

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 8

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EPA REGION VIII  
HEARING CLERK

IN THE MATTER OF: )  
)  
DR. THOMAS RICHARDS )  
217 Woodward Avenue )  
Sausalito, CA 94965 )  
)  
Respondent. )  
\_\_\_\_\_ )

ADMINISTRATIVE ORDER  
ON CONSENT

Docket No. CWA-08-2015-0011

**I. INTRODUCTION**

This Administrative Order on Consent (AOC) is entered into voluntarily by the United States Environmental Protection Agency (EPA) and Dr. Thomas Richards (Respondent). The AOC concerns the implementation and completion of actions required to restore the environmental damage caused by allegedly illegal discharges of dredged and/or fill material into Little Goose Creek, Girdle Ditch, and wetlands adjacent to Little Goose Creek and Girdle Ditch in Sheridan County, Wyoming.

**II. STATUTORY AUTHORITY**

This AOC is issued pursuant to the authority vested in the Administrator of the EPA by section 309 of the Clean Water Act (CWA), 33 U.S.C. § 1319, and by the Administrator delegated to the Regional Administrator of the EPA Region 8 and redelegated by the Regional Administrator of the EPA Region 8 to the Assistant Regional Administrator, Office of Enforcement, Compliance and Environmental Justice. The AOC is based on the findings of violation of section 301(a) of the CWA, 33 U.S.C. § 1311(a), which, among other things, prohibits the discharge of pollutants into waters of the United States except as in compliance with section 404 of the CWA, 33 U.S.C. § 1344.

### **III. PARTIES BOUND**

This AOC shall apply to and be binding upon the EPA and upon Respondent. The signatories to this AOC certify that they are authorized to execute and legally bind the party they represent to this AOC. No change in the ownership of the Site shall alter Respondent's responsibilities under this AOC unless the EPA, Respondent, and the transferee agree in writing to allow the transferee to assume such responsibilities. Additionally, at least 30 calendar days prior to such transfer, Respondent shall notify the EPA at the address specified in paragraph 45 of this AOC.

### **IV. STATEMENT OF PARTIES**

The following FINDINGS OF FACT AND OF VIOLATION are made solely by the EPA. In signing this AOC, Respondent neither admits nor denies the FINDINGS OF FACT AND OF VIOLATION. As such, and without any admission of liability, Respondent consents to issuance of this AOC and agrees to abide by all of the conditions herein. Respondent waives any and all claims for relief and otherwise available rights or remedies to judicial or administrative review which Respondent may have with respect to any issue of fact or law set forth in this AOC, including, but not limited to, any right of judicial review of this AOC under the Administrative Procedure Act, 5 U.S.C. §§ 701-706. Respondent further agrees not to challenge the jurisdiction of the EPA or the FINDINGS OF FACT AND OF VIOLATION below in any proceeding to enforce this AOC or in any action under this AOC.

### **V. FINDINGS OF FACT AND OF VIOLATION**

1. Respondent is an individual whose primary place of residence is located at 217 Woodward Avenue, Sausalito, California.

2. Respondent owns property in the SW ¼ of the NE ¼ of Section 27, Township 55 North, Range 84 West, in Sheridan County, Wyoming (Site). Little Goose Creek and Girdle Ditch run through the Site, and wetlands adjacent to Little Goose Creek and Girdle Ditch are located at the Site.
3. In July of 2006, Respondent contacted the U.S. Army Corps of Engineers (Corps) to inquire about the need to obtain a permit pursuant to section 404 of the CWA, 33 U.S.C. § 1344, (404 Permit) to develop property at the Site adjacent to Little Goose Creek.
4. The Corps informed Respondent that wetlands and other waters of the U.S. appeared to be on his property and that he should conduct a wetland delineation and submit it to the Corps for verification. Respondent did not submit a wetland delineation and no construction activities were observed by the Corps at that time.
5. In September and October 2008, Respondent contacted the Corps and advised that he intended to conduct bank stabilization activities and construct minor road crossings at the Site.
6. In November 2008, pursuant to nationwide permits 14 and 18, the Corps authorized Respondent to place rock at the Site along the bank of Little Goose Creek and construct three road crossings on small tributaries to Little Goose Creek. The permit identified Little Goose Creek and adjacent wetlands as waters of the U.S.
7. In December 2008, in response to Respondent's inquiry regarding the removal of a beaver dam at the Site, the Corps advised Respondent that if the excavation was conducted without discharging fill material into a water of the U.S., the Corps would not regulate the activity.
8. In March 2009, the Corps notified Respondent of apparent violations of the nationwide permits, arising from an improper construction of one of the stream crossings and the discharge of fill

material into waters of the U.S. during the removal of the beaver dam. The Corps instructed Respondent to undertake remedial actions to come into compliance with the permit.

