UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY
REGION 8

2014 JUN 23 PM 12: 36

IN THE MATTER OF	)	**ADMINISTRATIVE ORDER ON CONSENT**
	)	
Robert Gregg Sease	)	
	)	Docket No. **CWA-08-2014-0024**
Respondent.	)	
	)	

EPA REGION VIII
HEARING CLERK

I. INTRODUCTION

1. This Administrative Order on Consent (Consent Order) is entered into voluntarily by the United States Environmental Protection Agency (EPA) and Robert Gregg Sease (Respondent). This Consent Order concerns restoration of environmental damage caused by allegedly illegal discharges of dredged or fill material to Sheep Creek and its adjacent wetlands in Sections 5, 7, and 8, Township 45 North, Range 5 East of the N.M.P.M., Saguache County, Colorado (the Site).

II. STATUTORY AUTHORITY

2. This Consent Order is issued under section 309(a) of the Clean Water Act (CWA), 33 U.S.C. § 1319(a). The authority to issue this Consent Order has been properly delegated to the Assistant Regional Administrator of the Office of Enforcement, Compliance and Environmental Justice, EPA Region 8. This Consent Order is based on the following 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

3. This Consent Order shall apply to and be binding upon the EPA and upon Respondent and Respondent's agents, successors, and assigns. Each signatory to this Consent Order certifies that he is authorized to execute and legally bind the party he represents to this Consent Order. No change in the ownership of the Site shall alter Respondent's responsibilities under this Consent Order unless the EPA,

Respondent, and the transferee agree in writing to allow the transferee to assume such responsibilities. Additionally, no later than thirty (30) calendar days prior to such transfer, Respondent shall notify the EPA at the address specified in paragraph 37, below.

IV. STATEMENT OF THE PARTIES

4. The following FINDINGS OF FACT AND OF VIOLATION are made solely by the EPA. In signing this Consent Order, Respondent neither admits nor denies the FINDINGS OF FACT AND OF VIOLATION. As such, and without any admission of liability, Respondent consents to the issuance of this Consent Order and agrees to abide by all of its conditions. Respondent waives any and all remedies, claims for relief and otherwise available rights to judicial or administrative review that Respondent may have with respect to any issue of fact or law set forth in this Consent Order, including any right of judicial review 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 Consent Order or in any action under this Consent Order.

V. FINDINGS OF FACT AND OF VIOLATION

5. Respondent is an individual with a primary place of residence of 4413 Orofino Place Castle Rock, CO 80108. Respondent also owns a place of residence at the Site of 28890 CO Road 33 Ee, Saguache, Colorado 81149.

6. At all relevant times, Respondent owned, leased, controlled and/or operated the Site, including Sheep Creek and its adjacent wetlands.

7. Sheep Creek is a relatively permanent tributary to San Luis Lake. From the Site, Sheep Creek flows approximately 3.1 miles to Saguache Creek, which flows approximately 60 miles to San Luis Creek, which flows approximately 20 miles to San Luis Lake. San Luis Lake is currently used, or was used in the past, or may be susceptible to use by interstate or foreign travelers, for recreational or other interstate or foreign commerce.

8. Sometime during the week of August 24, 2009, Respondent and/or persons acting on his behalf removed approximately sixty (60) undecreed stream impoundments from within Sheep Creek at the Site. The dredged material removed from Sheep Creek was side-casted along the creek's banks and placed directly within adjacent wetlands at the Site.

9. On September 2, 2009, the U.S Army Corps of Engineers (Corps) conducted an inspection of the Site. The Corps found that Respondent and/or persons acting on his behalf discharged dredged or fill material into Sheep Creek and its adjacent wetlands during Respondent's removal of approximately sixty (60) undecreed stream impoundments within Sheep Creek at the Site without a permit required by section 404 of the CWA, 33 U.S.C. § 1344. The late August 2009 activities conducted by Respondent and/or by persons acting on his behalf violated section 301 of the CWA, 33 U.S.C. § 1311.

10. On January 13, 2010, the Corps referred the CWA violations described in paragraphs 8 and 9 to the EPA for enforcement in accordance with the "Memorandum of Agreement Between the Department of the Army and the Environmental Protection Agency Concerning Federal Enforcement of the Section 404 Program of the Clean Water Act," dated January 19, 1989.

11. On June 9, 2011, the EPA issued a Findings of Violations and Administrative Order for Compliance, Docket No. CWA-08-2011-0015 (June 9, 2011, Order), to Respondent for the CWA violations described in paragraphs 8 and 9. The June 9, 2011, Order specified the nature of the CWA violations and described actions necessary for Respondent to achieve compliance with sections 301 and 404 of the CWA.

12. On September 29, 2011, the EPA approved Respondent's Restoration Plan submitted on September 19, 2011, by Bikis Water Consultants, LLC, for the: (1) removal of all dredged or fill material that was discharged into the waters and wetlands at the Site; and (2) restoration, to their pre-impact configuration and/or grade, of the waters and wetlands that were impacted as a result of Respondent's unauthorized discharges of dredged or fill material at the Site.

13. In letters to the EPA dated November 14th and 16th, 2011, Respondent's legal counsel stated that Respondent had advised him that the work set forth in the September 19, 2011, Restoration Plan had been completed, except for some small areas where the work would be completed the next day.

14. Sometime between September 2011 and August 2012, Respondent and/or persons acting on his behalf discharged dredged or fill material into Sheep Creek and its adjacent wetlands at approximately 86 locations over 1.66 miles of Sheep Creek at the Site. Some, if not all, of the dredged or fill material that was required to be removed as part of the September 19, 2011, Restoration Plan had been discharged back into Sheep Creek and its adjacent wetlands at the Site by Respondent and/or persons acting on his behalf.

15. On July 24, 2012, the Colorado Division of Water Resources (CODWR) informed the Corps and the EPA about Respondent's ongoing activities in Sheep Creek and its adjacent wetlands at the Site that CODWR observed during an inspection of the Site on July 18, 2012.

16. On August 29, 2012, a multi-agency inspection was conducted at the Site with Respondent, Respondent's legal counsel, and Bikis Water Consultants, LLC. The agencies participating in this inspection included the Corps, the EPA, and the CODWR. During this inspection, the EPA and the Corps found that Respondent and/or persons acting on his behalf discharged dredged or fill material into Sheep Creek and its adjacent wetlands at approximately 86 locations over 1.66 miles of Sheep Creek at the Site without a permit required by section 404 of the CWA.

17. The activities described in paragraph 14 were performed using common earthmoving vehicles and equipment, all of which were operated by Respondent and/or by persons acting on its behalf.

18. Respondent is a "person" as defined in section 502(5) of the CWA, 33 U.S.C. § 1362(5).

19. The discharged dredged or fill material referenced above is and was at all relevant times "dredged material" or "fill material" within the meaning of 33 C.F.R. § 323.2(c) or 33 C.F.R. § 323.2(e), respectively, and "pollutants" within the meaning of § 502(6) of the CWA, 33 U.S.C. § 1362(6).

20. Sheep Creek and its adjacent wetlands filled and disturbed by Respondent's unauthorized activities provided various functions and values, including: wildlife habitat for birds, mammals, reptiles and amphibians; water quality enhancement; flood attenuation; and/or aesthetics.

21. The vehicles and equipment described in paragraph 17, above, are and were at all relevant times each a "point source" as defined in section 502(14) of the CWA, 33 U.S.C. § 1362(14).

22. Sheep Creek and its adjacent wetlands referenced above are and were at all relevant times "waters of the United States" as defined in 33 C.F.R. § 328.3(a) and therefore "navigable waters" as defined in section 502(7) of the CWA, 33 U.S.C. § 1362(7).

23. The placement of dredged or fill material into Sheep Creek and its adjacent wetlands constitutes the "discharge of pollutants" as defined in section 502(12) of the CWA, 33 U.S.C. § 1362(12).

24. Section 301(a) of the CWA, 33 U.S.C. § 1311(a), prohibits, among other things, the discharge of pollutants by any person into waters of the United States except as in compliance with section 404 of the CWA, 33 U.S.C. § 1344(a).

25. 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 navigable waters which are defined as waters of the United States.

26. According to 33 C.F.R. § 323.3(a), a permit issued by the Corps is required for the discharge of dredged or fill material into waters of the United States, unless an exemption pursuant to 33 C.F.R. § 323.4 applies.

27. Respondent is not and never has been authorized by a permit issued pursuant to section 404 of the CWA, 33 U.S.C. § 1344, to conduct any of the activities described in paragraph 14.

28. The activities conducted by Respondent and/or by persons acting on his behalf as described in paragraph 14 violate section 301(a) of the CWA, 33 U.S.C. § 1311(a). Each discharge of

pollutants from a point source by Respondent into waters of the United States without the required permits issued pursuant to section 404 of the CWA, 33 U.S.C. § 1344, constitutes a violation of section 301(a) of the CWA, 33 U.S.C. § 1311(a). Each day the discharges remain in place without the required permits constitutes an additional day of violation of section 301(a) of the CWA.

29. The activities conducted by Respondent and/or by persons acting on his behalf as described in paragraph 14 violate the June 9, 2001 Order that was issued by the Administrator of EPA under § 309(a) of the CWA, 33 U.S.C. § 1319(a),

30. Activities to be carried out under this Consent Order 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," as specified in section 101(a) of the CWA, 33 U.S.C. § 1251(a). Restoration and mitigation are appropriate 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.

31. A penalty settlement for the actions cited in paragraph 28 is being formalized in a Consent Agreement in a separate proceeding under 40 C.F.R. part 22.

32. This Consent Order was issued after consultation and coordination with the Corps' Albuquerque District, Durango Regulatory Office.

VI. ORDER FOR COMPLIANCE

Based upon the foregoing FINDINGS OF FACT AND OF VIOLATION, and pursuant to the authority vested in the Administrator of the EPA pursuant to section 309(a) of the CWA, 33 U.S.C. § 1319(a), as properly delegated to the Assistant Regional Administrator of the Office of Enforcement, Compliance and Environmental Justice, EPA Region 8, it is hereby ORDERED:

33. Respondent shall immediately terminate all unauthorized discharges of dredged or fill material, now and in the future, into waters of the United States, unless specifically authorized by the Corps under a valid permit issued pursuant to section 404 of the CWA, 33 U.S.C. § 1344. This

prohibition includes all mechanical land clearing, dredging, filling, grading, leveling, installation of utilities, construction, and any other activities that result in a discharge of dredged or fill material into waters of the United States.

34. Prior to execution of this Consent Order, Respondent submitted a Second Restoration Plan for Sheep Creek Ranch, dated June 4, 2014, (hereinafter, the 2nd Plan) to the EPA that provides for restoration of the impacts to Sheep Creek and its adjacent wetlands at the 86 locations described in paragraphs 14 and 16, above. The 2nd Plan, attached hereto as Attachment 1, is approved by the EPA, and Respondent shall implement the 2nd Plan.

a. Performance of the Plan shall be a condition of any Corps' authorization for the past discharges and proposed future discharges into waters and wetlands at the Site. The parties acknowledge and agree that their mutual intent in entering into this Consent Order is that the 2nd Plan shall be fully implemented according to the schedule set forth in the 2nd Plan, after obtaining all necessary permits and approvals from the Corps and other governmental authorities, unless a shorter time frame is specified in these permits or approvals.

b. Respondent shall monitor the success of the restoration project at least annually beginning during the calendar year in which Respondent completes the final earthwork and planting required by the 2nd Plan, and continuing for five (5) calendar years after the date of final planting required in the 2nd Plan. Respondent may discontinue annual monitoring earlier than that date if the success of the entire restoration project required in the 2nd Plan has been fully demonstrated and accepted in writing by the EPA and the Corps. Respondent shall submit each annual monitoring report to the EPA and the Corps no later than December 31st of the year covered by that report. If any annual monitoring report demonstrates that the restoration project is not making progress toward meeting the criteria for

success set forth in the 2nd Plan, Respondent shall submit the analysis required in subsection c., below.

c. In the event that any part of the restoration project fails to meet the criteria for success set forth in the 2nd Plan, Respondent will repair, replace and maintain any improvements necessary to meet the criteria for success of the 2nd Plan. Respondent shall submit to the EPA and the Corps, in its annual report or upon realization of project failure, an analysis of the project's failure (if applicable) and proposed corrective actions for correcting all deficiencies in the restoration project. The proposed corrective actions shall include provisions for adequately monitoring the effectiveness of the measures proposed to correct the deficiencies and shall be submitted to the EPA and Corps for approval.

35. Upon receiving the final executed Consent Order, Respondent shall obtain all necessary permits to implement the 2nd Plan and then commence all restoration activities in accordance with the 2nd Plan, including the time frames specified therein, and all granted permits. Respondent shall demonstrate that all necessary permits have been granted by providing complete copies of all such permits, and any amendments thereto, to the EPA within seven (7) calendar days of issuance of each permit.

36. This Consent Order is not a permit or an authorization to place or discharge dredged or fill material in waters of the United States. Respondent shall consult with the Corps at the address and telephone number below to determine if any work to be performed pursuant to this Consent Order requires a permit from the Corps under section 404 of the CWA. If any such permit is required, Respondent shall obtain such permit(s) and provide a copy or copies to the EPA pursuant to paragraph 37, below, prior to initiating any work that is to be performed pursuant to this Consent Order.

U.S. Army Corps of Engineers
Durango Regulatory Office
1970 E. 3rd Avenue, Suite #109

Durango, CO 81301
Telephone: 970- 259-1604
Facsimile: 970-259-1658

37. Respondent shall submit all notifications under this Consent Order, and related correspondence to:

Kenneth M. Champagne, 8ENF-W
U.S. Environmental Protection Agency, Region 8
1595 Wynkoop Street
Denver, CO 80202-1129
Telephone: 303-312-6608
Facsimile: 303-312-7518

All notifications and related correspondence also shall be provided to:

James Eppers, 8ENF-L
U.S. Environmental Protection Agency, Region 8
1595 Wynkoop Street
Denver, CO 80202-1129
Telephone: 303-312-6893
Facsimile: 303-312-6953

38. In addition to the notification requirements set forth in paragraph 36, after issuance of any Corps authorization for the restoration work, Respondent shall submit all notifications and correspondence to the Corps in accordance with the terms and conditions in the Corps permit(s).

