



DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS
441 G STREET NW
WASHINGTON, D.C. 20314-1000

DEC 19 2006

CEMP-SPD (1105-2-10a)

SUBJECT: Salt River (Rio Salado Oeste), Phoenix, Maricopa County, Arizona

THE SECRETARY OF THE ARMY

1. I submit for transmission to Congress my report on the study of ecosystem restoration, flood damage reduction, and recreation opportunities on the Salt River, Rio Salado Oeste in Phoenix, AZ. It is accompanied by the report of the District and Division Engineers. These reports are in partial response to Public Law 761, 75th Congress (Section 6 of the Flood Control Act of 1938) and a resolution adopted by the Committee on Public Works and Transportation of the U.S. House of Representatives on 17 May 1994 (HR 2425). The statute and the resolution requested a review of reports for the State of Arizona to determine whether modifications of the recommendations contained therein are advisable at the present time in the interest of flood damage reduction, environmental protection and restoration, and related purposes. This is the authority under which pre-construction engineering and design activities continue.

2. The reporting officers recommend a plan for ecosystem restoration and recreation for an 8-mile reach of the Salt River in Phoenix, Arizona (Maricopa County), between 19th Avenue and 83rd Avenue. The recommended plan includes the following measures:

- Grading and terracing eight miles of river channel,
- Constructing a grade control structure at 35th Avenue,
- Planting of riparian vegetation (375 acres of cottonwood/willow, 417 acres of mesquite, 296 acres of riparian shrub, and 52 acres of scrub shrub),
- Modifying eight storm water outfalls to harvest available runoff,
- Installing a water supply and distribution system, including a supply well, pump station, open channel canals, and pressurized distribution piping,
- Constructing maintenance roads and ramps for safety and river access,
- Invasive species removal on about 120 acres and invasive species control on about 830 acres,
- Regrading of approximately 3 million cubic yards of material in the vicinity of existing gravel pits lakes to produce emergent wetlands, and
- Constructing a recreation plan consisting of approximately sixteen miles of multi-use non-motorized trails, pedestrian bridges, parking lots, comfort stations, and interpretive signs.

3. In Arizona, over ninety percent of riparian areas have been lost due to impacts from historical settlement and urbanization. Restoration of these areas is significant because riparian areas in the Southwest represent only one percent of the landscape yet contribute to the survival of seventy-five to ninety percent of wildlife in the arid West. The recommended plan would restore a significant ecosystem resource along the Pacific Flyway for neo-tropical birds, reconnect wildlife corridors, and restore wildlife habitat for species significant to Arizona. To insure recommendation of an efficient plan, the alternative environmental restoration plans were evaluated using functional assessment, cost effectiveness, and incremental analysis techniques. The recommended plan is the National Ecosystem Restoration Plan and is the plan that is locally preferred. The recommended plan would restore and improve approximately 1,466 acres of habitat, including 375 acres of cottonwood/willow, 417 acres mesquite, 190 acres of emergent wetlands, and approximately 296 acres of riparian shrub and 52 acres of scrub shrub, as well as 8 miles of restored river channel. The cost of the recommended environmental restoration features are justified by an increase of about 267 average annual functional capacity units over the no action alternative, and provides for achieving ecosystem function increases in the most cost effective manner. Based on a total ecosystem restoration cost of \$153,770,000, the cost per acre of restoration is about \$104,900. The annual cost per average annual functional capacity unit is about \$45,300.

4. Based on October 2005 price levels the estimated first cost of the recommended plan is \$164,950,000. In accordance with the cost sharing provisions of the Water Resources Development Act (WRDA) of 1986, as amended, the estimated Federal share of the total project cost would be approximately \$105,540,000 and the estimated non-Federal share would be approximately \$59,410,000. The estimated total first cost of the ecosystem restoration portion of the recommended plan is \$153,770,000, which is cost shared 65 percent Federal and 35 percent non-Federal, has an estimated Federal cost of \$99,950,000 and an estimated non-Federal cost of \$53,820,000. The estimated total first cost of the recommended plan includes approximately \$3,760,000 for five (5) years of monitoring and adaptive management necessary to ensure success of the project. Additionally, the estimated total first cost of the recommended plan incorporates recreation features, including multipurpose trails, comfort stations, benches, parking, interpretive signage, and trails. These recreation features have an estimated first cost of \$11,180,000, which would be shared 50 percent Federal and 50 percent non-Federal, at about \$5,590,000 each. The total estimated annual operation and maintenance costs for the project, which are the responsibility of the non-Federal sponsor, are estimated to be \$2,880,000. The non-Federal sponsor is also responsible for an associated water cost of \$817,000 annually.

5. The reporting officers further recommend that the plan recommended herein be exempt from section 401 of the Clean Water Act, pursuant to Section 404(r) of the Clean Water Act. The 404(r) exemption will cover the construction phase and the first five years of the operation and maintenance phase of the project, as described in the feasibility report and environmental impact statement.

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6. Washington level review indicates that the project is technically sound, environmentally acceptable, and economically justified. The plan conforms with essential elements of the U.S. Water Resources Counsel's Economic and Environmental Principles for Water and Related Land Resources Implementation studies and complies with other administration and legislative policies and guidelines. Also, the views of interested parties, including Federal, State, and local agencies have been considered.

7. I concur in the findings, conclusions, and recommendations of the reporting officers. Accordingly, I recommend that the Salt River, Rio Salado Oeste, Maricopa County-Phoenix, Arizona, Project be constructed in accordance with the reporting officers' recommended plan. My recommendation is subject to cost sharing and financing and other applicable requirements of Federal and State laws and policies, including WRDA 1986, as amended by WRDA 1996.