9. Respondent completed the remedial actions in April 2009.
10. In November 2011 and August through September 2012, Respondent conducted land clearing, pond and wetland dredging, and residential land development at the Site, resulting in the discharge of dredged and fill material into Little Goose Creek, Girdle Ditch, and wetlands adjacent to Little Goose Creek and Girdle Ditch. Respondent did not obtain authorization from the Corps to conduct these dredge and fill activities.
11. In August 2012, the Corps received information about these activities and contacted Respondent via telephone on August 30, 2012. Respondent confirmed that he was clearing out ponds, connecting ponds and using fill at the Site for a home and a garage. The Corps advised Respondent that if these activities resulted in discharges of dredged or fill material into waters of the U.S., a permit from the Corps would be required and additional work in the area of the wetlands should be avoided until the Corps could conduct a site visit.
12. In September 2012, Respondent hired a consultant, Steady Stream Hydrology, Inc. (SSH) to conduct a wetlands delineation at the Site and agreed to cease any further work that would result in unauthorized discharges of fill into waters of the U.S.
13. In October 2012, the Corps conducted a site visit and confirmed that unauthorized activities resulting in the excavation and discharge of dredged and/or fill material into waters of the U.S. had occurred.
14. The Corps issued a notice of violation (NOV) to Respondent on November 7, 2012, providing notice of the Corps' finding that Respondent had conducted unauthorized activities at the Site

resulting in the discharge of dredged and/or fill material into Little Goose Creek, Girdle Ditch, and wetlands adjacent to Little Goose Creek and Girdle Ditch. The Corps found that Respondent had conducted unauthorized activities impacting approximately 1.75 acres of wetlands, 546 sq. ft. of Girdle Ditch, and 300 sq. ft. of Little Goose Creek. The NOV ordered Respondent to conduct initial corrective measures to help restore function and seasonal flow attenuation within the creek channel and immediate floodplain.

15. In January 2013, Respondent submitted a compliance certification to the Corps, documenting actions to comply with the Corps' order to conduct initial corrective measures.
16. In March 2013, the Corps advised Respondent that additional information was needed for verification of the wetlands delineation to be completed.
17. On May 3, 2013, Respondent submitted some of the requested information to the Corps.
18. On May 15, 2013, pursuant to an interagency memorandum of agreement concerning the federal enforcement of the section 404 program of the CWA dated January 19, 1989, the Corps referred this matter to the EPA for enforcement.
19. On June 14, 2013, Respondent submitted additional information regarding the wetlands delineation to the Corps. The Corps forwarded this information to the EPA.
20. On April 30, 2014, the EPA sent a letter of potential violation to Respondent, inviting Respondent to enter into preliminary discussions with the EPA. In consultation with the Corps, the EPA engaged in discussions with Respondent to reach a resolution of this matter.
21. The EPA has determined that Respondent has completed some, but not all, of the necessary corrective measures.

22. Little Goose Creek is a perennial tributary of the Tongue River, a traditionally navigable water. Girdle Ditch is a tributary of Little Goose Creek. The impacted wetlands at the Site directly abut and are hydrologically connected to Little Goose Creek and Girdle Ditch.
23. Little Goose Creek, Girdle Ditch, and the wetlands adjacent to Little Goose Creek and Girdle Ditch are and were at all relevant times “waters of the United States” within the meaning of 33 C.F.R. § 328.3(a) and therefore “navigable waters” within the meaning of section 502(7) of the CWA, 33 U.S.C. § 1362(7).
24. The discharged dredged and/or fill material referenced in this AOC is and was at all relevant times “dredged material” and “fill material” within the meaning of 33 C.F.R. § 323.2(c) and (e), respectively, and “pollutants” within the meaning of section 502(6) of the CWA, 33 U.S.C. § 1362(6).
25. The discharges of fill material described in this AOC resulted from the use of common earthmoving vehicles and equipment. These vehicles and equipment are and were at all relevant times each a “point source” within the meaning of section 502(14) of the CWA, 33 U.S.C. § 1362(14).
26. The placement of the dredged and fill material into Little Goose Creek, Girdle Ditch, and the wetlands abutting Little Goose Creek and Girdle Ditch as described in this AOC constituted “discharges of pollutants” within the meaning of section 502(12) of the CWA, 33 U.S.C. § 1362(12).
27. Section 404 of the CWA, 33 U.S.C. § 1344, sets forth a permitting system authorizing the Secretary of the Army, acting through the Chief of Engineers of the Corps, to issue permits for the discharge of dredged or fill material into waters of the U.S.

28. Under 33 C.F.R. § 323.3(a), a 404 permit issued by the Corps is required for the discharge of dredged or fill material into waters of the U.S., unless the activities are exempted pursuant to 33 C.F.R. § 323.4.
29. Respondent was not authorized by a 404 permit to conduct any of the activities resulting in discharges of dredged and fill material into waters of the U.S. described in this AOC, nor were the activities exempted from the 404 permitting requirements.
30. Respondent is a “person” within the meaning of section 502(5) of the CWA, 33 U.S.C. § 1362(5).
31. Section 301(a) of the CWA, 33 U.S.C. § 1311(a), prohibits the discharge of pollutants by any person into waters of the U.S. except as in compliance with section 404 of the CWA, 33 U.S.C. § 1344.
32. Respondent’s activities resulting in the discharges of dredged and fill material into waters of the U.S. constitute violations of section 301(a) of the CWA, 33 U.S.C. § 1311(a).

#### **VI. ORDER FOR COMPLIANCE**

33. The foregoing FINDINGS OF FACT AND OF VIOLATION and this ORDER FOR COMPLIANCE have been made after consultation and coordination with the Corps.
34. Activities to be carried out under this AOC are remedial, not punitive, and are necessary to achieve the CWA’s objective “to restore and maintain the chemical, physical, and biological integrity of the nation’s waters.” Section 101(a) of the CWA, 33 U.S.C. § 1251(a). Restoration is appropriate and required to address the actual and potential harm to water quality, aquatic habitat, and wildlife habitat, as well as other functions and values, caused by Respondent’s unpermitted activities.