39. The 2nd Plan and any other deliverables, reports, specifications, schedules, and attachments required by this Consent Order are, upon approval by the EPA, incorporated into this Consent Order. Any non-compliance with the 2nd Plan, deliverables, reports, specifications, schedules, permits, or attachments shall be deemed a failure to comply with this Consent Order and shall be subject to EPA enforcement.

40. Respondent shall allow, or use its best efforts to allow, access by any authorized representatives of the EPA, the Corps, and CODWR, or any of the agencies' contractors, upon proper presentation of credentials, to sites and records relevant to this Consent Order for any of the following purposes:

a. To inspect and monitor progress of the activities required by this Consent Order;

b. To inspect and monitor compliance with this Consent Order; and

c. To verify and evaluate data and other information submitted to the EPA.

This Consent Order shall in no way limit or otherwise affect the EPA's authority, or the authority of 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.

41. This Consent Order shall be effective upon receipt by Respondent of a fully executed copy.

42. Issuance of this Consent Order shall not be deemed an election by the United States to forego any civil or criminal action to seek penalties, fines or other appropriate relief under the CWA for violations giving rise to the Consent Order.

43. The EPA agrees to submit all notifications and correspondence to:

Robert Gregg Sease
4413 Orofino Place
Castle Rock, CO 80108

44. 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.

45. If an event causes or may cause delay in the achievement of the requirements of this Consent Order, Respondent shall notify the EPA orally as soon as possible and in writing within 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 Consent Order, unless the EPA grants in writing an extension of the applicable requirement or deadline.

46. If Respondent demonstrates to the EPA's satisfaction that the delay or anticipated delay has been or will be caused by circumstances beyond Respondent's control (including the control of any of Respondent's agents and contractors) that Respondent could not have foreseen and prevented despite Respondent's best efforts to fulfill the requirement, the EPA may excuse performance or extend the time for performance of such requirement for a period not to exceed the actual delay resulting from such circumstances. The EPA's determination on these matters shall be made as soon as possible, and in writing within ten working days, after the receipt of Respondent's written notification of the event. The parties agree that changed economic circumstances or financial inability to complete the work shall not be considered circumstances beyond the control of Respondent.

47. Each party shall bear its own costs and attorneys fees in connection with this matter.

48. Respondent understands and acknowledges the following:

a. Section 309(d) of the CWA, 33 U.S.C. § 1319(d), authorizes civil penalties of up to $37,500 per day for each violation of an order issued by the Administrator of the EPA under section 309(a) of the CWA, 33 U.S.C. § 1319(a).

b. Compliance with the terms and conditions of this Consent Order shall not be construed to relieve Respondent of his obligations to comply with any applicable federal, state or local law or regulation.

c. Failure by Respondent to complete the tasks described herein in the manner and time frame specified pursuant to this Consent Order may subject Respondent to a civil action under section 309 of the CWA, 33 U.S.C. § 1319, for violation of this Consent Order.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION 8,
Complainant

Date: 06/23/2014

Eddie A. Sierra
Acting Assistant Regional Administrator
Office of Enforcement, Compliance and Environmental Justice
1595 Wynkoop Street
Denver, CO 80202

Robert Gregg Sease,
Respondent

Date: 03-10-14

By: R Gregg Sease

ATTACHMENT 1

BĪKIS
Water Consultants LLC

SECOND RESTORATION PLAN FOR SHEEP CREEK RANCH FOR FINDINGS OF VIOLATION AND ADMINISTRATIVE ORDER FOR COMPLIANCE, DOCKET NO. CWA-08-2011-0015

Prepared for:
Mr. Robert Gregg Sease
4413 Orofino Place
Castle Rock, Colorado 80108

Prepared by:
Bikis Water Consultants, LLC
info@BikisWater.com
www.BikisWater.com

June 4, 2014

555RiverGate Lane, Suite B4-82
Durango, Colorado 81301
Tele: 970.385.2340
Fax: 970.385.2341

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1.0 INTRODUCTION/PURPOSE

This Second Restoration Plan for Sheep Creek Ranch (Ranch) was prepared to restore unpermitted activities in waters of the U.S. which occurred on the Ranch in 2012, after work described in the September 2011 Restoration Plan (First Plan) was completed. The goal of this Second Plan is to meet the requirements of Section 404 of the Clean Water Act and Colorado water law with alleged fill activities in Sheep Creek and adjacent wetlands, based on conditions at the Ranch in May 2013.

The work in this plan includes all of the work included in the April 11, 2013 Order issued by the District court in Alamosa in Case No. 2007CW53, which includes, as modified by the Colorado Division of Water Resources (CDWR): 1) work to remove obstructions in Sheep Creek at the 86 locations identified by the CDWR in May 2014 (this list was slightly different than the list provided in the April 11, 2013 Order); 2) work on the Feeder Ditch; 3) modifications to Horse Shoe Pond No. 2; and 4) work on the diversion box to Ditch Lateral No. 5. All of this work is to correct activities that are allegedly in violation of Colorado water law, as described in an affidavit by Division 3 Engineer Craig Cotten dated August 16, 2012. The work in this plan also includes eight areas that were identified as unauthorized fill under Section 404 of the Clean Water Act by the U.S. Environmental Protection Agency (USEPA). Many of the sites included in this Second Plan are at sites which were included in the First Plan.

The purpose of this plan is to describe the work that will be completed at the Ranch to remove the unpermitted dredged and fill material that was placed into Sheep Creek and adjacent wetlands to: 1) restore the wetlands and creek to their pre-impact grade and condition; and 2) bring the Ranch into compliance with Colorado water law.

This plan was prepared consistent with guidelines entitled "U.S. Environmental Protection Agency, Region 8 - Clean Water Act Section 404 Enforcement: Removal/Restoration Plans and Habitat Mitigation /Monitoring Proposals" and with the "404(b)(1) Guidelines" set forth in 40 CFR Part 230. In addition, this plan includes the following information: 1) a detailed work plan; 2) a delineation of wetlands and waters of the U.S. included in the restoration; 3) locations of existing natural features and improvements; 4) grading, planting, and monitoring plans; 5) drawings of the restoration work to be accomplished; and 6) a description of the costs to prepare and implement the plan.

1.1 BACKGROUND

The First Plan for Sheep Creek Ranch was prepared in September 2011 to describe the work to be completed to restore 92 sites identified on the Ranch where unpermitted fill was placed into Sheep Creek and/or adjacent wetlands, as required by the "Findings of Violation and Administrative Order for Compliance, Docket No. CWA-08-2011-0015" (Order) that was issued to Mr. Robert Gregg Sease by USEPA on June 9, 2011. Most of the unauthorized fills in the First Plan were the result of work directed on-site by the CDWR to remove material placed in Sheep Creek in alleged violation of Colorado water law. The rocks and fill were originally placed in Sheep Creek by Mr. Sease largely for the purposes of improving fish habitat and channel stability.

The First Plan was approved by USEPA in the fall of 2011, and Mr. Sease completed most of the work in the First Plan sometime in the fall of 2011. BWC was not notified that the work was going to be done, but was notified in October 2011 that the work was completed and was asked to observe the work to document its condition. Accordingly, BWC visited the Ranch on October 24 and November 2, 2011 to observe the work. Based on observations on these days, it appeared that most of the work in the First Plan was completed consistent with the plan. This work was documented with photographs.

In late summer of 2012, BWC was contacted by Mr. Sease and the CDWR regarding alleged new work in Sheep Creek and adjacent wetlands. BWC attended a field meeting at the Ranch on August 29, 2012 with staff from USEPA and the CDWR to observe Sheep Creek on the Ranch. Based on this meeting, it appeared that additional work was completed on the Creek without proper authorization from the USEPA and CDWR.

The CDWR filed a Sixth Citation for contempt of court to Mr. Sease on March 26, 2013. This citation was based on fieldwork by CDWR which identified 86 sites of rock and fill in Sheep Creek that were allegedly causing increased evaporation or illegal diversions from the Creek. GPS coordinates and figures showing the locations of the fills were included in an affidavit from Mr. Cotten and attached as Exhibit A in the Citation. The Alamosa County District Court issued an order to complete the work on April 11, 2013. Specifically, the Sixth Citation and Order from the court sought actions claimed necessary to bring the Creek into compliance with state water law, as follows:

1. Removal of 86 obstructions and impoundments in Sheep Creek.
2. Modifications to the Feeder Ditch at Horseshoe Pond No. 2.
3. Modification to the outlet works for Horseshoe Pond No. 2 to reduce the surface area of the pond to its previously approved size.
4. Modification to the diversion box for Ditch Lateral No. 5.

In order to resolve the alleged violations without further controversy or proceedings, Mr. Sease voluntarily agreed to carry out all of the actions sought by CDWR, to the sole satisfaction of CDWR and to the satisfaction of USEPA, and his agreement was embodied in the April 11, 2013 court Order. Accordingly, this Second Plan does not represent an independent judgment by BWC of work necessary for legal compliance, but rather describes work necessary to carry out requirements of CDWR and USEPA.

All of the above sites were observed with staff from USEPA and CDWR on May 21 and 22, 2013. A draft of this Second Plan was prepared for review in August 2013. The comments received from CDWR, USEPA and the U.S. Army Corps of Engineers (Corps) were incorporated in to this final plan. Therefore, the work in this plan represents all the work claimed as needed by USEPA and required by the court to bring Sheep Creek into compliance with both Section 404 of the Clean Water Act and Colorado water law at the time of preparation of this plan.

1.2 Basis of Plan

This Second Plan was prepared based on fieldwork completed at the Ranch in 2011, and additional fieldwork on May 20 to 22, and June 27, 2013. This work included observations of conditions at the alleged violation sites, including the nature of the alleged violations, delineation of wetlands, and observations of Sheep Creek. This Plan was also prepared based on review of existing information related to the site, including digital aerial photographs.

The specific work to be done at each of the 86 alleged obstructions and impoundments was specified in the field by Mr. Cotten on May 21 and 22, 2013, with input from the USEPA. BWC has not completed any evaluation of possible effects on channel stability from the work specified by the CDWR. Observations of Sheep Creek downstream of the Ranch indicate that the Creek does have rocks (cobbles) on its bed and banks which stabilize the channel. Removal of rocks

from the channel, as directed by Mr. Cotten, may result in de-stabilization of the channel and channel degradation. BWC is not responsible for any channel degradation or changes in channel stability as a result of the work specified by CDWR.

2.0 PROJECT DESCRIPTION

The Ranch consists of approximately 320 acres located in portions of Section 5, 7, and 8, Township 45 N, Range 5E N.M.P.M. in Saguache County, Colorado. Figure 1 is a vicinity map of the Ranch. Sheep Creek, which is a small, perennial tributary to Saguache Creek, flows through the Ranch.

Saguache Creek is a perennial stream in its headwaters near the confluence of Sheep Creek, but has been affected by agricultural activities downstream in the San Luis Valley where its channel and flow path are not distinct. In the Order, USEPA contends that Saguache Creek is tributary to San Luis Lake. This conclusion has not been confirmed in this Second Plan.

Soil and rock were placed on the banks of Sheep Creek and in adjacent wetlands in August 2009 when approximately 60 instream structures were removed from the Creek, as directed on site by the CDWR. The First Plan addressed the restoration of these areas. It appears that most of the work in the First Plan was completed in the fall of 2011, but that some of the material removed, plus new imported material, was placed back in the creek and wetlands sometime in 2012.

The work in this plan includes:

1. Removal of instream impoundments and obstructions–86 Sites. The removal of rock, dead willows, and soil at 86 locations where material is acting as an impoundment or impeding the flow of water in Sheep Creek, according to CDWR. Work at these sites also includes restoration of stream banks, revegetation, and planting of new willows and alders. These sites were identified by CDWR and are shown on Figures 2a and 2b. Most of these sites are also of interest to USEPA since they entail placement of fill material into a water of the U.S.

2. Removal of fill and restoration of wetlands–Eight Sites. Fill material placed in wetlands will be removed at eight sites where it appears fill was placed sometime in

2012, and the areas restored to their original condition and functions (Figures 2a and 2b). These sites were identified by USEPA, and are not of concern to CDWR.

3. Modification of bank stabilization work. Bank stabilization work, which included placement of rock (mainly cobbles) on the banks of Sheep Creek above and below the ordinary high water mark (OHWM), and grading, seeding, and mulching of the areas, was completed in select areas sometime in 2012. Some of this work did not result in the discharge of fill material into a water of the U.S. Of the portion that did, most of the work will be removed and the area restored; however, it is requested to retain bank stabilization where it is providing a bank stabilization function and the removal of the work would result in adverse impacts to Sheep Creek or adjacent wetlands. Figure 4 shows the locations of the bank stabilization.

4. Completion of work on the Feeder Ditch near Horseshoe Pond No. 2. Work previously required by CDWR at the Feeder Ditch will be completed. This includes completion of filling of a portion of the ditch, protection of the fill area with rock, and restoration of the swale from the ditch to Horseshoe Pond No. 2.

5. Modification of the outlet works for Horseshoe Pond No. 2. The outlet for this pond will be re-constructed to provide and maintain the water surface area required by CWDR.

6. Modification of the headgate to Ditch Lateral No. 5. This structure will be restored to its previous condition with a locking diversion structure (head gate).

Work at each of the 86 instream sites, and 8 additional USEPA-only sites, will generally include the following sequence of activities, as appropriate (see the more detailed descriptions of the work at each site in Section 3.2):

- Removal of rocks, dead willows, and soil from Sheep Creek and/or its banks and/or adjacent wetlands and disposal of all material in designated upland stockpile areas.
- Re-grading of the stream banks and disturbed areas to their original contours.
- Seeding with upland or wetland seed mixes, as appropriate, and mulching.
- Planting of willows and alders.