8. Federal implementation of the authorized project would be subject to the non-Federal sponsor agreeing to comply with applicable Federal laws and policies, including but not limited to:

a. Provide 35 percent of the total project costs allocated to environmental restoration and 50 percent of the total project costs allocated to recreation, as further specified below:

(1) Enter into an agreement, which provides, prior to execution of a project cooperation agreement for the project, 25 percent of design costs;

(2) Provide, during construction, any additional funds needed to cover the non-federal share of design costs;

(3) Provide all lands, easements, and rights-of-way, including suitable borrow and dredged or excavated material disposal areas, and perform or assure the performance of all relocations determined by the Government to be necessary for the construction, operation, and maintenance of the project;

(4) Provide or pay to the Government the cost of providing all retaining dikes, waste weirs, bulkheads, and embankments, including all monitoring features and stilling basins, that may be required at any dredged or excavated material disposal areas required for the construction, operation, and maintenance of the project; and

(5) Provide, during construction, any additional costs as necessary to make its total contribution equal to 35 percent of the separable project costs allocated to environmental restoration and 50 percent of the separable project costs allocated to recreation.

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b. Assume responsibility for operating, maintaining, replacing, repairing, and rehabilitating (OMRR&R) the project or completed functional portions of the project, including mitigation features, without cost to the Government, in a manner compatible with the project's authorized purposes and in accordance with applicable Federal and State laws and specific directions prescribed by the Government in the OMRR&R manual and any subsequent amendments thereto.

c. Give the Government a right to enter, at reasonable times and in a reasonable manner, upon land which the local sponsor owns or controls for access to the project for the purpose of inspection, and, if necessary, for the purpose of completing, operating, maintaining, repairing, replacing, or rehabilitating the project.

d. Comply with Section 221 of the Flood Control Act of 1970, Public Law 91-611, as amended, 42 U.S.C. 1962d-5b, and Section 103 of the Water Resources Development Act of 1986, Public Law 99-662, as amended, 33 U.S.C. 2213, which provide that the Secretary of the Army shall not commence the construction of any water resources project or separable element thereof, until the non-Federal sponsor has entered into a written agreement to furnish its required cooperation for the project or separable element.

e. Hold and save the Government free from all damages arising for the construction, operation, maintenance, repair, replacement, and rehabilitation of the project and any project-related betterments, except for damages due to the fault or negligence of the Government or the Government's contractors.

f. Keep and maintain books, records, documents, and other evidence pertaining to costs and expenses incurred pursuant to the project to the extent and in such detail as will properly reflect total project costs.

g. Perform, or cause to be performed, 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 (CERCLA), 42 U.S.C. 9601-9675, that may exist in, on, or under lands, easements or rights-of-way necessary for the construction, operation, and maintenance of the project; except that the non-Federal sponsor shall not perform such investigations on lands, easements, or rights-of-way that the Government determines to be subject to the navigation servitude without prior specific written direction by the Government.

h. Assume complete financial responsibility for all necessary cleanup and response costs of any CERCLA regulated materials located in, on, or under lands, easements, or rights-of-way that the Government determines necessary for the construction, operation, or maintenance of the project.

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i. Agree that, as between the Government and the non-Federal sponsor, 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, replace, and rehabilitate the project and otherwise perform its obligations in a manner that will not cause liability to arise under CERCLA.

j. Prevent obstructions of, or encroachments on, the project (including prescribing and enforcing regulations to prevent such obstructions or encroachments) which might reduce the level of protection it affords, hinder its operation and maintenance, or interfere with its proposed function, such as any new developments on project lands or addition of facilities which would degrade the benefits of the project.

k. Comply with the applicable provisions of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, Public Law 91-646, as amended, 42 U.S.C. 4601-4655, and the Uniform Regulations contained in 49 CFR Part 24, in acquiring lands, easements, and rights-of-way, and performing relocations for construction, operation, and maintenance of the project, and inform all affected persons of applicable benefits, policies, and procedures in connection with said Act.

l. Comply with all applicable Federal and State laws and regulations, including, but not limited to: Section 601 of the Civil Rights Act of 1964, Public Law 88-352 (42 U.S.C. 2000d) and Defense Directive 5500.11 issued pursuant thereto; Army Regulation 600-7, entitled "Nondiscrimination on the Basis of Handicap in Programs and Activities Assisted or Conducted by the Department of the Army"; and all applicable Federal labor standards requirements including, but not limited to, 40 U.S.C. 3141-3148 and 40 U.S.C. 3701-3708 (revising, codifying and enacting without substantive change the provisions of the Davis-Bacon Act (formerly 40 U.S.C. 276a *et seq.*), the Contract Work Hours and Safety Standards Act (formerly 40 U.S.C. 327 *et seq.*) and the Copeland Anti-Kickback Act (formerly 40 U.S.C. 276c)).

m. Provide the non-Federal share of that portion of the costs of archeological data recovery activities associated with historic preservation, that are in excess of 1 percent of the total amount authorized to be appropriated for the project, in accordance with cost sharing provisions of the agreement.

n. Not use Federal funds to meet the non-Federal sponsor's share of total project costs unless the Federal granting agency verifies in writing that the expenditure of such funds is authorized.

o. Provide and maintain necessary access roads, parking areas, and other public use facilities, open and available to all on equal terms.

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p. For so long as the project remains authorized, provide the quantity of water for such periods that the Government determines is necessary to construct, operate, repair, replace, rehabilitate, and otherwise maintain the project.

9. 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, 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 the 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.

A handwritten signature in black ink, appearing to read 'Carl A. Strock', with a long horizontal flourish extending to the right.

CARL A. STROCK
Lieutenant General, U.S. Army
Chief of Engineers