35. Based upon the foregoing FINDINGS OF FACT AND OF VIOLATION and pursuant to the authority vested in the Administrator of the EPA under section 309(a) of the CWA, 33 U.S.C. § 1319(a), as properly delegated to the Assistant Regional Administrator for the Office of Enforcement, Compliance and Environmental Justice, it is hereby ORDERED and AGREED:
36. Respondent shall immediately terminate all discharges of dredged and fill material into waters of the U.S. at the Site, now and in the future, unless specifically authorized to do so pursuant to a 404 permit issued by the Corps.
37. Within 15 calendar days of receipt of this AOC, Respondent shall submit to the EPA the name and qualifications, including professional resume, of a consultant (Consultant) experienced in wetlands restoration who will prepare a restoration plan (Plan) and who will directly supervise all work performed pursuant to the Plan.
38. Within 60 calendar days of receipt of this AOC, Respondent shall submit to the EPA for review, comment, and approval the Plan, prepared by the Consultant, setting forth a proposal for: (1) the removal of dredged and fill material that was discharged into the waters of the U.S. at the Site; and (2) the restoration of the waters of the U.S. at the Site that were impacted by Respondent's unauthorized discharges of dredged and fill material.
39. The Plan shall be prepared in accordance with the "U.S. Environmental Protection Agency, Region 8 Clean Water Act § 404 Enforcement: Removal/Restoration Plans and Habitat Mitigation/Monitoring Proposals," attached hereto as Exhibit A. The Plan shall include:
- a. a complete assessment of the impacts to the Little Goose Creek and its adjacent wetlands due to Respondent's unauthorized discharges of dredged and fill material at the Site;

- b. a site map at an appropriate scale showing the entire area of unauthorized disturbance, including existing undisturbed natural features that were not impacted (e.g., riparian and wetland areas, riffle and pool complexes) and clearly identify all unauthorized manmade disturbances, fills, channel excavations, road crossings, culverts, structures, and any other work;
  - c. a detailed work plan and schedule for all of the work and activities to be accomplished, as specified in the Plan, including the application for any required permits, providing for completion of all aspects of the work no later than 60 days after the EPA approves the Plan;
  - d. grading, planting, and monitoring plans, measurable criteria for success of restoration and provisions for proper disposal of any excess soils or other material generated during removal and restoration;
  - e. detailed professional drawings of the restoration site, including plan and profile drawings with control elevations for current conditions and proposed conditions; and
  - f. a description of all costs to complete the restoration work, including the costs of all consultations, permits, construction, and monitoring.
40. The EPA will review the Plan and approve it, approve it with modifications or reject it with comments. If the EPA rejects the Plan, Respondent shall, within 60 calendar days of receipt of the EPA's rejection letter, submit a revised Plan that corrects the deficiencies identified by the EPA.
41. This AOC is not a permit or an authorization to discharge dredged or fill material, storm water, or any other pollutant into waters of the U.S. Respondent shall consult with the Corps to

determine if any work to be performed pursuant to this AOC requires a 404 permit from the Corps. If any such permit is required, Respondent shall obtain such permit(s) and provide a copy to the EPA prior to initiating any work that is to be performed pursuant to the Plan. The Corps can be reached at:

U.S. Army Corps of Engineers  
Wyoming Regulatory Office  
2232 Dell Range Blvd., Suite 210  
Cheyenne, WY 82009  
(307) 772-2300

42. Respondent must make a timely application for each permit necessary to implement the Plan and for conducting removal and restoration activities in accordance with the Plan, including the schedule specified therein, with all granted permits, and with all applicable laws. If any permits are necessary, Respondent shall demonstrate that all permits have been granted by providing copies of all such permits, and any amendments thereto, to the EPA within seven calendar days of issuance of each permit.
43. Respondent shall implement the Plan and ensure that all required activities are conducted in accordance with the Plan, including the time frames specified therein, and all granted permits.
44. Respondent shall ensure that the Consultant supervises all work performed pursuant to the Plan and shall be present at the Site during all critical times unless the EPA authorizes otherwise in advance.
45. Respondent shall submit two copies of the Plan, all permits, notifications, and related correspondence to:

Richard Clark  
Mail Code 8ENF-W  
U.S. EPA, Region 8  
1595 Wynkoop St.  
Denver, CO 80202  
(303) 312-6748  
clark.richard@epa.gov

Respondent shall also submit a copy of the Plan to the Corps at the address in paragraph 41.

46. All plans, deliverables, reports, specifications, schedules and attachments required by this AOC are, upon approval by the EPA, incorporated into this AOC. Any noncompliance with such EPA-approved plans, deliverables, reports, specifications, schedules, and attachments shall be deemed a failure to comply with this AOC and subject to EPA enforcement.
47. A lease, sublease, or transfer of the Site shall not relieve Respondent of any responsibility in the AOC unless the EPA, Respondent, and the lessee, sublessee, or transferee agree in writing to allow the lessee, sublessee, or transferee to assume such responsibility. Additionally, at least 30 calendar days prior to such lease, sublease, or transfer, Respondent shall notify the EPA regarding the details of the lease, sublease, or transfer at the address specified in paragraph 45.
48. Respondent shall allow, or use his best efforts to allow, access by any authorized representative of the EPA or its contractors and the Corps to the Site and to all records relevant to this AOC for any of the following purposes:
  - a. to inspect and monitor progress of the activities required under this AOC;
  - b. to inspect and monitor compliance with this AOC; and
  - c. to verify and evaluate data and other information submitted to the EPA and/or the Corps.
49. This AOC shall in no way limit or otherwise affect the EPA's authority, or the authority of the Corps or any other governmental agency, to enter the Site, conduct inspections, have access to

records, issue notices and orders for enforcement, compliance, or abatement purposes, or monitor compliance pursuant to any statute, regulation, permit, or court order.