No wetlands will be impacted by the work. Access routes for equipment have been identified to avoid any unintentional impacts. The banks of Sheep Creek and existing riparian vegetation will also be protected. Additional measures for site protection are included in Section 3.4.

2.1 Responsible Party

The party responsible for completing the work included in this Plan is:

Robert Gregg Sease
4413 Orofino Place
Castle Rock, Colorado 80108
303-594-0050

This Plan was prepared by:

Dave Mehan, P.W.S.
Bikis Water Consultants LLC
555 RiverGate Lane, Suite B4-82
Durango, Colorado 81301
970-385-2340

3.0 INFORMATION FOR REMOVAL AND RESTORATION PLAN

3.1 Existing Physical Conditions

The portion of the Ranch for the work included in this plan is an approximate 1.66-mile reach of Sheep Creek and adjacent, relatively flat, irrigated pastureland. Water from a ditch referred to as the Feeder Ditch and from the Sheep Creek Ditch, along with laterals, has been used by the present and previous owners to irrigate the pasture. The pasture and area next to the creek have been grazed for years.

Sheep Creek is a relatively small perennial stream on the Ranch with moderate sinuosity and an average gradient of 1.37 percent. The creek formed in alluvial materials; channel banks generally consist of soil and are armored by plant roots, including from willows (*Salix spp.*) and Alders (*Alnus tenuifolia*), and rock. The channel consists of alternating riffles and pools, with riffles stabilized by cobbles and some sediment deposition in pools. While a detailed

characterization of the channel was not completed for this Plan, Sheep Creek would likely be classified as a "Type E" stream according to "Applied River Morphology" (Rosgen, D. 1996).

Figure 3 shows information related to soils and wetlands on the Ranch. According to the Web Soil Survey (http://websoilsurvey.nrcs.usda.gov/app/HomePage.htm), the soil in the area along the creek is Torsido loam, which is described as a poorly drained soil derived from alluvium located on valley floors. The surface soil is a loam which is underlain by clay loam and very gravelly sand at a depth of greater than 23 inches. Torsido loam is listed as a hydric soil due to poor drainage and a high water table. Field observations found soils along the creek to be variable. Surface soils (A and B horizons) are typically loam, silt loam, or clay loam soils. Gravel and stones occur in many areas and make digging of soil pits difficult. A histic epipedon occurs in several areas indicating the presence of a fen.

National Wetlands Inventory (NWI) mapping of the Ranch shows five discontinuous areas of freshwater emergent wetlands on the Ranch (see Figure 3). This mapping does not correspond well with field observations of the presence of wetlands on the Ranch.

Wetlands were delineated in the areas of fill and also areas required for work for this Plan (material stockpiles, access routes, and adjacent areas) using the "Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region" (U.S. Army Corps of Engineers May 2010). In 2011, fieldwork was completed on May 12, May 26, June 16, August 31, and September 1, and included observations of vegetation communities, soils, and hydrologic conditions. Additional fieldwork was completed on June 27, 2013. The occurrence of plant species in wetlands was determined from the updated May 2012 National Wetland Plant List (Intermountain Region). Pits were dug to observe soils and soil colors were determined using Munsell Soil Color Charts (Kollmorgen Instruments 1988). Lastly, observations of surface and groundwater were made. This included observations on water flow in the Feeder Ditch and irrigation of fields. Observations were recorded on Wetland Determination Data Forms (WDDFs) and photographs were taken.

WDDFs are provided in Appendix A. The wetlands along the creek are affected by historical grazing and irrigation practices. Most of the wetlands include a mix of both wetland (hydrophytic) and upland species. Table 1 lists the plant species found in wetlands along the creek and indicates the frequency of occurrence of the species. As this table indicates, 34 species of plants were observed in wetlands. The more common species (shown as "very

common" in Table 1 include: Rocky Mountain iris (*Iris missouriensis*), tufted hairgrass (*Deschampsia caespitosa*), beaked sedge (*Carex utriculata*), wheatgrass (*Agropyron spp.*), cinquefoil (*Potentilla spp.*), Baltic rush (*Juncus balticus*), and hoary aster (*Machaeranthera canescens*). Upland weeds, including dandelion (*Taraxicum officinale*), kochia (*Kochia scoparia*), and thistle (*Circium spp.*) are also relatively common in the wetlands. Three types of wetlands occur, as follows:

1. Wet meadow wetlands. These occur in fields away from the creek and are dominated by relatively drier species (and ones found to increase under grazing) including Baltic rush, iris, foxtail barley (*Hordeum jubatum*), cinquefoil, field sedge (*Carex praegracilis*), bluegrass (*Poa pratensis*), wheatgrass, yarrow (*Achillea lanulosa*) and weeds, including dandelion, kochia, and thistle. In many places, these wetlands are influenced by irrigation water and have been affected by historical grazing. Iris and Baltic rush have been found to increase under grazing pressure.

2. Sedge - grass wetlands. These wetlands occur in bands along the creek and close to the water surface, and on lower terraces. Dominant species in this wetland type include: tufted hairgrass, beaked sedge, spikerush (*Eleocharis spp.*), redtop (*Agrostis gigantea*), and mint (*Mentha arvensis*). Several areas exist with a histic epipedon and are fens. This wetland type is less affected by irrigation water on the Ranch.

3. Shrub riparian wetlands. Wetlands dominated by several species of willow and alders with an understory of sedges, Baltic rush, and wetland grasses occur along the creek. The best examples of this wetland type occur in the northern part of the Ranch.

The functions provided to the greatest degree by the wetlands are bank stability and forage for livestock. The riparian wetlands also provide functions for wildlife and aquatic food chain support.

Wetlands do not occur in areas along the creek that are well above the OHWM of the creek. Examples of this are at WDDFs 2, 3, 6, 7, 8, and 9 (see Appendix A). The dry banks may be due to incisement of the channel over the years which may have lowered associated groundwater levels and reduced the amount of overbank flooding. Capillary rise is likely insufficient to sustain a wetland plant community in these areas. The vegetation community is not dominated by hydrophytes and hydric soil indicators are lacking in uplands along the creek.

As previously noted, removal of the instream structures under the direction of the CDWR damaged creek banks, shrubs, and the channel bottom in certain locations.

There is no flood plain mapping for Sheep Creek. Likewise, detailed topographic mapping of the

Ranch does not exist. Figures 2a and 2b show the existing improvements on the Ranch which include a ranch house, stable, several out-buildings, the "House Pond", driveway, and parking area - all of which are located away from Sheep Creek. Improvements near the creek include: the Feeder Ditch and laterals, Horseshoe Ponds Nos. 1 and 2, the Corral Pond No. 1 (the other Corral Ponds have been filled by the owner per direction of the CDWR), and several ranch roads and creek crossings.

3.2 Proposed Physical Conditions

3.2.1 Instream Impoundments and Obstructions

Figures 2a and 2b show the locations of the 86 sites identified by the CDWR in the Sixth Citation, plus the other areas on work included in this plan. Table 2 provides descriptions of the existing conditions at the sites. Table 3a describes the work that will be completed at the 86 obstructions, per instructions provided specifically by Mr. Cotten in the field on May 21 and 22, 2013. "Work Plans" for each site are included on the photographs of the sites in Appendix B.

Most of the material to be removed from the instream impoundment/obstruction sites is either 0.5- to 1.5-foot angular rock or 0.33- to 0.5-foot cobbles. In addition, dead willows will be removed at several sites.

No toxic or objectionable materials exist in the rocks and willows to be removed from the creek. There are no issues with removal and stockpiling of the materials from a toxicity or pollutant standpoint.

Fieldwork was completed to identify areas for stockpiling and disposal of the fill materials, and designated stockpile (storage) areas are shown on Figures 2a and 2b. All storage areas are relatively flat, upland areas located away from Sheep Creek or wetlands. Other considerations for defining the storage areas include: 1) proximity to the areas of fill; 2) the need to minimize having to cross the creek to dispose of fill materials; and 3) access given the network of fences and gates on the Ranch. A total of 21 designated stockpiles were identified, as shown on

Figures 2a and 2b. Photographs of the upland stockpile areas are included in Appendix C. Section 3.2.7 provides more information on use of the stockpiles.

3.2.2 Restoration of Wetland Fills

Table 3b describes the work to be completed at the additional eight sites identified by USEPA where fill was allegedly placed in wetlands without a Section 404 permit. The locations of these sites are shown in Figures 2a and 2b, and Work plans are included in Appendix D.

The following work will be completed at these sites:

- Fill will be removed to the approximate elevations of the original grade. All removed materials will be stockpiled at the approved stockpile areas (See Section 3.2.7 for information on the stockpile areas).
- The areas will be fine-graded to restore the original grade, to the extent feasible.
- Wetland vegetation will be restored by a combination of seeding and planting of containerized willows.

USEPA also requested an evaluation of whether fill material was placed in wetlands where Mr. Sease built concrete abutments for a creek crossing, but never finished the work (in the vicinity of CDWR Sites 13 and 14, see Figure 2a and Figure 4). Historical aerial photographs of this area are limited. An October 12, 1999 black and white aerial clearly shows a road cutting across the ranch to the northeast towards Sheep Creek where there is presently a road (see Figure 2a). This road is not evident on a paper black and white photograph taken in December 1950. BWC was not able to locate any aerial photographs between 1950 and 1999 with a good image of the area.

The area was observed on June 27, 2013. WDDFs were completed on both sides of the fill at the areas shown on Figure 4 (see WDDFs 2 and 3 in Appendix A). The criteria for wetlands were not met at either site. This part of the ranch has been irrigated and grazed for years. The subject area is located well above Sheep Creek to the east and does not appear to be affected by overbank flooding or shallow groundwater associated with the creek.

It was concluded that the fill in this area does not appear to be placed in wetlands. Some material was likely placed below the OHWM of Sheep Creek and will be restored as part of the

removal of the old concrete abutments and work shown on Figures B-13 and B-14 in Appendix B.

3.2.3 Bank Stabilization Work

Work was completed to grade the banks of Sheep Creek and armor the banks with rocks to prevent further erosion. This work was done on one or both banks of the creek towards the northern part of the ranch. The work, which is shown on Figure 4 and in the photographs in Appendix E, included: placement of rock on creek banks both above and below the OHWM; grading of banks, placement of soil on the rocks, and seeding and mulching. Observations indicate that most of the work is in good to excellent condition with growth of seeded vegetation (see photographs E-1 to E-8 in Appendix E).

Figure 4 shows the areas of bank stabilization work. Based on field observations, it is estimated that a total of approximately 941 linear feet (LF) of bank stabilization work was completed (on both banks). This included approximately 821 LF of work likely in wetlands or below the OHWM of the creek, and approximately 120 LF of work in uplands or above the OHWM.

It is proposed to remove all the rocks and materials placed in wetlands or below the OHWM at bank stabilization (BS) areas BS-2, BS-4, and BS-5 for a total of 491 LF (Figure 4). The following sequence of work will be completed at these areas:

- Rock and soil will be removed from the area and disposed of in one of the designated stockpile areas.
- The banks will be graded to what is believed to be the original contours, based on observations of adjacent areas.
- Willows and/or alders will be planted, as shown on the plans (see Appendix E).
- Disturbed areas will be seeded and mulched.

It is proposed to retain the work at BS-1 (where the rock was placed above the OHWM; see Figure E-1 in Appendix E), and at BS-2W and BS-3 for a total of 450 LF. Most of the lower bank at BS-2W is wetland and the work is in excellent condition (Figure E-5). The rocks armor the bank and provide bank stabilization. Removal of the rock would likely damage the bank. The rocks at BS-3 are below the OHWM and on the outside bend of the creek where they deflect

flow and protect the bank (see Figure E-6). The work is in excellent condition and removal of the rock would result in damage to Sheep Creek or adjacent wetlands and possibly result in degradation to channel banks from high flows in the future. Willows and alders would be planted 4-foot on-center for all reaches where the bank stabilization work is retained. Fieldwork for this plan indicates the following characteristics for the amount of fill that would be retained in waters of the U.S.:

- 330 LF of bank stabilization work (note: this equals 450 LF minus the 120 LF in uplands at BS-1).
- 13 cubic yards (CY) of clean fill and rock retained below the OHWM or in adjacent wetlands.
- An average of 0.04 CY per LF of material in a water of the U.S.

As described in Section 3.6 of this plan, all areas where fill would be retained in a water of the U.S. would have a performance standard of 75 percent survival of willows and alders.

The areas will be monitored, as described in Section 4.0.

3.2.4 Feeder Ditch at Horseshoe Pond No. 2

Work at this site is needed to bring it into compliance with previous orders/citations issued by CDWR for compliance with state water law. The work at this site, which was specified in the filed on May 21, 2013 by Mr. Cotten is shown on Figures F-1, F-2 and F-3 in Appendix F, and includes the following:

1. Filling of 37.5 LF of the Feeder Ditch between the stakes placed in the field (see Figure F-1) with native soil material. The beginning of this new fill is at approximately the starting point of the fill in the Feeder Ditch that was authorized under Section 404 by the Corps on October 20, 2010. The new fill material will be compacted to match the existing grade.
2. Placement of angular rip-rap at the start of the fill in item 1 above to armor the plug in the Feeder Ditch (see Figure F-2).

3. Restoration of the first part of the swale between the Feeder Ditch and Horseshoe Pond No. 2 to allow for water in the Feeder Ditch to flow freely into the pond (Figure F-3).

3.2.5 Outlet Works for Horseshoe Pond No. 2

The existing outlet works for Horseshoe Pond No. 2 consists of 6- and 8-inch PVC pipes with screens on the intakes. The intakes are at fixed elevations which control the water surface in the pond. According to CDWR, the surface area of the pond is currently around 3,700 square-feet (SF), which is larger than the required area of 3,330 SF. Based on information provided by CDWR, Horseshoe Pond No. 2 should be at 22.5 percent of its original size with no changes to Horseshoe Pond No. 1. The 3,330 SF represents 22.5 percent of the "old surface area" of 14,802 SF shown on drawings by Davis Engineering. In addition, the intakes of the pipes reportedly get clogged by algae and may not flow freely to Sheep Creek.

