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MAY 11 2018

SUBJECT: Española Valley, Rio Grande and Tributaries, New Mexico

THE SECRETARY OF THE ARMY

1. I submit for transmission to Congress my report on flood damage reduction and ecosystem restoration along the Rio Grande in the vicinity of Española, New Mexico. It is accompanied by the reports of the Albuquerque District Engineer and the South Pacific Division Engineer. These reports are in an interim response to a resolution by the Committee on Environment and Public Works of the Senate, adopted 10 December 2009. The resolution requested a review of the report of the Chief of Engineers on the Rio Grande and Tributaries transmitted to Congress on 27 June 1949 and related reports to determine whether additional projects were necessary in the Española Valley to meet federal flood risk management, ecosystem restoration and allied purposes." Preconstruction engineering and design activities, if funded, would commence under the authority provided by the resolution cited above.

2. The reporting officers recommend an ecosystem restoration plan for authorization, consisting of the improvement of habitat for fish, wildlife and waterfowl in the vicinity of Española, New Mexico. The reporting officers are unable to recommend a plan for the purpose of flood risk management. The recommended plan to restore the ecosystem consists of an active footprint of 314 acres of aquatic ecosystem restoration measures to restore and protect 958 acres of aquatic and riparian habitats in the study area. The recommended plan increases habitat value by 19,781 average annual habitat units.

3. The measures are formulated to: a) improve hydrologic connectivity between the Rio Chama, Rio Grande and their respective floodplains by constructing grade restoration facilities (GRFs), high-flow channels, terrace lowering, willow swales and wetlands; and b) restore native vegetation and habitat through exotic species reduction, and by riparian forest re-vegetation with native plant species. The GRFs to be constructed on Ohkay Owingeh Pueblo would improve floodplain connectivity for about 80 acres, and prevent the loss of connectivity for approximately 644 floodplain acres by arresting the channel incision that would occur under the future without project condition. Terrace lowering would provide over 57 acres of connectivity with the river by excavating the banks. The proposed high-flow channels (21 acres) would transport much-needed water across the terraces to bosque vegetation and improve floodplain connectivity on both Ohkay Owingeh and Santa Clara Pueblos. Willow swales (48 acres) provide microenvironments in which native plants can thrive due to the reduced depth to the water table and moist soils. The proposed swale/wetland measures (17 acres) focus on development of 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 (91 acres). Removal of invasive plants and planting of native species removal increases the habitat value and enhances the aesthetic aspects of the bosque. As important as the habitat restoration is, the cultural value and

importance of a robust bosque to the two cost share partners carries great significance. 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 both the Pueblo of Santa Clara and Ohkay Owingeh. Any damages or negative alterations to the bosque would result in equally negative impacts to the beliefs, customs, and cultural practices of both Tribes. Its preservation, therefore, is of critical importance to the cultural well-being of both project sponsors.

4. The recommended plan also includes post construction monitoring and adaptive management for a period of five years to ensure project performance. Since the recommended plan would not have any significant adverse effects, no mitigation measures (beyond best management practices and avoidance) or compensation measures would be required. The recommended plan is the National Ecosystem Restoration (NER) plan. All features are located in New Mexico.

5. The Pueblo of Ohkay Owingeh and the Pueblo of Santa Clara are the non-federal cost-sharing sponsors for the proposed project. Each Pueblo will be responsible for the non-federal obligations for the project features implemented on its lands, including the provision of lands, easements, rights-of-way, relocations, and disposal areas (LERRD), and the monitoring and adaptive management as well as the operation and maintenance of those features. Based on October 2017 price levels, the estimated total first cost of the recommended plan is \$62,000,000, consisting of the first costs of the ecosystem restoration features estimated at \$61,718,000 and the first costs of the recreation features proposed for construction on Santa Clara Pueblo lands estimated at \$282,000. The estimated project costs are divided among the two sponsors based on the distribution of project features within each Pueblo reservation, with approximately 50 percent allocated to each Pueblo.

6. In accordance with the cost sharing provisions of Section 103 of the Water Resources Development Act (WRDA) of 1986, as amended (33 U.S.C. 2213), the following are the base calculations for the recommended plan prior to the application of the non-federal cost sharing waiver and of the ability to pay guidance described in the next paragraph. The federal share of the estimated cost of the ecosystem restoration features of \$61,718,000 would amount to an estimated \$40,117,000 (65 percent) and the non-federal share would amount to an estimated \$21,601,000 (35 percent), consisting of the provision of LERRD estimated at \$3,040,000, and a monetary contribution estimated at \$18,561,000. The total estimated cost of the recreation features of \$282,000 would be shared equally, so that the federal share and the non-federal share would each amount to an estimated \$141,000.