50. This AOC shall be effective upon the date Respondent receives a fully executed copy of this AOC.
51. Issuance of this AOC shall not be deemed an election by the EPA to forego any civil or criminal action to seek penalties, fines, or other appropriate relief under the CWA for violations giving rise to this AOC.
52. The EPA agrees to submit all notifications and correspondence related to the AOC to:

Dr. Thomas Richards  
217 Woodward Ave.  
Sausalito, CA 94965  
[Trichards0445@me.com](mailto:Trichards0445@me.com)

53. Any party hereto may, by notice, change the address to which future notices shall be sent or the identities of the persons designated to receive notices hereunder.
54. If an event causes or may cause a delay in the achievement of the requirements of this AOC, Respondent shall notify EPA by telephone or by e-mail as soon as possible and in any event, in writing no later than ten working days from the date Respondent first knew of such event or should have known of such event by exercise of due diligence, whichever is earlier.  
  
Respondent's written notice shall specify the length of the anticipated delay, the cause(s) of the delay, the measures taken or to be taken by Respondent to minimize the delay and a timetable by which those measures will be or have been implemented. Notification to the EPA pursuant to this paragraph of any anticipated delay, by itself, shall not excuse the delay or the obligation of Respondent to comply with requirements and deadlines of this AOC. Such extension of the applicable requirement or deadline must be granted by the EPA in writing.

55. If Respondent demonstrates that the delay or anticipated delay has been or will be caused by circumstances beyond Respondent's control, and that Respondent could not have foreseen such circumstances nor taken all reasonable measures to prevent or minimize such delay, the EPA may excuse performance or extend the time for performance of such requirement. The EPA's determination on such matters shall be made as soon as possible and in any event, in writing no later than ten working days after the receipt of Respondent's written notification of the event and submission of information sufficient to allow the EPA to make its determination. Changed economic circumstances shall not be considered circumstances beyond the control of Respondent.
56. Respondent understands and acknowledges the following:
- a. Compliance with the terms and conditions of this AOC shall not be construed to relieve Respondent of his obligations to comply with any applicable federal, state, or local law or regulation.
  - b. Failure by Respondent to complete the tasks described herein in the manner and time frame specified pursuant to this AOC may subject Respondent to a civil action under section 309 of the CWA, 33 U.S.C. § 1319, for violation of this AOC.

IN THE MATTER OF: DR. THOMAS RICHARDS  
ADMINISTRATIVE ORDER ON CONSENT

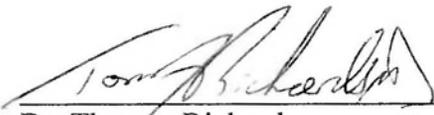
UNITED STATES ENVIRONMENTAL  
PROTECTION AGENCY, REGION 8  
Complainant

1/12/15  
\_\_\_\_\_  
Date

  
\_\_\_\_\_  
Suzanne J. Bohan  
Acting Assistant Regional Administrator  
Office of Enforcement, Compliance and  
Environmental Justice

DR. THOMAS RICHARDS  
Respondent

12/18/14  
\_\_\_\_\_  
Date

  
\_\_\_\_\_  
Dr. Thomas Richards

**CERTIFICATE OF SERVICE**

The undersigned hereby certifies that the original and one true and correct copy of the foregoing **ADMINISTRATIVE ORDER ON CONSENT** were hand delivered to the Regional Hearing Clerk, EPA Region 8, 1595 Wynkoop Street, Denver, Colorado, and that a true copy of the same was sent via Certified Mail to the following Monday, January 12, 2015 as indicated below:

to:

Dr. Thomas Richards  
217 Woodward Avenue  
Sausalito, California 94965  
CERTIFIED MAIL # 7008 3230 0003 0726 0979

Date: Monday, January 12, 2015

By: *Dayle Aldinger*  
Dayle Aldinger

# EXHIBIT A

U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION 8

CLEAN WATER ACT § 404 ENFORCEMENT:  
REMOVAL/RESTORATION PLANS  
AND HABITAT MITIGATION/MONITORING PROPOSALS

**INTRODUCTION**

These guidelines are designed to assist respondents in the preparation of (1) removal and restoration plans and (2) habitat mitigation and monitoring plans associated with projects required under EPA administrative orders. They have been developed from the experiences of many cases and are intended to be merely guidelines. In the event of a conflict between an administrative order and these guidelines, the administrative order controls.

For answers to questions regarding the interpretation of these guidelines or of acceptable restoration and mitigation for a specific project, please contact the person at EPA Region 8 in the Technical Enforcement Program who is handling the case.

**CLEAN WATER ACT § 404 ENFORCEMENT:  
GENERAL GUIDELINES FOR DEVELOPMENT OF  
REMOVAL AND RESTORATION PLANS**

**I. GENERAL INFORMATION**

The following guidelines serve as general specifications for preparing removal and restoration plans to remediate the unpermitted filling of wetlands. As environmental conditions vary from site to site, precise specifications will depend upon the environment conditions peculiar to the site in question. The size of the wetland area to be restored, its biological and physical characteristics, and the level of disturbance the wetland has experienced will further define the scope and complexity of the restoration plan. In most cases, the types of information listed below represent only the minimum required to formulate an acceptable removal and restoration plan.

**When these guidelines are incorporated into an EPA administrative order, the recipient of the order should obtain the approval of EPA's technical representative on the case before departing from the general specifications outlined below.**

**II. RECOMMENDED REMOVAL AND RESTORATION PLAN FORMAT**

The removal and restoration plan should be presented using the following six subsections when possible. An explanation of the kind of information that should be included in each subsection is provided.