The proposed plan is to remove the small of the two PVC pipes (the 6-inch pipe) and replace it with a 12-inch culvert with rip rap, as shown on Figure G-1 (see Appendix G). The invert of the culvert will be set at the same elevation as the existing upper pipe since survey information shows the surface area of the pond to be approximately 3,700 SF at this elevation. The pond will be filled at the areas shown in Figure G-2 with clean rock and fill to reduce the surface area by the 370 SF needed. All areas of the original pond outside of the 3,330 SF allowed will be filled so that they are at least 8-inches higher than the water surface when it is 3,330 SF. In addition, the work will be surveyed by the licensed surveyor to demonstrate compliance with the state's requirements.

3.2.6 Diversion Box for Ditch Lateral No. 5

A diversion structure that can be locked will be installed at the location of Ditch Lateral No. 5 to allow for water in the ditch to either be diverted back to Sheep Creek or allowed to flow further along the ditch. The new box will have wing walls and be constructed to prevent water from flowing around or under the box. The location of this structure is indicated on Figure 2b. A schematic is shown in Figures H-1 and H-2 in Appendix H.

3.2.7 Stockpile Areas

The limits of each stockpile will be marked in the field. It is envisioned that the stockpiles will be permanent features so that material deposited at them will remain at that location. No material

will be placed back in the channel of Sheep Creek or wetlands under this plan. Each stockpile will be graded to minimize its height, and have stable side-slopes of no steeper than 3:1 (horizontal to vertical). Soil will be placed on the stockpiles, to the extent possible, and the stockpiles will be seeded with the upland seed mix (Table 5) and mulched.

3.3 Implementation Plan

The work described in the previous section will be completed by the selected and approved contractor under the supervision of staff from CDWR, and Mr. Sease's selected representative. All work will be completed as specified in the plan(s) for the site, and the conditions included in the Section 404 permit issued for the work. The work will be completed after receiving necessary approvals from the Corps and U. S. Bureau of Land Management (USBLM). Several of the sites may be located on USBLM land and approval from them is needed before the work can be done.

The work will be documented by photographs, video, and notes. Any deviations in the work for a site will be approved ahead of time by CDWR and USEPA.

3.4 Site Protection

The following measures will be used to ensure there are no inadvertent impacts to wetlands or Sheep Creek from the work:

1. The limits of wetlands, the Sheep Creek channel, and the restoration work will be marked in the field at each restoration site prior to beginning of the work.

2. Trucks and equipment will use the designated access areas shown on Figures 2a and 2b. Fill storage sites have been identified on both sides of the creek to avoid multiple creek crossings by equipment being used to dispose of the soil and rock.

3. Equipment will only cross Sheep Creek at the locations shown on Figures 2a and 2b to complete work on the other side of the creek. The two areas represent old creek crossings on the Ranch. No new creek crossings will be constructed.

4. The areas for soil and rock disposal are located in uplands away from any wetlands and Sheep Creek, and also in areas not subject to flooding or erosion.

5. The work will be completed in the late spring of 2014 following snowmelt runoff (See Section 7.0).

6. The work will be observed in the field by a qualified scientist to ensure compliance with this plan.

3.5 Actual Restored Physical Conditions

Due to the small size of each of the restoration sites and relatively simple nature of the work to be completed, it is proposed that as-built drawings not be provided prior to planting. Instead, the work and progress towards meeting the stated measures of success will be documented with photographs.

3.6 Success Criteria

The goals of the work are twofold: 1) to meet the requirements of the CDWR to eliminate the impoundments/obstructions in Sheep Creek and, 2) to fully restore the wetlands and banks of Sheep Creek impacted by fills and the work in this plan back to their original (pre-impact) condition and functions. Accordingly, the following success criteria will apply to the restoration areas.

3.6.1 Criteria for CDWR Sites

The purpose of the CDWR sites is to remove rock and willows and complete the other work specified by CDWR to reduce the increased water lost from the work in Sheep Creek. Therefore, each site will be deemed to be successful when all of the work shown on the plan for the site is completed. Completion of the work at each site will be documented with photographs and field notes.

It is likely that the channel of Sheep Creek will adjust horizontally and/or vertically after the work required by the CDWR is completed. This could occur because the existing rocks in the creek and on the banks provide stabilization from flow in the creek, and once removed, the force of the water will erode the finer, underlying materials in the channel and on the banks. The result of this is that it will appear that new rock has been placed in the channel when, in fact, it is native (existing) rock that has been exposed. If this phenomenon is found to occur, the CDWR will be notified to verify its occurrence.

3.6.2 Criteria for USEPA

Each wetland restoration site will be deemed to be successful when measurements and observations show the area has achieved:

- A cover of wetland plant species at least as high as the adjacent wetland area (which is typically 60 to 80 percent).
- Dominance by at least two wetland species.
- A survival rate of planted willows and alders of at least 75 percent.
- Less than 10 percent cover of the site by noxious, upland weeds.

It will be assumed that the functions of the wetland restoration areas have been restored upon achieving the above success criteria.

4.0 MONITORING PLAN

The work at each site will be documented with photographs and observations at the completion of the work at the site. The sites will then be observed and documented as follows:

- End of growing season 2014 (by October 1, 2014).
- Beginning of growing season 2015.
- End of additional growing seasons for a minimum of 5-years.

The Mitigation Rule and Regulatory Guidance Letter 08-03 required compensatory mitigation areas to be monitored for a minimum of five full years following completion of the restoration/mitigation work. USEPA may consider a written request to reduce the five-year monitoring requirement after submittal of at least two consecutive annul monitoring reports which demonstrate that all the success criteria have been met, including through field verification by the USEPA or Corps.

Annual monitoring will consist of the following at each site:

1. Photographic documentation of the site.

2. Visual estimation of the percent coverage of species present.

3. Visual estimate of the percent cover of noxious upland weeds.

4. Observation of the survival of planted trees and shrubs.

5. Notes on any remedial measures needed.

Observations will be recorded on a standard field form. In addition, the storage areas will be observed for:

1. Success of upland seeding.

2. Evidence of excessive soil erosion.

3. Excessive invasion by noxious weeds.

4.1 REPORTING

A Work Summary report will be submitted by December 31, 2014. This report will document the work completed in 2014. Annual monitoring reports will then be submitted by December 31 of each year until the success criteria are met. The annual monitoring reports will include all field data sheets.

In addition, as described in Section 3.6.1, the CDWR will be notified of the exposure of native rock in the channel or on the banks due to natural channel adjustment processes as a result of the removal of rock which is currently armoring the channel bottom and banks. This will be done to avoid misunderstanding about the origin of rock in the channel in the future.

5.0 CONTINGENCY MEASURES

Deficiencies will be noted at the restoration sites in the Annual Monitoring reports. Such deficiencies could include:

- Lack of germination of wetland seed mix.
- Grazing or trampling by livestock.
- Invasion by noxious weeds.

- Excessive erosion.
- Death of planted willows and alders.

Potential measures to rectify deficiencies will depend on the specifics, but could include:

- Re-seeding.
- Re-mulching.
- Fencing to prevent grazing.
- Application of approved herbicides (in strict accordance with the label instructions).
- Re-planting of willows.
- Installation of sediment controls (e.g., silt fence).

6.0 FUNDING AND IMPLEMENTATION

All of the land on which the work described in this Plan will occur is on land owned by Mr. Sease, the responsible party. The land is an agricultural ranch and there is no zoning or other land use regulations which would prevent completion of the work.

Mr. Sease will implement this plan and be responsible for all work completed, including any contingency measures, to achieve the success criteria. The responsible party has the financial capabilities to complete this work. The estimated cost for the work is $60,000.

7.0 SCHEDULE

All of the work in the channel included in this Second Plan will be completed within 20 days of USEPA signing the Administrative Order on Consent, and the remaining work outside of the channel will be completed by July 15, 2014--necessary approvals (from the Corps and USBLM) and adverse weather or unusual conditions aside (e.g., high flows in Sheep Creek). The USEPA will be notified of the date of completion of the work within two weeks after the work is done.

Mr. Sease's selected representative will be on the site to observe the work being completed in compliance with this Second Plan. It is understood that staff from CDWR will also be on the site to observe the work. The work will be documented by Mr. Sease's selected representative as necessary, including with notes, photographs, and GPS data points.

Reports will be submitted as detailed in Section 4.1

8.0 SECTION 404 PERMITTING

The work described in this plan entails the removal of rocks, soil, and dead willows from Sheep Creek and adjacent wetlands, and the restoration of impacted areas. No fill or dredged material will be placed in a water of the U.S. for this work, except for at the Feeder Ditch (Appendix F) and Horseshoe Pond No.2 (Appendix G). Clean fill will be placed in a 37.5 foot reach of the Feeder Ditch, and clean, angular rock will be placed at the end of the ditch. Portions of the original areas of Horseshoe Pond No. 2 will be filled to keep the pond surface area to less than 3,330 square-feet.

Observations of the ranch in May and June 2013 indicate that bank stabilization work was completed in 2012 along certain reaches of Sheep Creek. This work, the locations for which are shown on Figure 4, entailed placement of rock (mostly rounded cobbles) on the banks of the creek, covering of the rock with soil, grading, seeding, and mulching. In most areas it appears that rock and/or soil were placed at or below the OHWM of Sheep Creek. It does not appear that wetlands were impacted by the work in most areas. The bank stabilization work is in excellent condition with stable banks and good revegetation success. Photographs of the work are included in Appendix E.

While the bank stabilization work may be in excellent condition and provide functions for bank stabilization, authorization under Section 404 was not received for the work. On behalf of Mr. Sease, it is requested that the bank stabilization shown at the areas on Figure 4 and described in Section 3.2.3 be retained and authorized under Section 404. Reasons for consideration of permitting this work include:

- The work is in excellent condition presently and it appears likely that it will stay that way in the future.

- The work greatly improved the condition of the stream banks in the areas which were trampled by historic grazing activities.
- The work provides bank stabilization functions.
- It would likely be more destructive to remove the work (rocks) and leave soil banks in place. These banks would be subject to erosion by the creek in the future,

For this consideration, Mr. Sease has agreed to:

- Maintain the work in operable condition.
- Plant containerized willows and alders on the banks where the work was done at a spacing of 4 feet, on center.
- Monitor the condition of the work and success of the willow plantings as part of the monitoring plan for the other work included in this plan.

Tables

Table 1. Plant Species in Wetlands[1]
Sheep Creek Ranch

Common Name	Scientific Name	Abbreviation	Occurrence in Wetlands[2]	Frequency[3]
Alder	*Alnus incana*	AT	FACW	RC
Baltic rush	*Juncus balticus*	JB	FACW	VC
Beaked sedge	*Carex utriculata*	CU	OBL	VC
Bluejoint reed grass	*Calamagrostis canadensis*	CC	FACW	RC
Cinquefoil	*Potentilla spp.*	P	FAC	VC
Curley dock	*Rumex crispus*	RC	FAC	C
Currant	*Ribes inerme*	RI	FAC	R
Dandelion	*Taraxicum officinale*	TO	FACU	RC
Field sedge	*Carex praegracilis*	CP	FACW	RC
Fireweed	*Epilobium angustifolium*	EA	FACU	C
Foxtail barley	*Hordeum jubatum*	HJ	FAC	VC
Fringed sage	*Artemisia frigida*	AF	UPL	RC
Hoary aster	*Machaeranthera canescens*	MC	FACU	VC
Horsetail	*Equisetum arvense*	ER	FAC	RC
Kentucky bluegrass	*Poa pratensis*	PP	UPL	RC
Kochia	*Kochia scoparia*	KS	UPL	C
Manna grass	*Glyceria elata*	GE	FACW	R
Nettle	*Urtica gracilis*	UG	FAC	RC
Prairie thermopsis	*Thermopsis rhombifolia*	TR	FAC	C
Rabbitbrush	*Chrysothamnus nauseosus*	CN	UPL	R
Redtop	*Agrostis alba*	AA	FACW	C
Reed canary grass	*Phalaris arundinacea*	PA	FACW	R
Rocky Mountain iris	*Iris missouriensis*	IM	OBL	VC
Shrubby cinquefoil	*Pentaphylloides floribunda*	PF	FACW	RC
Sloughgrass	*Beckmannia syzigachne*	BS	OBL	R
Spike rush	*Eleocharis palustris*	ES	OBL	RC
Thistle	*Circium spp.*	C	FAC	RC
Timothy grass	*Phleum pratense*	PH	UPL	RC
Tufted hairgrass	*Deschampsia caespitosa*	DC	FACW	VC
Wheatgrass	*Agropyron spp.*	A	FACU	C
Wild mint	*Mentha arvensis*	MA	FACW	VC
Wild rye	*Elymus canadensis*	EC	FAC	R
Willow	*Salix spp*	S	≥ FAC	C
Yarrow	*Achillea lanulosa*	AL	FACU	VC
Upland weed	NA	UW	UPL	C

Notes:
1) Based on observations in May, June, and August 2011.
2) Ratings per "May 2012 Updated National Wetland Plant List for Intermountain Region", as follows: OBL = obligate; FACW = facultative wetland; FAC = facultative; FACU = facultative upland; and UPL = upland.
3) Based on field observations as follows: R = rare; RC = relatively common; C = common; VC = very common.

