



DEPARTMENT OF THE ARMY  
U.S. ARMY CORPS OF ENGINEERS  
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WASHINGTON, DC 20314-1000

CECW-P

OCT 19 2017

MEMORANDUM FOR SEE DISTRIBUTION

SUBJECT: Implementation Guidance for Section 1161 of the Water Resources Development Act of 2016 (WRDA 2016), Completion of Ecosystem Restoration Projects

1. Section 1161 of WRDA 2016 amends Section 2039 of WRDA 2007, to specify information required to be included in monitoring plans for ecosystem restoration projects, and to direct when non-federal operation and maintenance responsibilities of these projects may cease. Section 2039 of WRDA 2007, as amended by Section 1161 of WRDA 2016, is enclosed.
2. Section 2039 of WRDA 2007, as amended, directs the Secretary to ensure that, when conducting a feasibility study for a project (or component of a project) for ecosystem restoration, the recommended project includes a plan for monitoring the success of the ecosystem restoration. The monitoring plan shall include a description of:
  - a. Types and number of restoration activities to be carried out;
  - b. Physical actions to be undertaken to achieve project objectives;
  - c. Functions and values that will result from the restoration plan;
  - d. Monitoring activities to be carried out;
  - e. Criteria for ecosystem restoration success;
  - f. Estimated cost and duration of the monitoring; and
  - g. A contingency plan for taking corrective actions in cases in which the monitoring demonstrates that restoration measures are not achieving ecological success in accordance with criteria described in the monitoring plan.
3. The monitoring plan will also specify that the monitoring will continue until such time as the Secretary determines that the success criteria will be met. Within a period of ten years from completion of construction of an ecosystem restoration project, monitoring shall be a cost-shared project cost. Any additional monitoring required beyond 10 years will be a non-federal responsibility.

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4. Additionally, Section 2039(e) of WRDA 2007, as amended, directs that the responsibility of a non-federal interest for operations and maintenance (O&M) of the nonstructural and nonmechanical elements of a project (or component of a project) for ecosystem restoration shall cease 10 years after the date on which the Secretary makes a determination of success per Section 2039(b)(2). The Secretary is not responsible for the O&M of any components of a project with respect to which a non-federal interest is released from obligations under Section 2039(e).

5. This memorandum provides guidance for the monitoring and adaptive management of ecosystem restoration projects, the determination of project success, and the cessation of non-federal O&M requirements. This guidance applies to specifically authorized projects and components of projects as well as to those ecosystem restoration projects initiated under the Continuing Authority Program or other programmatic authorities. This implementation guidance does not apply to projects that are already authorized or under construction, or completed projects. This implementation guidance replaces guidance issued on 31 August 2009, CECW-PB Memorandum, Subject: Implementation Guidance for Section 2039 of WRDA 2007, Monitoring Ecosystem Restoration.

6. Section 1010 of the Water Resources Reform and Development Act of 2014 (WRRDA 2014) provides requirements for determination of project completion. Nothing in this guidance changes guidance provided for Section 1010 in a 30 January 2015, CECW-P Memorandum, subject: Implementation Guidance for Section 1010 of WRRDA 2014, Determination of Project Completion.

7. Guidance.

a. Monitoring includes the systematic collection and analysis of data that provides information necessary to determine if the project is meeting its performance standards, and to determine when ecological success has been achieved or whether adaptive management measures are necessary to ensure that the project will attain project benefits. Development of a monitoring plan will be initiated during the plan formulation process for an ecosystem restoration project, or component of a project, and should focus on key indicators of project performance.

b. The monitoring plan must be described in the decision document as stated in paragraph 2.a-g, and must include the rationale for monitoring, the key project-specific parameters to be measured, how the parameters relate to achieving the desired outcomes or making a decision about the next phase of the project, and the intended use(s) of the information obtained. Also to be described in the plan is the nature of the monitoring including duration and/or periodicity, the disposition of the information and analysis, as well as the cost of the monitoring plan, the party responsible for carrying

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out the monitoring plan, and a project closeout plan. Monitoring plans need not be complex but the scope and duration should include the minimum monitoring actions necessary to evaluate success. The appropriateness of a monitoring plan will be reviewed as part of the decision document review including agency technical review and independent external peer review, as necessary. The estimated cost of the proposed monitoring program will be included in the project cost estimate and cost-shared accordingly.

c. Upon completion of construction of an ecosystem restoration project (or component of a project), monitoring for ecological success will be initiated. Monitoring will be continued until ecological success is determined. Once ecological success has been documented by the district engineer in consultation with federal and state resource agencies, and a determination has been made by the division commander that ecological success has been achieved (which may be less than ten years), no further monitoring will be required. Ecological success will be documented through an evaluation of the predicted outcomes as measured against the actual results. The law allows for but does not require a 10-year cost shared monitoring plan. Necessary monitoring for a period not to exceed 10 years will be considered a project cost and will be cost shared as a project construction cost and funded under construction. Costs for monitoring beyond a 10-year period will be a non-federal responsibility. Financial and implementation responsibilities for the monitoring plan will be identified in the project partnership agreement. For Continuing Authority Program (CAP) projects, or for those projects that may be authorized with an explicit dollar cap, any cost shared monitoring costs cannot increase the federal cost beyond the authorized project limit of the CAP or other authority under which the project is being considered.