**1. Existing Physical Conditions**

- A. A surveyed site plan depicting property boundaries, streets, buildings, waterbodies (with ordinary high water line indicated), wetlands, FEMA 100-year floodplain (if applicable), areas of unpermitted fill, elevation contours, and other ground surface features at a scale no greater than 1":40'. This plan shall include a cross-section view of the site which shows soil depths, fill depths, and average depth to groundwater across the site.
- B. A narrative description of existing physical conditions, including the area of the site; area of unpermitted fill; existing wetlands (including the types of vegetation); the soil types present (including the types of unpermitted fill present); the hydrologic regime of the site; and other relevant information.

## 2. Proposed Physical Conditions

- A. Using the site plan described in Subsection 1.A. as a base, show the exact areas where remedial activities will occur (e.g., removal of fill, replacing dredged material into ditches, etc.). Indicate proposed finished grades, expected ordinary high water elevations, the location of proposed plantings/seedings, and the location of all sediment and erosion control structures (e.g., hay bales, silt screens, etc.). This plan shall include a cross-section view of the site which shows proposed soil depths and average depth to groundwater across the site.
- B. Provide a narrative description of the remedial work to occur, including the methods and equipment to be employed; how access to the site to perform the work will be obtained; how equipment will be brought to the site; the location of the ultimate disposal site for any removed fill; how the work will progress across the site; a listing of the plant species to be seeded/planted at the site; the sources of the plant material [*note*: as a rule, transplanting of plant stock will not be permitted]; the planting method(s) and scheme (i.e., physical layout of the how plant material will be installed); any methods to be used to minimize adverse impacts while remedial work is underway; the expected hydrologic regime of the site in its restored condition; and other relevant information.
- C. Delineate the area(s) on the site to be restored by installation of flagging, sedimentation and erosion control structures, or other appropriate method. This delineation shall represent the limit of construction activities such that no work shall occur beyond those boundaries.

## 3. Actual Restored Physical Conditions

Using the site plan described in Subsection 1.A. as a base, show the actual physical conditions to exist at the site at the completion of grading activities (i.e., as “as-built” plan), including actual finished grades and all pertinent ground surface features. This plan shall include a cross-section view of the site which shows actual soil depths and average depth to groundwater across the site. This as-built plan shall be prepared and submitted prior to planting/seeding activities.

## 4. Monitoring/Measures of Success

- A. Normally, monitoring shall be performed midway through and near the end of the first and second growing seasons, then annually near the end of each successive growing season for the duration of the required

monitoring period. Monitoring shall be performed for a period of at least five years due to the scope and complexity of the remedial efforts required.

- B. A monitoring plan shall incorporate a simple statistical approach to assessing relative success or failure of restoration efforts (e.g., transects with sampling stations for measuring parameters such as percent areal cover in each vegetative stratum). A permanent photographic record shall be included as part of the monitoring plan.
- C. Depending upon the scope and complexity of the remedial efforts, general criteria to measure success shall be determined by EPA. These criteria shall be directly related to reestablishing the structural components of the aquatic ecosystem being restored. A general provision shall be included to allow for corrective action to be taken, at the direction of EPA, should monitoring show that criteria for success are not being met.
- D. A report shall be prepared and submitted after each monitoring event which describes the environmental conditions at the site and assesses relative success or failure of restoration efforts. This report shall include photographic evidence as well. This report shall identify any problems discovered and recommend appropriate corrective action to ensure the success of restoration.

## **5. Inspections**

The plan shall provide for inspections by EPA personnel after installation of all sedimentation and erosion control structures, after completion of grading activities, after completion of initial planting/seeding activities, and after monitoring indicates that the criteria for success have been attained.

## **6. Schedule**

A comprehensive schedule integrating all removal, restoration, inspection, and monitoring activities as well as report/product submissions shall be included.

**CLEAN WATER ACT § 404 ENFORCEMENT:**  
**GENERAL GUIDELINES FOR DEVELOPMENT OF**  
**HABITAT MITIGATION AND MONITORING PROPOSALS**

**I. GENERAL INFORMATION**

Submission of a mitigation and monitoring proposal as described in these guidelines will not be a substitute for complete compliance with the Memorandum of Agreement Between the Environmental Protection Agency and the Department of the Army Concerning the Mitigation under the Clean Water Act Section 404(b)(1) Guidelines dated November 7, 1989, which took effect on February 7, 1990. Therefore, mitigation proposals will only be considered if avoidance and minimization have been fully pursued.

Although all the individual components presented here may not be applicable to every project, a proposal should address each heading in the guidelines. Appendix A provides text and figure format guidelines.

**II. PLACE OF MITIGATION AND MONITORING PROPOSAL IN CLEAN WATER ACT § 404 PERMIT PROCEDURE**

**1. Individual Permit**

If a respondent is applying for an individual permit from the U.S. Army Corps of Engineers (the "Corps") and proposes mitigation, it is preferable that a preliminary mitigation and monitoring plan be submitted along with application materials. A detailed preliminary mitigation plan should generally not be completed until a final jurisdictional map has been accepted by EPA, and the area of fill to be mitigated for has been identified. The final mitigation plan will usually be submitted following the public comment period and Corps review of the preliminary plan.

**2. Nationwide Permit**

If a respondent is requesting confirmation of a project's qualification for a Corps nationwide permit and proposes mitigation, a detailed mitigation and monitoring plan must be submitted with the request for confirmation.

**3. Final Submission**

The final submission of all mitigation and monitoring plans must be in a *single* document. It must contain up-to-date versions of all materials, even if other versions were submitted earlier in the application process.