Table 2. Summary of Conditions at Instream Impoundment/ Obstruction Sites and Other Sites Included in Plan

Sheep Creek Ranch

Site No.[1]	Location Coordinates[2]		2010 USEPA Plan No.	Description
	X	Y		
1	373004	4226909	F88	Site at approved stream crossing where some rocks remain in the creek.
2	373004	4226876		Angular rocks in middle of channel.
4	373037	4226829		Previous restoration site with excess rocks in channel.
4A	373037	4226829	F83	Previous restoration site with fill pile on west bank.
5	373058	4226751	F82	Previous restoration site with rocks remaining in channel.
6	373056	4226745		Large rocks in channel.
7	373074	4226732	F91	Large rocks in channel.
9	373083	4226642		Old cobbles on east bank; new cobbles on west bank.
11	373081	4226536	F78	Cobbles on west bank. Rocks in channel.
11A	373081	4226536		Scattered rocks in wetland on west bank near Site 11.
12	373073	4226469	F77	Rocks placed on banks constrict the creek. Fill placed on west bank.
12A	373073	4226469		Fill on bank and plant willows.
13	373058	4226396	F75,F76	Area where two concrete abutments were constructed years ago for a bridge crossing. Rocks exist in channel and on banks.
14	373073	4226376	F71,F73	Rocks exist on banks and in channel below old creek crossing.
15	373071	4226346	F69	Rock exists in creek. Bank stabilization on both banks.
16	373071	4226318		Willows in middle of channel blocking flow.
17	373064	4226303		Rocks exist in creek.
18	373066	4226267	F68	Two large rocks on banks. Rocks exist in channel.
19	373075	4226229	F67	Rocks exist in channel. Bank stabilization on west bank.
20	373084	4226209		Rocks exist in channel.
21	373092	4226190		Rocks exist in side channel and on both banks.
22	373078	4226150	F63	Willows, rocks and dirt exist in the channel.
23	373069	4226117	F62	Rocks exist in channel at constriction. Bank stabilization on west bank.
23A	373044	4226060	F61	Large rocks on both banks. Rocks exist in channel.
24	373044	4226060	F60	Cobbles on banks and in channel at old creek crossing.
25	373003	4226029		Rocks in channel for short reach
25A	372967.3436	4225990.903		Dead willows and rocks in channel.
25B	372958	4225968		Rocks exist in channel. Large rocks on both banks.
26	372958	4225968		Rocks exist in channel and on both banks.
27	372952	4225942		Rocks and willows exist in channel and rocks exist on both banks.
28	372957	4225915		Dead willows and rocks in channel.
29	372939	4225897		Dead willows and rocks in channel.
30	373043	4226016		Dead willows and rocks in channel.
31	373041	4226013		Rocks in channel below ditch headgate for diversion dam.
32	373021	4225969	F56	Rocks exist in channel and on banks.
33	373009	4225938	F55	Rocks exist in channel.
34	373002	4225924	F54	Rocks exist in channel and on east bank.
35	372986	4225905	F53	Rocks exist in channel and on both banks.
36	372974	4225900	F52	Large rocks on west bank. Rocks on east bank and in channel.
37	372960	4225893	F50	Fill in wetland on west bank. Rocks exist in channel and on east bank.
38	372948	4225879	F49	Rocks exist in channel.
39	372920	4225869		Rocks exist in channel at approved creek crossing.
40A	372884	4225845	F46	Rocks exist in channel at two locations.
40B	372884	4225845	F46	Five to six rocks in split channel.
41	372865	4225826		Rocks exist in channel as diversion dam for ditch headgate.
42	372824	4225781	F42	Large rocks exists on channel bottom and banks.
43	372817	4225748	F41	Rocks exist in channel, rocks placed on east bank.
44	372791	4225732	F39	Rocks exist in channel, banks degraded.
45	372793	4225720		Rocks on sides of channel.
46	372789	4225708	F37	Rocks exist in channel.
48	372783	4225687		Rocks exist in channel.
49	372783	4225667	F35	Cobbles in channel, created side-channel.
50	372766	4225621	F32	Previous USEPA site with excess rocks, new cobbles in channel.
51	372776	4225595	F31	Previous USEPA site with new cobbles in channel and on both banks. Large rocks placed along both sides of channel for bank protection.
52	372751	4225577	F30	Three large rocks on east bank. Some cobbles and disturbance on the west bank.
53A	372734	4225564	F29	Cobbles placed on both banks.

Table 2. Summary of Conditions at Instream Impoundment/ Obstruction Sites and Other Sites Included in Plan

Sheep Creek Ranch

Site No.[1]	Location Coordinates[2]		2014 USEPA Plan No.	Description
	X	Y		
54	372718	4225553	F28	New cobbles on both banks and in the creek for approximately 35 feet of channel.
55	372710	4225528	F27	Large rocks on west bank, new cobbles in channel and on both banks, and fill and cobbles up against willows on the east bank.
56	372693	4225514	F26	Several old willows in creek, cobbles and sod placed on west bank.
57	372681	4225497	F25	Several large rocks on both banks; cobbles in channel and on west bank.
58	372664	4225478	F24	15 to 20 moderate-sized rocks are in the channel.
59	372656	4225470		Large willows in channel, some larger rocks on banks.
60	372632	4225472		Dead willows in channel; some rocks in channel.
61	372625	4225469		New cobbles on both banks.
62	372616	4225433	F22	Large rocks on west bank with smaller rocks on east bank; some rocks in creek.
63	372597	4225403	F21	Dead willows in channel; three to four large rocks on banks.
64	372590	4225376	F20	Large willow and two large rocks in channel.
65A	372586	4225365		Rocks on bank.
66	372588	4225327		Rock in channel for approximately 40 feet.
67	372585	4225304	F18	3 large willows in creek; large rock on east bank.
68	372578	4225289		Moderate sized rock in channel for approximately 25 feet.
69	372574	4225278	F17	cobbles placed in creek for approximately 10 feet. Note: large rocks on west bank are considered old fill and not required to be removed, per USEPA.
70	372577	4225269		One large rock on west bank; 10 to 15 rocks in channel.
71	372559	4225240	F15	Two large rocks on banks create constriction. Rock in channel for approximately 25 feet.
72	372543	4225230	F14	Rocks in channel for approximately 30 feet. New rocks on east bank.
73A	372532	4225215		Several large rocks in channel along with cobbles.
73B	372532	4225215		Several large rocks in channel along with cobbles.
74	372508	4225196	F13	Several willows in channel along with scattered rocks.
75A	372473	4225173	F12	Large rocks on both banks are constricting the channel. Cobbles in channel for approximately 50 feet.
75B	372461	4225130		Angular rocks in channel.
76	372461	4225130	F11	Small ditch on east bank. Rock in channel for approximately 20 feet.
77	372441	4225094	F10	Rocks at head of two channels in the area. Pile of cobbles on the west bank.
77A	372441	4225094	F10	Cobbles on west bank.
78A	372424	4225052	F10	Pile of angular rock in wetland on west bank.
78B	372437	4225079		Cobbles on both banks and in channel at old crossing.
79	372424	4225052	F9	Large rocks on bank create constriction. Rocks placed on both banks upstream of large rocks.
80	372423	4224998	F5	Large rock up against willow on the east bank. Rock in channel for approximately 25 feet.
81	372397	4224988	F4	Two to three rocks in split channel on the east side.
82	372397	4224975	F3	Rocks in channel for approximately 25 feet. Cobbles on west bank.
83	372401	4224965		Rocks in channel for approximately 10 feet
84	372400	4224950	F2	Two large rocks on banks create constriction. Rock in channel for approximately 25 feet.
85	372384	4224923	F1	Three large rock on banks. Rock in channel for approximately 15 feet.
86	372359	4224906		Rock in channel at southern property boundary.
B			F78	Pile of cobbles on west bank.

Notes:
USEPA = U.S. Environmental Protection Agency
CDWR = Colorado Division of Water Resources
Highlighted rows = USEPA-only site

Footnotes:
1) Numbering per the CDWR.
2) Per GPS coordinates provided by CDWR.

Table 3a. Description of Work at Instream Sites Required by the State

Sheep Creek Ranch

Site No.[1]	Location		2010 USEPA Plan No.	Description	Work Plan No.[3]
	X	Y			
1	373004	4226909	F88	Remove rocks from channel to lower upstream water surface. Remove rocks from west bank, re-grade, seed and mulch.	B-1
2	373004	4226876		Remove approximately seven rocks from middle of channel.	B-2
4	373037	4226829	F85	Remove small cobble bar and excess rocks in channel downstream.	B-4
5	373058	4226751	F82	Remove eight to ten rocks in channel.	B-5
6	373056	4226745		Remove five to six larger rocks from middle of channel.	B-6
7	373074	4226732	F91	Remove rocks from channel for approximately 15 feet.	B-7
9	373083	4226642		Remove rocks from channel for approximately 25 feet. Remove cobbles from west bank, re-grade, seed and mulch. Plant two willows on east bank.	B-9
11	373081	4226536	F78	Remove rocks in channel and widen.	B-11
12	373073	4226469		Remove fill from wetland on west bank, seed, mulch and plant three willows. Remove rocks from banks and channel to lower water level upstream and plant three willows along creek.	B-12
13	373058	4226396	F75, F76	Remove old concrete abutments and remove rock in channel. Re-grade, seed and mulch both banks. Plant six willows.	B-13
14	373073	4226376	F71, F73	Remove large rocks on banks and rock in channel to lower water surface upstream by 1.5 feet. Restore banks on both sides. Note: the old creek crossing can remain upstream of site.	B-14A,14B
15	373071	4226346	F69	Remove rocks in channel to lower upstream water surface. Widen channel at constriction.	B-15
16	373071	4226318		Remove willows from middle of channel. Also remove any underlying rocks.	B-16
17	373064	4226303		Remove rocks in channel for approximately 20 feet.	B-17
18	373066	4226267	F68	Remove rocks in channel for approximately 15 feet. Large rocks on bank to remain.	B-18
19	373075	4226229	F67	Remove rocks from channel for approximately 30 feet.	B-19
20	373084	4226209		Remove rocks from channel for approximately 30 feet. Plant three willows.	B-20
21	373092	4226190		Remove rocks from channel for approximately 25 feet. Also remove rocks from both banks, re-grade, seed, mulch and plant four willows.	B-21
22	373078	4226150	F63	Remove willows, rocks and dirt from channel to restore flow. Rocks on bank can remain.	B-22
23	373069	4226117	F62	Remove rocks from channel at constriction to lower upstream water level. Remove fill from east bank, re-grade, seed and mulch. Plant two willows on east bank. Note: large rocks on west bank to remain.	B-23
23A	373044	4226060	F61	Large rocks on both banks. Rocks exist in channel.	B-23A
24	373044	4226060	F60	Remove cobbles from banks and channel to restore area and eliminate crossing. Seed and mulch banks and plant four willows.	B-24
25	373003	4226029		Remove rocks in channel. Plant three willows.	B-25A
25A	372967	4225991		Remove willows and rocks in channel for 15 feet.	B-25A
25B	372967	4225991		Remove four to five large rocks. Remove rocks from bottom. Plant five willows.	B-25B
26	372958	4225968		Remove rocks in channel for approximately 25 feet. Remove rocks from both banks, seed and mulch banks. Remove one willow in water at bend on east side.	B-26
27	372952	4225942		Remove willows in channel. Remove rocks in channel. Seed and mulch west bank.	B-27
28	372957	4225915		Remove dead willows from channel upstream. Remove rocks from channel for approximately 30 feet to lower the water surface.	B-28
29	372939	4225897		Remove dead willows from channel and underlying rocks. Live willows along channel can remain.	B-29
30	373043	4226016		Remove dead willows in channel and underlying rocks for approximately 20 feet.	B-30
31	373041	4226013		Remove rocks from channel to lower water surface upstream by approximately 1 foot.	B-31
32	373021	4225969	F56	Remove rocks from channel for approximately 12 feet. Large rocks on west bank to remain.	B-32
33	373009	4225938	F55	Remove rocks from channel for approximately 15 feet.	B-
34	373002	4225924	F54	Remove rocks from channel for approximately 10 feet. Remove rocks from east bank, re-grade, seed and mulch bank. Plant 2 willows.	B-34
35	372986	4225905	F53	Remove rocks from channel for approximately 25 feet. Remove rocks from both banks, re-grade, seed and mulch. Plant three willows on east bank.	B-35
36	372974	4225900	F52	Remove rocks from channel for approximately 20 feet. Remove all but the largest rock on the west bank. Note: rocks on east bank to remain.	B-36
37	372960	4225893	F50	Remove fill on west bank, seed and mulch area. Remove rocks from channel for approximately 15 feet.	B-37
38	372948	4225879	F49	Remove rocks in channel. Seed and mulch both banks. Plant three willows.	B-38
39	372920	4225869		Remove largest rocks from drop. Re-grade bottom to reduce the slope and lower upstream water level around 1 foot. Note: An approved creek crossing exists at this site and should be maintained by the work.	B-39

Table 3a. Description of Work at Instream Sites Required by the State
Sheep Creek Ranch

