rio Grande and its floodplain by constructing high-flow channels, bank destabilization, berm removal, willow swales and wetlands; and b) restore native habitat diversity through re-creation of historic habitat types lost to water management activity, creating new successional stages of existing habitat, exotic species reduction, and re-vegetation with native plant species. Bank excavation and berm removal would provide over 64 acres of additional river connectivity. The proposed high-flow channels (8 acres) would transport much needed water across the terraces to bosque vegetation and improve floodplain connectivity. Willow swales (39 acres) provide microenvironments in which native plants can thrive due to the reduced depth to the water table and moist soils. The proposed

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wetland measures (5 acres) focus on development of high value and scarce open water or marsh wetlands to provide open water habitat for migrating and local waterfowl, and provide aquatic habitat for numerous species. Vegetation removal and replanting is a component of most measures and are also proposed as standalone measures (197 acres). The plan's 10 independent water measures for restoring hydrologic connectivity to increase riparian aquatic habitat will require further evaluation to determine the full extent of the water depletion to achieve the project outputs. If the State of New Mexico and or non-federal sponsor cannot obtain sufficient offsets for the required water measure, then that portion of the recommended plan would be dropped. The recommended plan is supported by the primary non-federal sponsor, the Middle Rio Grande Conservancy District (MRGCD).

5. Based on October 2018 price levels, the estimated total project first cost is \$24,674,000. The federal share of the estimated first cost is currently estimated at \$16,038,000. The non-federal cost of the estimated first cost is \$8,636,000. The MRGCD would be responsible for the operation, maintenance, repair, replacement, and rehabilitation (OMRR&R) of the project after construction. OMRR&R costs are currently estimated at \$15,000 per year and would be the responsibility of MRGCD.

6. Based on a 2.875-percent interest rate and a 50-year period of analysis, the total equivalent average annual costs of the project are estimated to be \$936,331, including OMRR&R. Ecosystem restoration benefits for the recommended plan include generating an estimated 1,003 average annual habitat units and restoring 261 acres of riparian forest habitat.

7. The goals and objectives included in the Environmental Operating Principles and Campaign Plan of the Corps have been integrated into the Sandia Pueblo to Isleta Pueblo feasibility study process. The recommended plan has been designed to avoid or minimize environmental impacts while maximizing the ecosystem benefits.

8. In accordance with the Corps guidance on 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, and a Corps Headquarters policy and legal review. All concerns from these reviews have been addressed and incorporated into the final report.

9. Washington level review indicated that the project recommended by the reporting officers is technically sound, environmentally and socially acceptable, and economically justified. The plan complies with all essential elements of the U.S. Water Resources Council's 1983 Economic and Environmental Principles and Guidelines for Water and Related Land Resources Implementation Studies. The recommended plan complies with other administrative and legislative policies and guidelines. The views of interested parties, including federal, state and local agencies have been considered.

10. I concur with the findings, conclusions, and recommendations of the reporting officers. I recommend that the recommended plan for ecosystem restoration in the Middle Rio Grande, New Mexico be authorized at an estimated first cost of \$24,674,000 with such modifications thereof as in the discretion of the Chief of Engineers may be advisable. My recommendation is subject to cost

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sharing, financing, and other applicable requirements of federal and state laws and policies. The cost of the plan recommended in this Report will be cost shared in accordance with Section 103 of the Water Resources Development Act of 1986, as amended (33 U.S.C. 2213), with a non-federal share of 35 percent of total NER costs. Applying these requirements, the federal portion of the estimated total first cost is \$16,038,000 and the non-federal portion is \$8,636,000, or a federal share of 65 percent and a non-federal share of 35 percent. Federal implementation of the selected plan would be subject to the non-federal sponsors agreeing to comply with applicable federal laws and policies, including but not limited to:

a. Provide 35 percent of total project costs as further specified below:

(1) Provide 35 percent of design costs 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, and rights-of-way, perform or ensure the performance of all relocations, and provide relocation assistance, as determined by the federal government to be required for the initial construction or the operation and maintenance of the project, all in compliance with applicable provisions of the Uniform Relocation and 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;

(3) Provide, during construction, any additional funds necessary to make its total contribution equal to 35 percent of total project costs;

b. 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;

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. 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, except as limited by Section 1161 of the Water Resources Development Act of 2016, Public Law 114-322 (33 U.S.C. 2330a(e)), at no cost to the federal 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 federal government;

e. 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;

f. Perform, or ensure performance of, any investigations for hazardous substances that are

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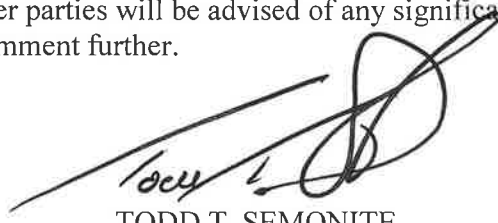
determined necessary to identify the existence and extent of any hazardous substances regulated under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), Public Law 96-510, as amended (42 U.S.C. 9601-9675), that may exist in, on, or under lands, easements, or rights-of-way 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 sponsors with prior specific written direction, in which case the non-federal sponsors shall perform such investigations in accordance with such written direction;

g. Assume, as between the federal government and the non-federal sponsors, 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; and

h. Agree, as between the federal government and the non-federal sponsors, that the non-federal sponsors 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.

11. 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 formulation of a national Civil Works construction program nor 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 non-federal 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.

*Excellent Project!
A GREAT OPPORTUNITY
FOR USACE TO CONTRIBUTE
TOWARDS IMPORTANT HABITAT
RESTORATION ON THE
RIO GRANDE..*



TODD T. SEMONITE
Lieutenant General, USA
Chief of Engineers