### **III. EPA/CORPS POLICY**

In general, the goal of both EPA and the Corps is to permit no net loss of functions and values of wetland habitat. The replacement ratio of wetland acreage required to achieve this goal is typically *at least* 1:1, and is often higher. The attainment of replacement functions and values and an acreage replacement ratio are usually included in final success criteria associated with the completion of a respondent-permittee's mitigation responsibility.

### **V. SUMMARY OF RECOMMENDED MITIGATION AND MONITORING PROPOSAL FORMAT**

The mitigation and monitoring proposal should be presented using the following nine subsections when possible. Detailed explanations of the kind of information that should be included in each subsection is provided in Section VI below.

#### **1. PROJECT DESCRIPTION**

- A. Location of Project
- B. Brief Summary of Overall Project
- C. Responsible Parties
- D. Jurisdictional Areas to be Filled
- E. Type(s), Functions, and Values of the Jurisdictional Areas

#### **2. GOAL(S) OF MITIGATION**

- A. Type(s) of Habitat to be Created
- B. Functions and Values of Habitat to be Created
- C. Time Lapse

#### **3. FINAL SUCCESS CRITERIA**

- A. Target Functions and Values
- B. Target Hydrological Regime
- C. Target Jurisdictional Acreage to be Created

#### **4. PROPOSED MITIGATION SITE**

- A. Location and Size of Mitigation Area
- B. Ownership Status
- C. Existing Functions and Values of Mitigation Area
- D. Present and Proposed Uses of Mitigation Area
- E. Jurisdictional Delineation (if applicable)
- F. Present and Proposed Uses of All Adjacent Areas
- G. Zoning

**5. IMPLEMENTATION PLAN**

- A. Rationale for Expecting Implementation Success
- B. Responsible Parties
- C. Site Preparation
- D. Planting Plan
- E. Schedule
- F. Irrigation Plan
- G. As-Built Conditions

**6. MAINTENANCE DURING MONITORING PERIOD**

- A. Maintenance Activities
- B. Responsible Parties
- C. Schedule

**7. MONITORING PLAN**

- A. Performance Criteria
- B. Monitoring Methods
- C. Annual Reports
- D. Schedule

**8. COMPLETION OF MITIGATION**

- A. Notification of Completion
- B. Corps Confirmation

**9. CONTINGENCY MEASURES**

- A. Initiating Procedures
- B. Alternative Locations for Contingency Mitigation
- C. Funding Mechanism
- D. Responsible Parties

**VI. DETAILED RECOMMENDED MITIGATION AND MONITORING PROPOSAL FORMAT**

Detailed information to be included in each subsection of the mitigation and monitoring proposal is presented below. The nine subsections should be preceded by a one-page summary of the report contents.

## 1. PROJECT DESCRIPTION

### A. Location of Project

1. Describe
2. Provide:
  - a. Road map with site location clearly indicated
  - b. USGS quad map with project site outlines (clear photocopy is acceptable)

### B. Brief Summary of Overall Project

In one or two paragraphs, describe the overall project (not just the jurisdictional area to be filled). Include type of development and project size.

### C. Responsible Parties

Provide the name(s), title(s), address(es), and phone number(s) of the applicant(s)<sup>1</sup>, including the contact person(s) if the applicant is a company, and of the preparer(s) of the mitigation plan.

### D. Jurisdictional Areas to be Filled

Provide a full-size topo base map with verified Corps/EPA jurisdictional area(s) and area(s) of proposed fill outlines. (See Appendix A for map format information.)

### E. Type(s), Functions, and Values of the Jurisdictional Areas

1. Type: e.g., seasonal wetland, vernal pool, freshwater marsh, playa, etc.

2. Functions and Values

Formal procedures to assess functions and values of wetlands have not yet been adopted. Therefore, to assist in evaluation of the project, a knowledgeable professional should provide a summary of the functions and values of the wetland to be filled. Any jurisdictional areas other than wetlands should also be assessed for functions and values. Examples of features to be addressed are:

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<sup>1</sup> The “applicant” refers to the permit applicant, who will in most instances be the respondent.

#### Water Quality

- ground water
- recharge/discharge
- flood storage
- other

#### Habitat

- rare/threatened/endangered species
- known or probable wildlife use
- plant communities
- complete species list
- known or probable fish, shellfish, and aquatic vertebrate use
- other

#### Recreational Use

- non-consumptive (e.g., birdwatching, walking)
- consumptive (e.g., fishing, hunting)

## **2. GOAL(S) OF MITIGATION**

This refers to the long-term goals, which may not be reached until some years after the applicant's mitigation responsibilities have been completed.

### **A. Type(s) of Habitat to be Created**

If out-of-kind, present rationale. (Refer to Subsection 1.E.1 above.)

### **B. Functions and Values of Habitat to be Created**

Identify, describe, and provide location of any local reference site if different from the wetland to be filled. (Refer to Subsection 1.E.2. above.)

### **C. Time Lapse**

Describe how many years it is likely to take for the long-term goal habitat to develop.