Site No.[1]	Location		2010 USEPA Plan No.	Description	Work Plan No.[3]
	X	Y			
40A	372884	4225845	F46	Remove five to six rocks from small channel upstream. Remove rocks in channel for approximately 20 feet to lower water level. Plant four willows.	B-40A
40B	372884	4225845	F46	Remove five to six rocks from channel.	B-40B
41	372865	4225826		Remove rocks in channel to lower upstream water surface approximately 1 foot.	B-41
42	372824	4225781	F42	Remove one large rock on channel bottom. Remove largest rock on west bank and two largest rocks on east bank. Remove rock and cobbles in channel for ± 25 feet. Re-grade, seed and mulch both banks.	B-42
43	372817	4225748	F41	Remove rocks from channel for approximately 20 feet. Remove larger rocks from east bank. Re-grade, seed and mulch east bank. Plant two willows.	B-43
44	372791	4225732	F39	Remove rocks from channel for approximately 20 feet. Re-grade east banks, seed and mulch. Plant three willows.	B-44
45	372793	4225720		Remove approximately six large rocks in channel.	B-45
46	372789	4225708	F37	Remove rocks from channel for approximately 20 feet to lower the invert.	B-46
48	372783	4225687		Remove rocks in channel for approximately 15 feet.	B-48
49	372783	4225667	F35	Remove rocks in channel for approximately 35 feet to lower invert approximately 2 feet. Re-grade, seed and mulch both banks. Plant three willows	B-49A,49B
50	372766	4225621	F32	Remove rock in channel for approximately 20 feet. Remove rocks from both banks, re-grade, seed and mulch. Plant two willows on east bank.	B-50
51	372776	4225595	F31	Remove rock in channel for approximately 40 feet. Remove rocks from both banks, re-grade, seed and mulch. Plant three willows on east bank.	B-51
52	372751	4225577	F30	Remove two large rocks on east bank, re-grade, seed and mulch. Remove rock and cobbles in channel for ± 20 feet. Re-seed and mulch west bank.	B-52
54	372718	4225553	F28	Remove rocks from channel for approximately 35 feet. Remove cobbles from lower bank, re-grade, seed and mulch.	B-54
55	372710	4225528	F27	Remove two large rocks from west bank, re-grade bank, seed and mulch. Remove cobbles from channel for approximately 30 feet. Remove cobbles from both banks, re-grade, seed and mulch banks.	B-55
56	372693	4225514	F26	Remove willows from channel; also remove any rocks under willows. Remove cobbles from west bank, re-grade seed and mulch.	B-56
57	372681	4225497	F25	Remove large rocks on both banks at constriction. Remove rocks in channel for approximately 25 feet. Re-grade, seed and mulch banks. Plant two willows on east bank.	B-57
58	372664	4225478	F24	Remove 15 - 20 rocks in channel. Seed and mulch both banks.	B-58
59	372656	4225470		Remove large willows in channel and any underlying rocks. Remove rocks from west bank, re-grade, seed and mulch.	B-59
60	372632	4225472		Remove old willows in channel and rocks for approximately 25 feet.	B-60
61	372625	4225469		Remove rocks in channel for approx 25 feet. Remove cobbles from lower banks on both banks. Re-grade, seed and mulch banks. Plant three willows.	B-61
62	372616	4225433	F22	Remove large rocks from banks/channel. Remove rock and cobble in channel for ± 25 feet. Remove fill from east bank, re-grade, seed and mulch. Plant three willows.	B-62
63	372597	4225403	F21	Remove three to four large rocks on banks and widen channel at constriction. Remove rocks in channel for ± 30 feet to lower invert 1 to 2 feet. Re-grade banks, seed and mulch. Plant two willows.	B-63
64	372590	4225376	F20	Remove large willow in channel and two large rocks on banks. Widen channel and remove rock for ± 10 feet on east side to carry the flow. Re-grade banks, seed and mulch.	B-64
66	372588	4225327		Remove rock in channel for approximately 40 feet. Widen channel to top width of approximately 5 feet. Re-seed and mulch bare spot on east bank.	B-66
67	372585	4225304	F18	Remove 3 large willows in channel. Remove rocks on east bank, re-grade, seed and mulch. Plant three willows on east bank.	B-67
68	372578	4225289		Remove rock in channel for approximately 25 feet.	B-68
69	372574	4225278	F17	Remove rock in channel for approximately 10 feet.	B-69
70	372577	4225269		Remove 10-15 rocks in channel. Remove one large rock on west bank. Re-grade, seed and mulch. Plant 2 willows on west bank.	B-70
71	372559	4225240	F15	Remove two large rocks on banks and rock in channel for approximately 25 feet. Re-grade, seed and mulch both banks.	B-71
72	372543	4225230	F14	Remove rocks in channel for approximately 30 feet. Remove rocks on east bank, re-grade, seed and mulch area. Plant three willows on east bank. Note: USEPA determined that the rocks on the west bank are old and can remain.	B-72
73A	372532	4225215		Remove large rocks in channel for approximately 15 feet.	B-73A
73B	372532	4225215		Remove large rock an smaller rocks in channel for ± 10 feet.	B-73B

Table 3a. Description of Work at Instream Sites Required by the State
Sheep Creek Ranch

Site No.[1]	Location		2010 USEPA Plan No.	Description	Work Plan No.[3]
	X	Y			
74	372508	4225196	F13	Remove willows in channel and also any rocks under them. Remove scattered rocks.	B-74
75A	372473	4225173	F12	Remove large rocks on both banks to widen the channel. Remove rocks in channel for approximately 50 feet. Re-grade both banks, seed and mulch. Also plant four willows.	B-75A
75B	372461	4225130		Remove angular rocks in channel.	B-75B
76	372461	4225130	F11	Fill in ditch on east bank. Remove rock from channel for approximately 20 feet.	B-76
77	372441	4225094	F10	Remove rock from heads of two channels.	B-77
78B	372437	4225079		Remove cobbles from both banks, seed and mulch. Remove and spread cobbles in channel for approximately 15 feet to lower the invert approximately 8 inches.	B-78B
79	372424	4225052	F9	Remove two large rocks that create a constriction and rocks in channel for approximately 40 feet. Remove rocks on both banks and from both channels downstream. Re-grade, seed and mulch. Plant six willows.	B-79
80	372423	4224998	F5	Remove large rock up against the willow on the east bank. Remove rocks in channel for approximately 25 feet. Re-seed and mulch the west bank.	B-80
81	372397	4224988	F4	Remove two to three rocks in small channel on east side.	B-81
82	372397	4224975	F3	Remove rocks from channel for approximately 20 feet. Remove cobbles from the west bank and re-seed and mulch.	B-82
83	372401	4224965		Remove rocks from channel for approximately 10 feet.	B-83
84	372400	4224950	F2	Remove large rock on west bank, re-grade, seed and mulch. Remove scattered rocks in the channel. Plant two willows on the west bank.	B-84
85	372384	4224923	F1	Remove large rock on west bank, re-grade, seed and mulch bank. Remove rock from channel for approximately 15 feet. Plant two willows on west bank.	B-85
86	372359	4224906		Remove rock from both channels for approximately 5 feet on the Sease property.	B-86

Notes:
USEPA = U.S. Environmental Protection Agency
CDWR = Colorado Division of Water Resources

Footnotes:
1) Numbering per the CDWR.
2) Per GPS coordinates provided by CDWR
3) See plans in Appendix B.

Table 3b. Description of Work at Sites Required by USEPA Only
Sheep Creek Ranch

Site No.	Location Coordinates[1]		2010 USEPA Plan No.	Description	Work Plan No.[2]
	X	Y			
B			F78	Remove rocks from wetland by hand.	D-2
4A	373037	4226829	F83	Remove pile of fill in wetland on west bank, seed and mulch.	D-4A
11A	373081	4226536		Remove cobbles from west bank, re-seed and mulch. Plant four willows.	D-11A
12A	373073	4226469		Remove fill from wetland on west bank, seed, mulch and plant three willows.	D-12A
53A	372734	4225564	F29	Remove cobbles from both banks, re-grade, seed and mulch. Plant two willows on west bank.	D-53A
65A	372586	4225365		Plant four willows.	D-65A
77A	372441	4225094	F10	Remove cobble pile on west bank, seed and mulch. Plant three willows on west bank.	D-77A
78A	372424	4225052	F9	Remove pile of rock in wetland.	D-78A

Notes:
USEPA = U.S. Environmental Protection Agency
CDWR = Colorado Division of Water Resources

Footnotes:
1) Per GPS coordinates.
2) See work plans in Appendix D.

Table 4. Wetland Seed Mix[(1)]
Sheep Creek Ranch

Common Name	Scientific Name	Percent Composition	Lbs PLS/AC
Baltic rush	*Juncus balticus*	20	0.58
Beaked sedge	*Carex utriculata*	20	3.9
Field sedge	*Carex praegracilis*	20	2.6
Foxtail barley	*Hordeum jubatum*	15	9.6
Rocky Mountain iris	*Iris missouriensis*	5	20.0
Tufted hairgrass	*Deschampsia caespitosa*	20	0.7
	Total:	**100%**	**37.38**

(0.86 lbs/1,000 square feet)

Notes:
Lbs PLS/AC = pounds of pure live seed per acre.

Footnotes:
1) Based on 200 seeds per square foot. Actual seed mix may vary depending on availability of seeds.

Table 5. Upland Seed Mix[1]
Sheep Creek Ranch

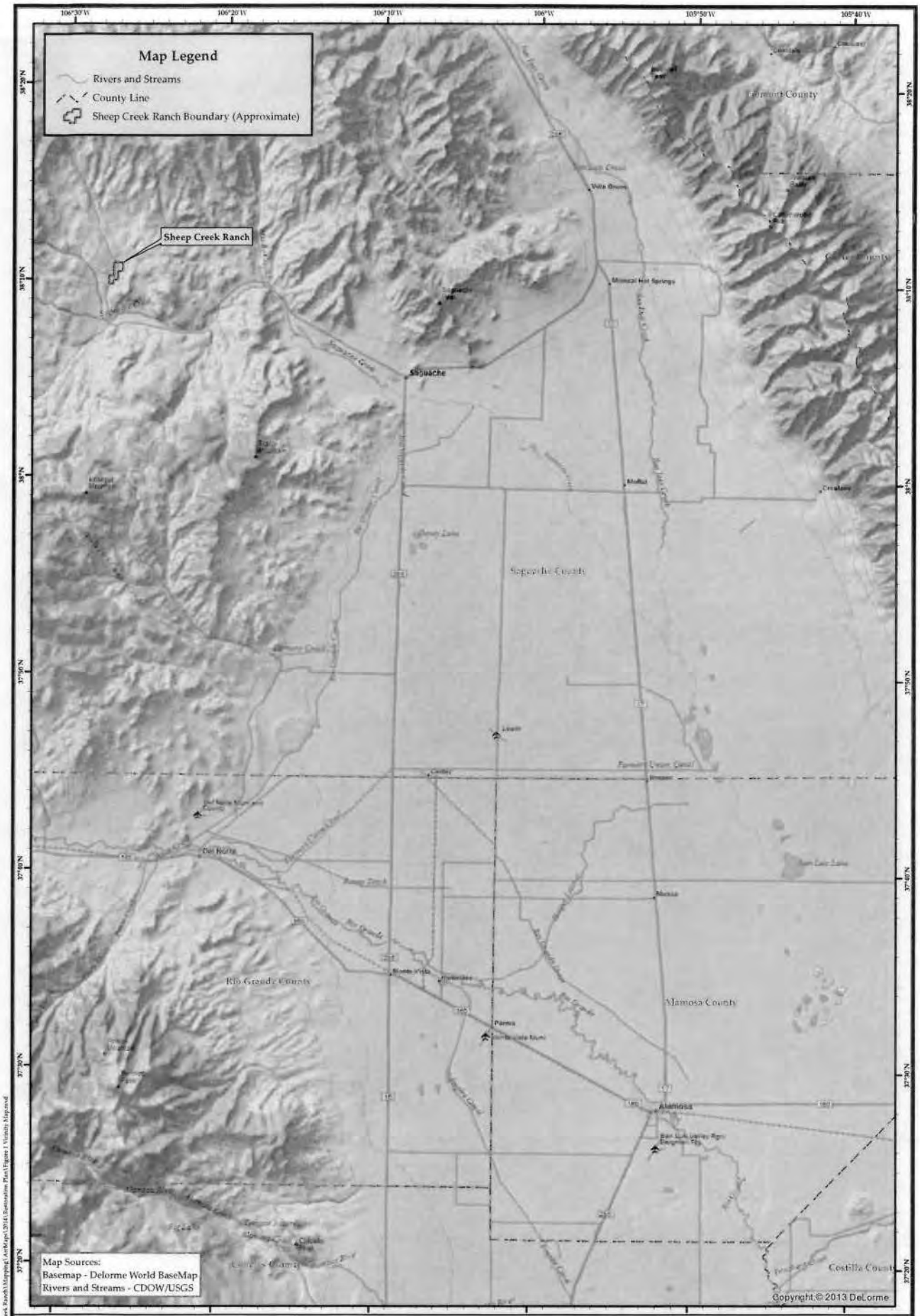
Common Name	Scientific Name	Percent Composition	Lbs PLS/AC
Alpine bluegrass	*Poa alpina*	15	1.3
Blue grama	*Bouteloua gracilis*	10	1.1
Slender wheatgrass	*Agropyron trachycaulum*	25	13.7
Timothy grass	*Phleum pratense*	25	1.7
Western wheatgrass	*Agropyron smithii*	25	19.8
	Total:	**100%**	**37.6**

(0.86 lbs/1,000 square feet)

Notes:
Lbs PLS/AC = pounds of pure live seed per acre.

Footnotes:
1) Based on 200 seeds per square foot. Actual seed mix may vary depending on availability of seeds.