d. Contingency (Adaptive Management) Plan. An adaptive management plan addresses unforeseen changes in site conditions or other components of the restoration project and will be developed for all ecosystem restoration projects. The adaptive management plan will guide decisions for refining or revising restoration activities and implementing measures to address both foreseeable and unforeseen circumstances that adversely affect restoration success. The information generated by the monitoring plan will be used by the district in consultation with federal and state resource agencies and the MSC, to guide decisions on operational or structural changes to a project that may be needed to ensure that the ecosystem restoration meets the success criteria described in the monitoring plan. The adaptive management plan must be appropriately scoped to the scale of the project. If the need for a specified adjustment is anticipated due to high uncertainty in achieving the desired outputs/results, the nature and cost of such actions should be explicitly described in the decision document for the project. The reasonableness and the cost of the adaptive management plan will be reviewed as part of the decision document. Costly adaptive management plans may indicate the

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need to reevaluate the formulation of the ecosystem restoration project. The adaptive management plan cost should be shown in the 06 feature code of the cost estimate.

e. If the results of the monitoring program support the need for physical modifications to the project, the cost of the changes will be cost shared with the non-federal sponsor and must be concurred with by the non-federal sponsor. The appropriate HQUSACE RIT should be advised at such time that it is determined a modification to a project is required. Any changes to an adaptive management plan in an approved decision document must be coordinated with HQUSACE Chief of Planning and Policy at the earliest opportunity. If a needed modification to a project is not part of the approved adaptive management plan and is determined by HQUSACE to be a deficiency correction, the annual budget guidance to initiate a study for such corrections should be followed. Significant changes to the project required to achieve ecological success and which cannot be appropriately addressed through operational changes or through the approved adaptive management plan may need to be examined under other authorities, such as Section 216, River and Harbor and Flood Control Act of 1970.

f. Ten years after ecological success has been determined pursuant to paragraph 7.c, the responsibility of a non-federal sponsor to conduct O&M activities on nonstructural and nonmechanical elements of an ecosystem restoration project (or component of a project) will cease. Operation, maintenance, repair, replacement and rehabilitation of structural and mechanical elements of an ecosystem restoration project (or component of a project) will continue as outlined in the operations manual for the project. The decision document for an ecosystem restoration project, or for other projects with an ecosystem restoration component, will include a description of project features that are considered nonmechanical and nonstructural. The decision document will also provide an analysis of the long-term risk to ecological success and sustainability of project features and functions should O&M of nonmechanical and nonstructural elements cease after the prescribed time frame, versus O&M occurring as needed in perpetuity. The significance of risks associated with the cessation of O&M of nonmechanical and nonstructural elements at an ecosystem restoration project (or component of a project) will be considered during deliberations on plan selection and federal participation.

g. Upon cessation of non-federal sponsor O&M activities on nonstructural and nonmechanical project elements in accordance with paragraph 7.f, these activities cannot subsequently be conducted by USACE. The non-federal sponsor is not prohibited from voluntarily conducting or resuming O&M of nonstructural and nonmechanical project elements at 100% non-federal cost

h. Cessation of O&M activities does not alter the non-federal sponsor's obligation to retain in public ownership the real property interests required for an ecosystem

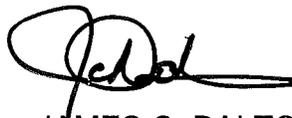
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restoration project for so long as the project remains authorized. Fee simple or perpetual easements will continue to be required for ecosystem restoration projects in accordance with the guidance in ER 405-1-12, ER 1105-2-100, and EP 1165-2-502. Perpetual real property interests are necessary to protect project benefits for so long as a project remains authorized.

8. The policy guidance in this memorandum will be incorporated into the permanent guidance of ER 1105-2-100 as the ER is updated. Technical assistance in developing and implementing monitoring and adaptive management plans will be forthcoming in technical notes, manuals and/or handbooks.

9. Questions regarding this implementation guidance may be directed to Mark Matusiak, Planning and Policy Division, at (202) 761-4700 or Mark.Matusiak@usace.army.mil.



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**Section 2039 of WRDA 2007, as amended by Section 1161 of WRDA 2016**

**MONITORING ECOSYSTEM RESTORATION**

(a) **IN GENERAL.**—In conducting a feasibility study for a project (or a component of a project) for ecosystem restoration, the Secretary shall ensure that the recommended project includes, as an integral part of the project, a plan for monitoring the success of the ecosystem restoration.

(b) **MONITORING PLAN.**—The monitoring plan shall—

(1) include a description of the monitoring activities to be carried out, the criteria for ecosystem restoration success, and the estimated cost and duration of the monitoring; and

(2) specify that the monitoring shall continue until such time as the Secretary determines that the criteria for ecosystem restoration success will be met.

(c) **COST SHARE.**—For a period of 10 years from completion of construction of a project (or a component of a project) for ecosystem restoration, the Secretary shall consider the cost of carrying out the monitoring as a project cost. If the monitoring plan under subsection (b) requires monitoring beyond the 10-year period, the cost of monitoring shall be a non-federal responsibility.

(d) **INCLUSIONS.**—A monitoring plan under subsection (b) shall include a description of—

(1) the types and number of restoration activities to be conducted;

(2) the physical action to be undertaken to achieve the restoration objectives of the project;

(3) the functions and values that will result from the restoration plan; and

(4) a contingency plan for taking corrective actions in cases in which monitoring demonstrates that restoration measures are not achieving ecological success in accordance with criteria described in the monitoring plan.

(e) **CONCLUSION OF OPERATION AND MAINTENANCE RESPONSIBILITY.**—

The responsibility of a non-federal interest for operation and maintenance of the nonstructural and nonmechanical elements of a project, or a component of a project, for ecosystem restoration shall cease 10 years after the date on which the Secretary makes a determination of success under subsection (b)(2).

(f) **FEDERAL OBLIGATIONS.**—The Secretary is not responsible for the operation or maintenance of any components of a project with respect to which a non-federal interest is released from obligations under subsection (e).