## **3. FINAL SUCCESS CRITERIA**

These are the criteria that are proposed by the applicant for Corps approval and are used to determine completion of permittee's mitigation responsibilities. Fulfillment of these criteria should indicate that the mitigation area is progressing well toward the habitat

type, functions, and values which constitute the long-term goal of this mitigation. For mitigation plantings, final success criteria will not be considered to have been met until a minimum of two years after all human support (e.g., irrigation, replanting, rodent control, and fertilization) has ceased. Major factors to be considered are:

A. Target Functions and Values

- wildlife species
- percentage vegetation cover and/or density
- approximate plant height criteria (shrubs and trees)
- plant and animal species diversity
- root development
- canopy stratification
- other quantifiable measures of success

B. Target Hydrological Regime

- source(s) of water
- discharge point(s)
- area(s) affected by seasonal flooding
- direction(s) of flow
- size (and map) of watershed

C. Target Jurisdictional Acreage To Be Created

Where applicable, a formal wetlands delineation must be submitted for Corps approval as a part of the final success criteria.

**4. PROPOSED MITIGATION SITE**

A. Location and Size of Mitigation Area

1. Describe location, including rationale for choice. If offsite, indicate distance from project site.
2. Provide the following maps:
  - a) full-size copy of USGS quad map with the mitigation location outlined
  - b) road map marked with the site location
  - c) base topo map with the proposed mitigation area outlined and acreage indicated. (See Appendix A for figure format information.)

B. Ownership Status

1. Indicate who presently owns the mitigation site. If any owner is different from the permit applicant(s), describe and explain the availability of the property. Describe and explain any easements or encroachments that the property carries. If any of the property is located on public land, describe and explain what arrangements, if any, have been discussed with the managing agency.
2. Indicate expected ownership of the mitigation area following completion of the mitigation project. Identify who will be responsible for long-term management and protection of the area. Describe and explain what if any long-term management plan has been prepared for the area. If an entity other than the applicant will assume management responsibilities following completion of the mitigation project, describe and explain any signed, written agreement that the manager will manage the area in conformance with goals of the mitigation. Include copies of any written plans or agreements.
3. Indicate what entity, if any, controls water flow to or from the site. Identify and describe the party who is to maintain water control structures. Describe and explain what arrangements have been made to guarantee appropriate water flow in the mitigation area during and after the establishment of the mitigation project.

C. Existing Functions and Values of Mitigation Area

(Refer to Section I.E. above.)

D. Present and Proposed Uses of Mitigation Area

Briefly describe all known present and proposed uses of the mitigation area. Discuss non-native landscape plantings, pipelines, powerlines, roads, distance and location of nearest structures, if any, etc., on the property containing the mitigation site.

E. Jurisdictional Delineation (if applicable)

Describe any jurisdictional areas that are already present on the mitigation site. Provide a topo base map of the site with jurisdictional areas (and any proposed fill) indicated. Describe the probable future of the mitigation area as habitat if left undisturbed.

F. Present and Proposed Uses of All Adjacent Areas

Briefly describe all known present and proposed uses of all property sharing a common border with the property containing the mitigation.

G. Zoning

Give all present and proposed zoning designations for the mitigation site and adjoining properties, including city, county, BCDC, etc.

**5. IMPLEMENTATION PLAN**

A. Rationale for Expecting Implementation Success

May refer to previous relevant experience of applicant and/or implementation consultant or to other similar and successful mitigation projects. Include hydrology and soils information.

B. Responsible Parties

Provide the name(s), title(s), address(es), and phone numbers of the person(s) responsible for implementing the mitigation project.

C. Site Preparation

1. Describe plans for grading, hydrologic changes, water control structures, soil amendments, erosion control, bank stabilization, equipment and procedures to be used, site access control, etc., as applicable. Include a description of exotic vegetation control techniques, planting hole excavation methods (e.g., auguring, hand digging), and the size of the planting hole (e.g., twice size of container).
2. Provide base topo maps showing planned site preparation. (See Appendix A for figure format information.)
3. Provide representative cross-sections of the mitigation site with elevations and scale indicated.
4. Provide the name, title, address, and phone number of the person supervising or providing biological monitoring during grading activities.

D. Planting Plan

1. Briefly describe the planting plan and methods
2. Provide a table of species to be planted, including numbers, spacing, types of propagules, pot sizes, etc.
3. Indicate the source-locale of seeds, plant plugs, cuttings, etc.
4. Show planting and species locations on a base topo map. (See Appendix A for figure format information.)
5. If transplanting is to be done, describe the storage method and duration.
6. Describe any expected volunteer native revegetation that is included in mitigation planning.

E. Schedule

Provide a schedule in the form of a legible flow chart showing intended timing of site preparation and plantings.

F. Irrigation Plan

1. Describe irrigation method(s), estimated frequency, and amount during dry months.
2. Indicate water source(s) for the mitigation area.
3. Show the planned irrigation system and/or water flow on base topo (may be included on the planting plan map).

G. As-Built Conditions

The plan should specify that the applicant will:

1. Submit a report to EPA within 6 weeks of the completion of site preparation and planting, describing the as-built status of the mitigation project. If avoidance is incorporated into development project design, describe the as-built status of the development project, including any deviations from the original plan in the vicinity of, or that will affect, jurisdictional area(s). Submit separate reports for grading and planting work if not completed

within six weeks of each other.

2. Provide topo maps showing as-built contours of the mitigation area. Indicate the location of plantings and any other installations or structures.

## 6. MAINTENANCE DURING MONITORING PERIOD

### A. Maintenance Activities

Describe planned maintenance activities, including irrigation system inspection, plant replacement, weeding, water structure inspection, fertilization, erosion control, herbivore protection, trash removal, and/or any other such activities.

### B. Responsible Parties

Identify the persons/entities responsible for financing and carrying out maintenance activities, including names, titles, addresses, and phone numbers.

### C. Schedule

Provide a table showing the schedule of maintenance inspections.