Figures



BIKIS Water Consultants
555 RiverGate Lane, Suite B4-82
Durango, CO 81301
(970) 385-2340ph 385-2341fx
www.BikisWater.com

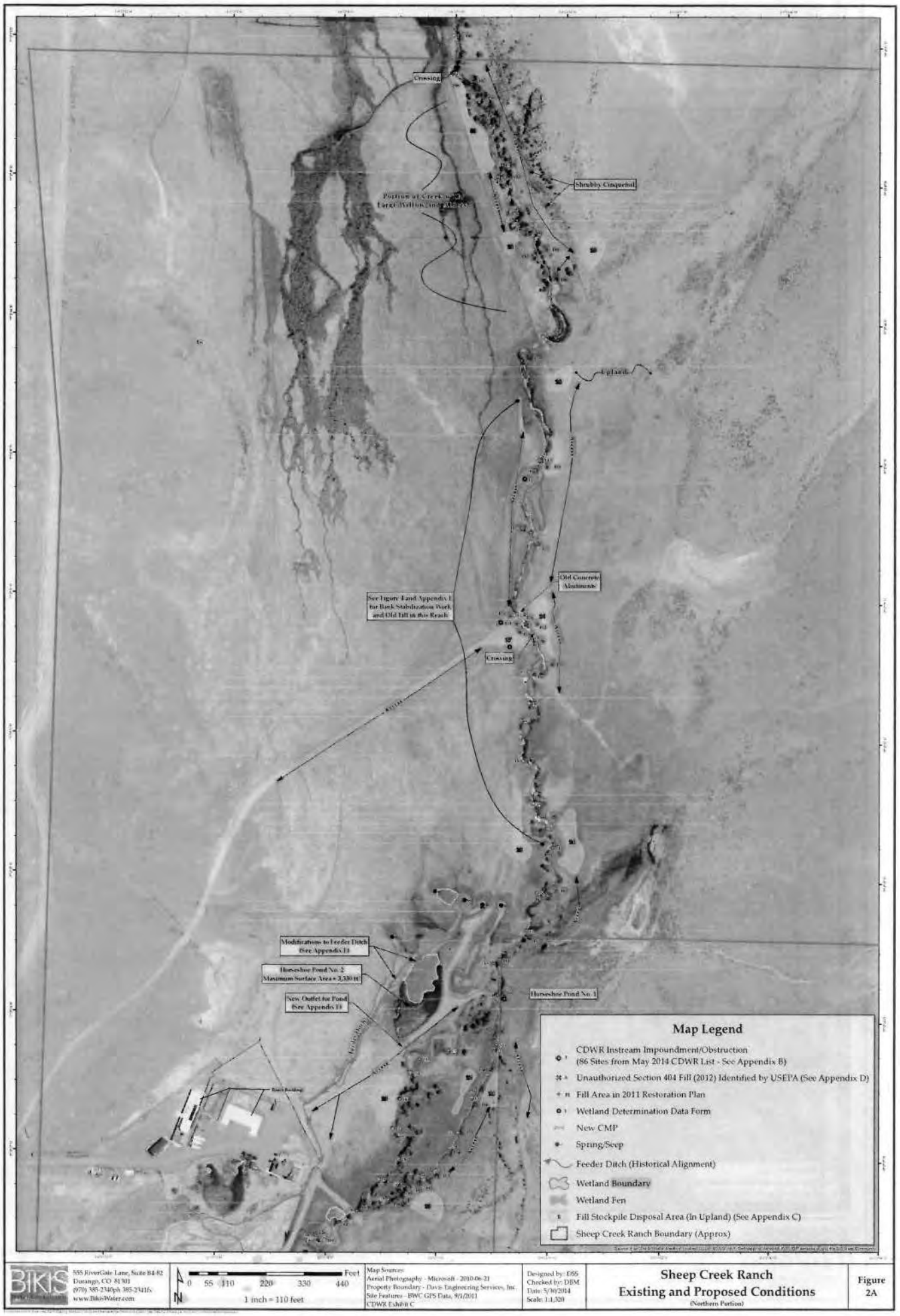
0 2.5 5 10 Miles

1 inch = 5 miles

Designed by: DSS
Checked by: DBM
Date: 3/13/2014
Scale: 1:316,800

Sheep Creek Ranch Vicinity Map

Figure 1



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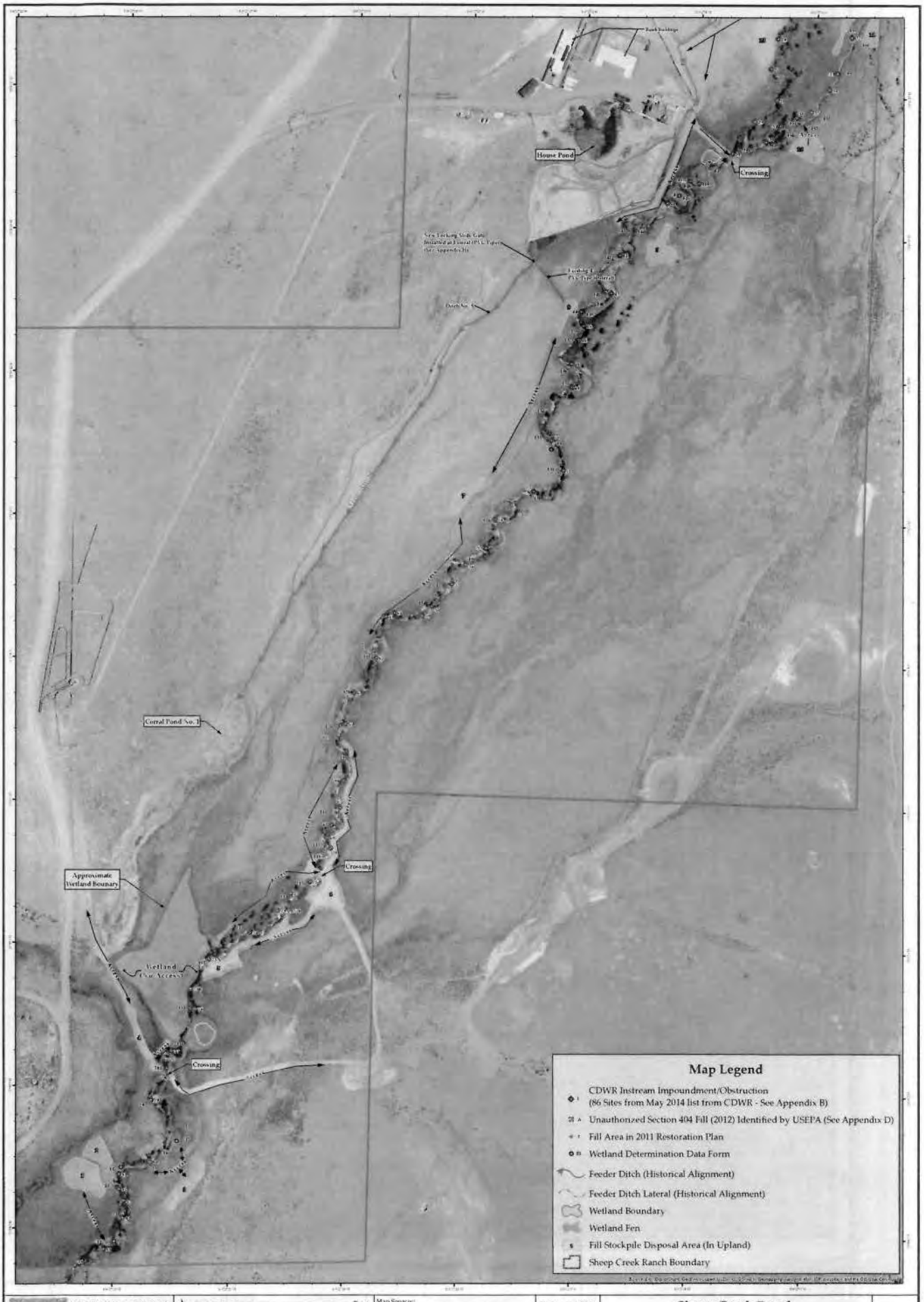
0 55 110 220 330 440 Feet
1 inch = 110 feet

Map Sources:
Aerial Photography - Microsoft - 2010-06-21
Property Boundary - Davis Engineering Services, Inc.
Site Features - BWC GPS Data, 9/1/2011
CDWR Exhibit C

Designed by: DSS
Checked by: DBM
Date: 5/30/2014
Scale: 1:1,320

Sheep Creek Ranch
Existing and Proposed Conditions
(Northern Portion)

Figure 2A



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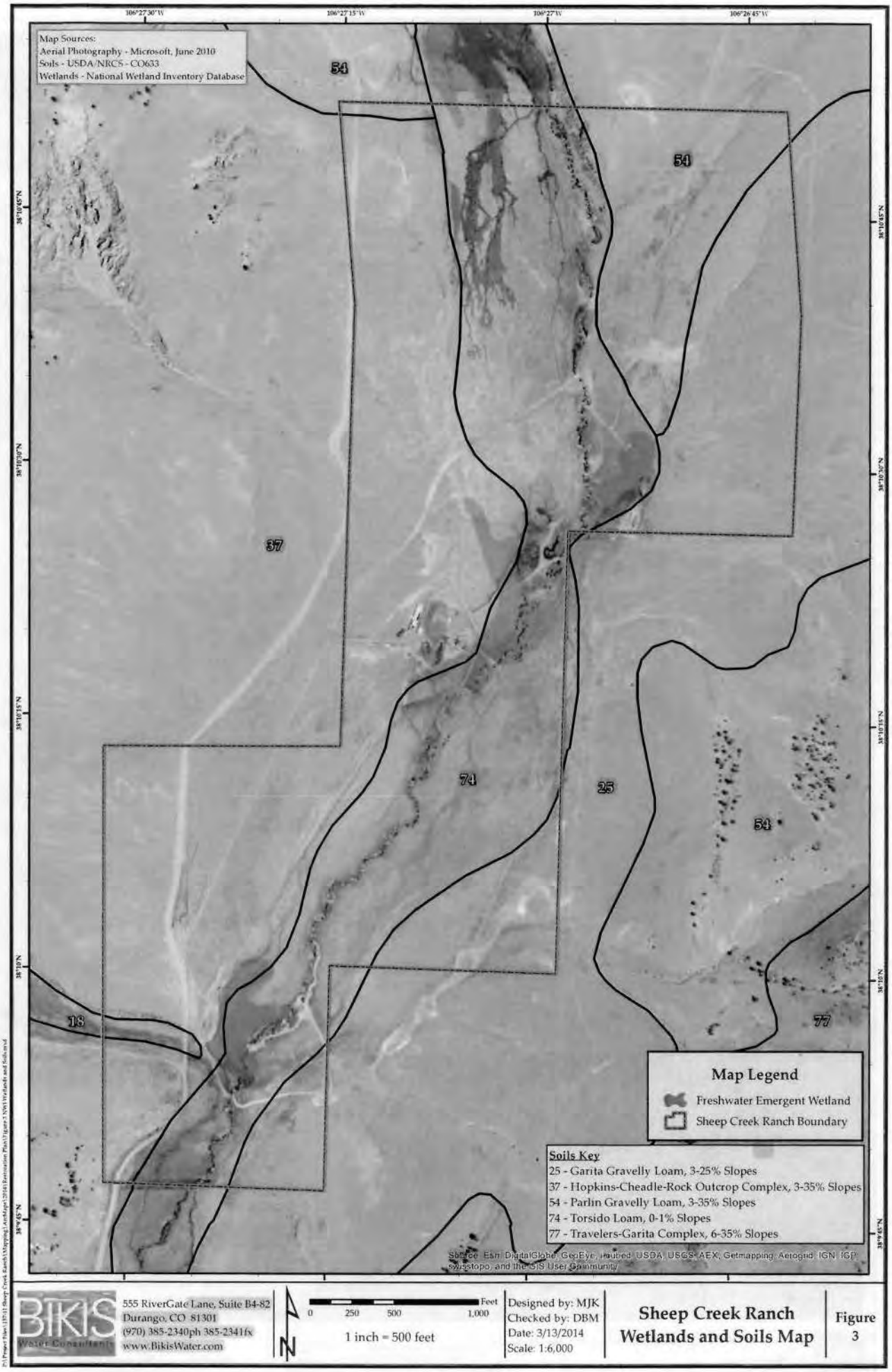
0 55 110 220 330 440 Feet
1 inch = 110 feet

Map Sources:
Aerial Photography - Microsoft - 2010-06-21
Property Boundary - Davis Engineering Services, Inc.
Site Features - BWC GPS Data, 9/1/2011 and 6/25/2013
CDWR Exhibit C

Designed by: DSS
Checked by: DBM
Date: 5/30/2014
Scale: 1:1,320

Sheep Creek Ranch
Existing and Proposed Conditions
(Southern Portion)

Figure 2B



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0 250 500 1,000 Feet

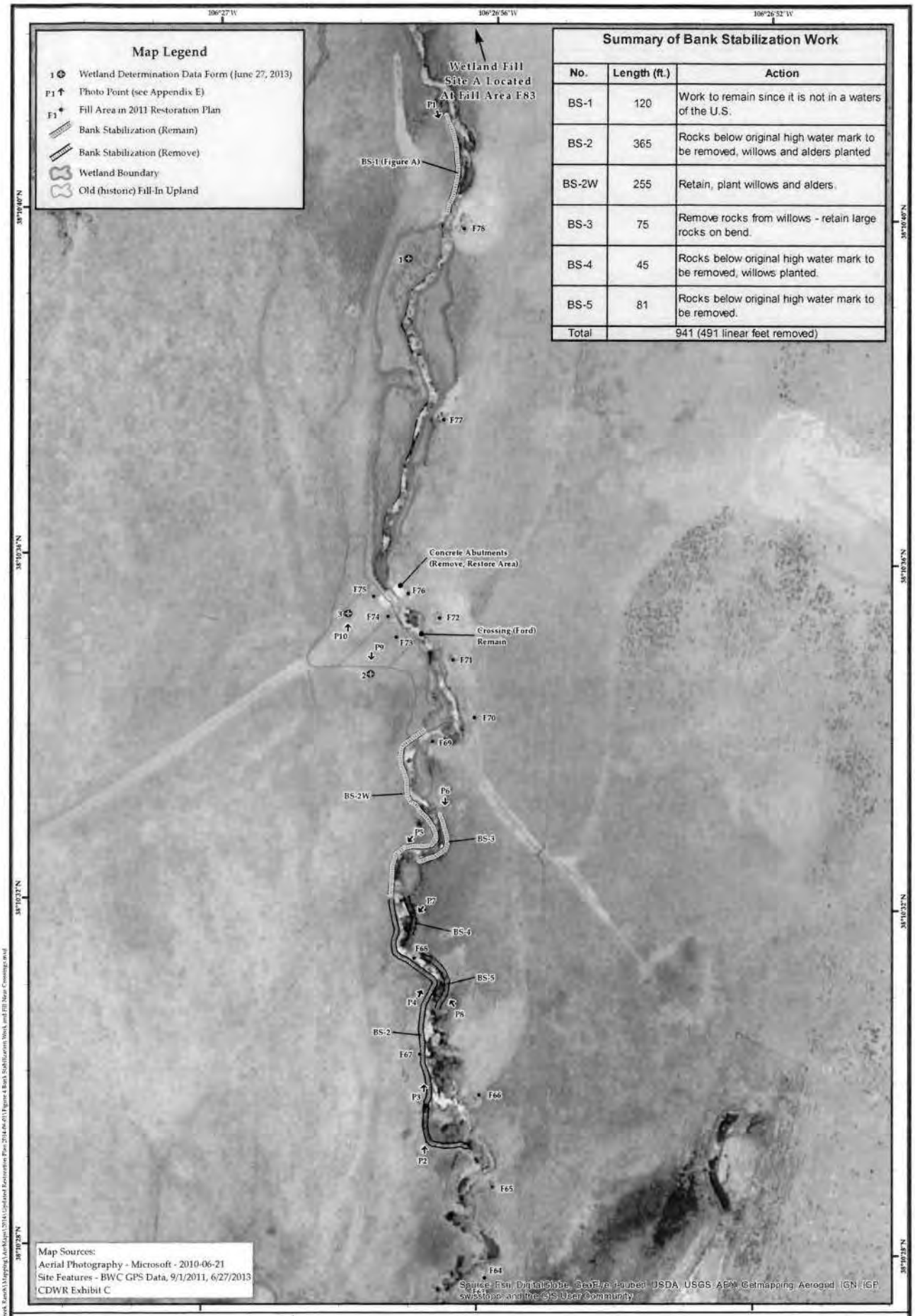
1 inch = 500 feet

Designed by: MJK
Checked by: DBM
Date: 3/13/2014
Scale: 1:6,000

Sheep Creek Ranch Wetlands and Soils Map

Figure 3

P:\Project Files\13711 Sheep Creek Ranch\13\Mapping\ArcMaps\2014\Restoration Plan\13fgure 3 NWI Wetlands and Soils.mxd