7. A waiver of non-federal cost sharing of up to \$455,000, provided to Indian tribes by Section 1156 of WRDA 1986, as amended (33 U.S.C. 2310), is applicable to the recommended plan. In addition, consistent with Section 203 of WRDA 2000, as amended (33 U.S.C. 2269), I am recommending that the ability to pay of the Ohkay Owingeh Pueblo and of the Santa Clara Pueblo be considered in determining the non-federal cost share. Section 203, which authorizes the Tribal Partnership Program, provides for consideration of a Tribe's ability to pay in determining the Tribe's cost share for a water resources development project costing less than \$10,000,000 million in federal funds and implemented under that authority. Specific authority is

required to implement this project as it exceeds \$10,000,000 in federal funding; however, the benefits, location, and sponsorship of the recommended plan are otherwise comparable to those authorized by Congress for implementation under the Tribal Partnership Program.

8. The application of the Section 1156 non-federal cost sharing waiver and the Section 203 ability to pay guidance yields the following recommended cost sharing for each Pueblo of the estimated project first costs:

a. Ohkay Owingeh Pueblo. Based on October 2017 price levels, the base calculations for the ecosystem restoration features on Ohkay Owingeh Pueblo lands prior to applying the Section 1156 waiver and ability to pay guidance encompass an estimated total cost of \$31,100,000, including a federal share estimated at \$20,215,000 (65 percent), and a non-federal share estimated at \$10,885,000 (35 percent) consisting of LERRD estimated at \$1,440,000 and a monetary contribution estimated at \$9,445,000. Applying the Section 1156 waiver of \$455,000 reduces the non-federal monetary contribution to \$8,990,000, and applying the 25 percent ability to pay factor specified in the guidance reduces the non-federal monetary contribution to \$2,247,500. The resulting non-federal share is therefore estimated at \$3,687,500 (12 percent), consisting of LERRD estimated at \$1,440,000 and a monetary contribution estimated at \$2,247,500. The federal share is estimated at \$27,412,500 (88 percent).

b. Santa Clara Pueblo. Based on October 2017 price levels, the base calculations for the ecosystem restoration and recreation features on Santa Clara Pueblo lands prior to applying the Section 1156 waiver and ability to pay guidance encompass an estimated total cost of \$30,900,000, including: (i) a federal share estimated at \$20,043,000, comprising the federal share of \$19,902,000 (65 percent) of the ecosystem restoration features and \$141,000 (50 percent) of the recreations features; and (ii) a non-federal share estimated at \$10,857,000 comprising the non-federal share of \$10,716,000 (35 percent) of the ecosystem restoration features and \$141,000 (50 percent) of the recreation features. The estimated non-federal share of \$10,716,000 of the ecosystem restoration features in turn consists of LERRD estimated at \$1,600,000, and a monetary contribution estimated at \$9,116,000. Applying the Section 1156 waiver of \$455,000 reduces the non-federal monetary contribution of \$9,257,000 for both types of features to \$8,802,000, and applying the 25 percent ability to pay factor specified in the guidance reduces the non-federal monetary contribution to \$2,200,500. The resulting non-federal share is therefore estimated at \$3,800,500 (12 percent), consisting of LERRD estimated at \$1,600,000 and a monetary contribution estimated at \$2,200,500. The federal share is estimated at \$27,099,500 (88 percent).

9. The Pueblo of Ohkay Owingeh would be responsible for the monitoring and adaptive management as well as the operation and maintenance of the project located on its lands after implementation, a cost currently estimated at about \$60,000 per year. The annual operation and maintenance estimate includes \$20,000 for monitoring and adaptive management beyond the construction phase. The Pueblo of Santa Clara would be responsible for the monitoring and adaptive management as well as the operation and maintenance of the project located on its lands after implementation, a cost currently estimated at about \$60,000 per year. The annual operation

and maintenance estimate includes \$20,000 for monitoring and adaptive management beyond the construction phase.