## 7. MONITORING PLAN

### A. Performance Criteria

Provide yearly target criteria to be met, as appropriate, based on reasonably-paced progress toward final success criteria. (Refer to Section III.)

### B. Monitoring Methods

1. Describe the monitoring methods. If using sampling methods, include sample sizes, statistical justification for sampling regime, and data analyses to be performed. If appropriate, include assessment of natural population growth by target species.
2. Provide samples of all proposed data sheets.
3. Photos shall be taken during each monitoring period. They shall be

taken from the same vantage point and in the same direction every year, and shall reflect material discussed in the monitoring report. When percent cover estimates are made of herbaceous vegetation, photographs shall be taken of sampling quadrants.

C. Annual Reports

1. Annual reports shall be submitted which present monitoring results. They shall assess both attainment of yearly target criteria and progress toward final success criteria.
2. Annual reports shall include the following:
  - a. A list of names, titles, and companies of all persons who prepared the content of the annual report and participated in monitoring activities for that year.
  - b. A copy of any Corps permit attached. Special Conditions and any subsequent Letters of Modification shall be included as an appendix.
  - c. Analysis of all quantitative monitoring data.
  - d. Prints or good quality photocopies of all included monitoring photographs.
  - e. Maps identifying monitoring areas, transects, planting zones, etc., as appropriate. (See Appendix A for figure format information.)
3. Copies of all field data sheets shall be available for Corps review as needed.

D. Schedule

Since planting and/or site modification may not occur when planned, monitoring and performance criteria shall be tied to the actual implementation date rather than to predetermined years (e.g., the first annual report shall be delivered on (month, day) of the year following the first growing season after planting.)

8. COMPLETION OF MITIGATION

A. Notification of Completion

When the initial monitoring period is complete, and if the applicant believes that the final success criteria have been met, the applicant shall notify the Corps when the annual report that documents this completion is submitted. If it is appropriate here, a current jurisdictional delineation of the created wetland areas should be submitted with the report. (This delineation shall be accompanied by legible copies of all field data sheets.)

B. Corps Confirmation

Following receipt of the report, the Corps may require a site visit to confirm the completion of the mitigation effort and any jurisdictional delineation.

9. **CONTINGENCY MEASURES**

A. Initiating Procedures

If an annual performance criterion is not met for all or any portion of the mitigation project in any year, or if the final success criteria are not met, the permittee shall prepare an analysis of the cause(s) of failure and, if determined necessary by the Corps, propose remedial action for approval.

B. Alternative Locations for Contingency Mitigation

Indicate specific alternative mitigation locations that may be used in the event that mitigation cannot be successfully achieved at the intended mitigation site. Include current ownership information for any offsite alternative locations.

C. Funding Mechanism

Indicate what funds will be available to pay for planning, implementation, and monitoring of any contingency procedures that may be required to achieve mitigation goals.

D. Responsible Parties

List names, addresses, and phone numbers of persons/entities responsible for implementing and monitoring contingency procedures.

## APPENDIX A – FORMAT INFORMATION

### A. Text Format Notes for Mitigation/Monitoring Proposals, As-Built Reports, and Annual Reports.

1. The Corps file number and the date of the report should be included in title-page reading.
2. Include a distribution page listing names, titles, companies/agencies and addresses of all persons/agencies receiving a copy of the report.

### B. List of Figures to be Submitted

*(Page and section numbers in parentheses indicate location of figure request in annotated outline. For recommended figure formats, refer to Section (C) below.)*

1. Mitigation and Monitoring Proposal
  - a. Jurisdictional Areas and Proposed Fill on Project Site (*p. 8, 1.D.*) (outlines and acreages indicated.).
  - b. Location and Size of Mitigation Area
    - U.S.G.S. quad map (*p. 10, 4.A.2*)
    - road map (*p. 10, 4.A.2*)
    - topo map (*p. 10, 4.A.2*)
  - c. Jurisdictional Areas and Any Proposed Fill on Mitigation Site (*p. 11, 4.E.*)
  - d. Mitigation Site Preparation (*p. 12, 5.C.2*)  
(base topo map showing preparation plans)
  - e. Planting Plan (*p. 13, 5.D.4*)
    - plan view of base topo
    - representative cross-sections
  - f. Irrigation Plan (*p. 13, 5.F.3*) (may be on planting plan topo)

2. As-Built Report (*p. 14, 5.G.2*)
  - a. Final site contours
  - b. Plantings as installed

**C. Figure Format Notes**

- All maps and plans submitted shall be legible and include title, date of preparation, and date of submission.
- A legend shall be provided if symbols, patterns, or screens are used on the map or plan.
- If colors are used to indicate areas on the original map, color copies shall be included in all copies of the report submitted to the Corps.
- Indicate North and provide a scale and datum (if appropriate, i.e., tidal data).
- Scale and orientation shall be the same for all maps, except for detail sections.
- Base topo maps (i.e., for jurisdictional areas, location and size of mitigation areas, mitigation site preparation plans, planting plans, irrigation plans, and as-built reports) shall be full-size (1 inch = 100 feet or less, 1 inch = 200 feet for very large projects).
- USGS quad maps shall be full-size and full scale (may be photocopies, if clearly legible).

NOTE: Reduced copies of maps shall be bound with all documents to facilitate review by advisory agencies. For Corps review, at least two sets of full-sized copies shall accompany mitigation and monitoring proposal, and one set shall accompany each annual report.

**D. Schedule**

When submitting the mitigation and monitoring plan, the applicant shall indicate the month and date on which the yearly report will be delivered. If plan involves planting, this date should be made between growing seasons for the primary plants so that timely decisions can be made about any modifications to the plan.