10. Based on a 2.75-percent (October 2017) discount rate and a 50-year period of analysis, the total equivalent average annual costs of the project are estimated to be \$2,540,000, including Operations, Maintenance, Repair, Replacement and Rehabilitation (OMRR&R). These costs comprise two different purposes; one for aquatic ecosystem restoration features and one for recreation features.

a. The total equivalent average annual aquatic ecosystem restoration costs are estimated to be \$2,410,000 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 19,781 average annual habitat units over 958 acres of aquatic and riparian habitat along 17 river miles of the Rio Grande and Tributaries. The plan would restore the habitats in the most cost-effective manner. The restoration measures would improve hydrologic connectivity with the floodplain by constructing grade restoration facilities, high-flow channels, terrace lowering, willow swales and wetlands; and b) restoring native vegetation and habitat through exotic plant species reduction, and by riparian forest re-vegetation with native plant species. The restored riparian habitat would increase scarce resting, nesting, feeding, and rearing habitat for migratory waterfowl and neotropical migrant birds using the internationally significant Rio Grande Flyway. The restoration also directly benefits habitat for three species listed as federally endangered, the Southwest Willow Flycatcher, the Yellow Billed Cuckoo, and the New Mexico Meadow Jumping Mouse.

b. The total equivalent average annual recreation costs are estimated to be \$10,445. Unit Day Value method was used to derive benefits of potential recreation amenities. The cost of the recommended recreation features is justified by providing \$141,358 average annual benefits at a benefit to cost ratio of over 13 to 1.

11. I concur with the findings, conclusions, and recommendations of the reporting officers. Accordingly, I recommend that the plan to restore the ecosystem for the Española Valley, Rio Grande and Tributaries be authorized in accordance with the reporting officers' recommended plan at an estimated total first cost of \$62,000,000 (October 2017) 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 laws and policies, including the application of the non-federal cost sharing waiver provided to Indian tribes by Section 1156 of WRDA 1986, as amended (33 U.S.C. 2310). Further, consistent with Section 203 of the Water Resources Development Act of 2000, as amended (33 U.S.C. 2269), I am recommending that the ability to pay of the Ohkay Owingeh Pueblo and the Santa Clara Pueblo be considered in determining the non-federal cost share, as described in paragraphs 7 and 8 of this Report. If the project is authorized by the Congress for construction, I plan to apply the Section 203 guidance on ability to pay in determining the cost sharing requirements of the Ohkay Owingeh Pueblo and of the Santa Clara Pueblo. The non-federal sponsors would provide the non-federal cost share and all LERRD, and would be responsible for all OMRR&R. This recommendation is subject to

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the non-federal sponsors agreeing to comply with all applicable federal laws and policies, including, but not limited to, the following:

a. Provide the non-federal share of project costs as further specified below:

(1) Provide 12 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 LERRD determined by the government to be necessary for construction, operation, and maintenance of the project, perform or ensure the performance of all relocations and provide relocation assistance, all in compliance with applicable law, including provisions of the Uniform Relocation 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, a contribution of funds equal to 35 percent of ecosystem restoration costs and 50 percent of recreation costs, as reduced by application of the Section 1156 waiver of non-federal cost sharing of up to \$455,000 and reduced further by application of the 25 percent ability to pay factor specified in the Section 203 guidance;

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. Keep the recreation features, and access roads, parking areas, and other associated public use facilities, open and available to all on equal terms;

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. 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;

g. 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 the Comprehensive Environmental Response, Compensation, and Liability Act

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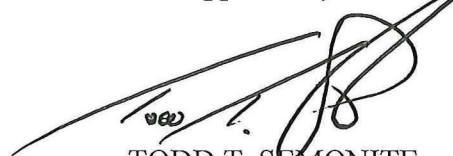
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(CERCLA), as amended (42 U.S.C. 9601-9675), that may exist in, on, or under lands, easements, or rights-of-way that the government determines to be required for construction, operation, and maintenance of the project. However, for lands that the government determines to be subject to the navigation servitude, only the government shall perform such investigations unless the 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;

h. Assume, as between the government and the non-federal sponsor, complete financial responsibility for all necessary remediation 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 government determines to be required for construction, operation, and maintenance of the project; and

i. Agree, as between the 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.

12. 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 sponsor, the state, interested federal agencies, and other parties will be advised of any significant modifications and will be afforded an opportunity to comment further.



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