Summary of Bank Stabilization Work

No.	Length (ft.)	Action
BS-1	120	Work to remain since it is not in a waters of the U.S.
BS-2	365	Rocks below original high water mark to be removed, willows and alders planted
BS-2W	255	Retain, plant willows and alders.
BS-3	75	Remove rocks from willows - retain large rocks on bend.
BS-4	45	Rocks below original high water mark to be removed, willows planted.
BS-5	81	Rocks below original high water mark to be removed.
Total	941 (491 linear feet removed)	

BIKIS Water Consultants
555 RiverGate Lane, Suite B4-82
Durango, CO 81301
(970) 385-2340ph 385-2341fx
www.BikisWater.com

0 50 100 200 Feet

1 inch = 100 feet

Designed by: DSS
Checked by: DBM
Date: 6/4/2014
Scale: 1:1,200

Bank Stabilization Work and Fill Near Crossings (see Photos in Appendix E)

Figure 4

P:\Project Files\157-13 Sheep Creek Ranch\Mapping\ArcMaps\2014 Updated Restoration Plan 2014-06-03\Figure 4 Bank Stabilization Work and Fill Near Crossings.mxd

Appendix A:
Wetland Determination Data Forms

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: SHEEP CREEK RANCH City/County: SAGUACHE COUNTY Sampling Date: 8/3/11

Applicant/Owner: GREGG SEASE State: CO Sampling Point: 1

Investigator(s): MEHAN Section, Township, Range: _____

Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope (%): _____

Subregion (LRR): _____ Lat: _____ Long: _____ Datum: _____

Soil Map Unit Name: Torsido Loam NWI classification: hydric

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✓	No _____	Is the Sampled Area within a Wetland? Yes ✓ No _____
Hydric Soil Present?	Yes ✓	No _____	
Wetland Hydrology Present?	Yes ✓	No _____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1. Salix spp	10		FACW
2.			
3.			
4.			
5.			
	_____ = Total Cover		
Herb Stratum (Plot size: _____)			
1. Iris missouriensis	20	✓	OBL
2. C. Praegracilis	20	✓	FACW
3. J. Balticus	20	✓	"
4. P. Gracilis	10		FAC
5. Poa pratensis	Tr		FACU
6.			
7.			
8.			
9.			
10.			
11.			
	90 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

- ✓ 1 - Rapid Test for Hydrophytic Vegetation
- ✓ 2 - Dominance Test is >50%
- ___ 3 - Prevalence Index is ≤3.0[1]
- ___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ___ 5 - Wetland Non-Vascular Plants[1]
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

SOIL

Sampling Point: 1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 3/1				C	M	CL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- __ Histosol (A1)
- __ Histic Epipedon (A2)
- __ Black Histic (A3)
- __ Hydrogen Sulfide (A4)
- __ Depleted Below Dark Surface (A11)
- __ Thick Dark Surface (A12)
- __ Sandy Mucky Mineral (S1)
- __ Sandy Gleyed Matrix (S4)
- __ Sandy Redox (S5)
- __ Stripped Matrix (S6)
- __ Loamy Mucky Mineral (F1) (except MLRA 1)
- __ Loamy Gleyed Matrix (F2)
- ✓ Depleted Matrix (F3)
- __ Redox Dark Surface (F6)
- __ Depleted Dark Surface (F7)
- __ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- __ 2 cm Muck (A10)
- __ Red Parent Material (TF2)
- __ Very Shallow Dark Surface (TF12)
- __ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✓ No ____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- __ Surface Water (A1)
- __ High Water Table (A2)
- __ Saturation (A3)
- __ Water Marks (B1)
- __ Sediment Deposits (B2)
- __ Drift Deposits (B3)
- __ Algal Mat or Crust (B4)
- __ Iron Deposits (B5)
- __ Surface Soil Cracks (B6)
- __ Inundation Visible on Aerial Imagery (B7)
- __ Sparsely Vegetated Concave Surface (B8)
- __ Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)
- __ Salt Crust (B11)
- __ Aquatic Invertebrates (B13)
- __ Hydrogen Sulfide Odor (C1)
- __ Oxidized Rhizospheres along Living Roots (C3)
- __ Presence of Reduced Iron (C4)
- __ Recent Iron Reduction in Tilled Soils (C6)
- __ Stunted or Stressed Plants (D1) (LRR A)
- __ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- __ Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
- ✓ Drainage Patterns (B10)
- __ Dry-Season Water Table (C2)
- ✓ Saturation Visible on Aerial Imagery (C9)
- __ Geomorphic Position (D2)
- __ Shallow Aquitard (D3)
- __ FAC-Neutral Test (D5)
- __ Raised Ant Mounds (D6) (LRR A)
- __ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ____ No ✓ Depth (inches): _____

Water Table Present? Yes ____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes ____ No ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: receives irrigation return flows - soil dry now, though.

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: SHEEP CREEK RANCH City/County: SAGUACHE COUNTY Sampling Date: 8/31/11

Applicant/Owner: GREGG SEASE State: CO Sampling Point: 2

Investigator(s): MEHAN Section, Township, Range: ______

Landform (hillslope, terrace, etc.): ______ Local relief (concave, convex, none): ______ Slope (%): ______

Subregion (LRR): ______ Lat: ______ Long: ______ Datum: ______

Soil Map Unit Name: Torsido Loam NWI classification: hydric

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No ______ (If no, explain in Remarks.)

Are Vegetation ______, Soil ______, or Hydrology ______ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No ______

Are Vegetation ______, Soil ______, or Hydrology ______ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ______ No ______	Is the Sampled Area within a Wetland?	Yes ______ No ______
Hydric Soil Present?	Yes ______ No ______		
Wetland Hydrology Present?	Yes ______ No ______		

Remarks:

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: ______)			
1.			
2.			
3.			
4.			
	______ = Total Cover		
Sapling/Shrub Stratum (Plot size: ______)			
1. Crysothomus Nauseosus	10		FACU
2. Artimesia Fricidata	5		FACU
3. Salix	10		≥FAC
4.			
5.			
	25 = Total Cover		
Herb Stratum (Plot size: ______)			
1. Poa pratensis	25	✓	FACU
2. Agropyron spp	15	✓	h
3. Juncus balticus	1.0	✓	FACW
4. Hordeum Jubatum	Tr		FAC
5. Potentilla	10	✓	≥FAC
6.			
7.			
8.			
9.			
10.			
11.			
	60 = Total Cover		
Woody Vine Stratum (Plot size: ______)			
1.			
2.			
	______ = Total Cover		

% Bare Ground in Herb Stratum 20

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	______	x 1 = ______
FACW species	______	x 2 = ______
FAC species	______	x 3 = ______
FACU species	______	x 4 = ______
UPL species	______	x 5 = ______
Column Totals:	______ (A)	______ (B)

Prevalence Index = B/A = ______

Hydrophytic Vegetation Indicators:

- __ 1 - Rapid Test for Hydrophytic Vegetation
- __ 2 - Dominance Test is >50%
- __ 3 - Prevalence Index is ≤3.0[1]
- __ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- __ 5 - Wetland Non-Vascular Plants[1]
- __ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ______ No ✓

Remarks:

SOIL

Sampling Point: 2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 3/2, 3/3	97	—				SL	very rocky

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) (except MLRA 1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ____ No ✓

Remarks:

no redox features

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (LRR A)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (LRR A)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ____ No ✓ Depth (inches): _____

Water Table Present? Yes ____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes ____ No ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Located on high bank above creek & irrigation return flows.

At R4

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Sheep Creek Ranch City/County: Saguache County Sampling Date: 8/31/11
Applicant/Owner: Gregg Sease State: CO Sampling Point: 3
Investigator(s): Meehan Section, Township, Range:
Landform (hillslope, terrace, etc.): Local relief (concave, convex, none): Slope (%):
Subregion (LRR): Lat: Long: Datum:
Soil Map Unit Name: Torsido Loam NWI classification: hydric
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____ No ✓	Is the Sampled Area within a Wetland? Yes ____ No ✓
Hydric Soil Present?	Yes ____ No ✓	
Wetland Hydrology Present?	Yes ____ No ✓	

Remarks: on dry stream bank.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: ____)			
1. Pot Fruticosa	Tr		FACW
2. Crythamnus ←on pile	Tr		UPL
3. Artemisia Frigida	5		UPL
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: ____)			
1. Agropyron Smithii	20	✓	UPL
2. ICIN	5		OBL
3. Juncus balticus	20	✓	FACW
4. Poa pratensis	20	✓	UP
5. Taraxacum officinale	20	✓	UP
6. pot Grocilis ←on pile	10		FAC
7. Deschampsia cespitosa ←bank	5		FACW
8.			
9.			
10.			
11.			
	= Total Cover		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum ____

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
Total Number of Dominant Species Across All Strata: 4 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 25% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species ____	x 1 = ____
FACW species ____	x 2 = ____
FAC species ____	x 3 = ____
FACU species ____	x 4 = ____
UPL species ____	x 5 = ____
Column Totals: ____ (A)	____ (B)

Prevalence Index = B/A = ____

Hydrophytic Vegetation Indicators:
___ 1 - Rapid Test for Hydrophytic Vegetation
___ 2 - Dominance Test is >50%
___ 3 - Prevalence Index is ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ 5 - Wetland Non-Vascular Plants[1]
___ Problematic Hydrophytic Vegetation[1] (Explain)
[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ____ No ✓

Remarks:

SOIL

Sampling Point: 3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	10YR 2/1		NONE				CL	hard to dig > 8"

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) (except MLRA 1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ____ No ✓

Remarks: NO redox features.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (LRR A)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (LRR A)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ____ No ✓ Depth (inches): _____

Water Table Present? Yes ____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes ____ No ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Located on bank 3' above creek; relative high point.

R7

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: SHEEP CREEK RANCH City/County: SAGUACHE COUNTY Sampling Date: 8/31/11

Applicant/Owner: GREGG SEASE State: CO Sampling Point: 4

Investigator(s): MEHAN Section, Township, Range: _____

Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope (%): _____

Subregion (LRR): _____ Lat: _____ Long: _____ Datum: _____

Soil Map Unit Name: Torsido Loam NWI classification: hydric

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✓	No _____	Is the Sampled Area within a Wetland? Yes ✓ No _____
Hydric Soil Present?	Yes ✓	No _____	
Wetland Hydrology Present?	Yes _____	No _____	

Remarks: ASSUMED hydrology – SEE CONTINUE

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	_____ = Total Cover		
Herb Stratum (Plot size: _____)			
1. JUNCUS BALTICUS	80	✓	FACW
2. IRIS	5		OBL
3. ACHILLEA LANULOSA	5		NP
4. AGROPYRON spp	10		NP
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	x 1 =	
FACW species	x 2 =	
FAC species	x 3 =	
FACU species	x 4 =	
UPL species	x 5 =	
Column Totals: (A)		(B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

- ✓ 1 - Rapid Test for Hydrophytic Vegetation
- ✓ 2 - Dominance Test is >50%
- ___ 3 - Prevalence Index is ≤3.0[1]
- ___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ___ 5 - Wetland Non-Vascular Plants[1]
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

R7

SOIL

Sampling Point: 4

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 3/1	95		3	C	M	CL	Very dark brown to dark

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ✓ Loamy Gleyed Matrix (F2)
- ✓ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✓ No ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (except **MLRA 1, 2, 4A, and 4B**)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (LRR A)
- ✓ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ✓ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (LRR A)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ___ No ✓ Depth (inches): _____

Water Table Present? Yes ___ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ___ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes ✓ No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Low spot near swale - Flat. Likely not sustained by water from sheep creek.

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region NR R10

Project/Site: SHEEP CREEK RANCH City/County: SAGUACHE COUNTY Sampling Date: 8/31/11

Applicant/Owner: GREGG SEASE State: CO Sampling Point: 12

Investigator(s): MEHAN Section, Township, Range: _____

Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope (%): _____

Subregion (LRR): _____ Lat: _____ Long: _____ Datum: _____

Soil Map Unit Name: Torsido Loam NWI classification: hydric

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✓	No _____	**Is the Sampled Area within a Wetland?** Yes ✓ No _____
Hydric Soil Present?	Yes ✓	No _____	
Wetland Hydrology Present?	Yes _____	No _____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	_____ = Total Cover		
Herb Stratum (Plot size: 3')			
1. Deschampsia Cespitosa	75	✓	FACW
2. Potentilla Gracilis	10	✓	FAC
3. Aster	+		FACW
4. Plantago sp.	Tr		FAC
5. Carex nebrascensis	15	✓	FACW
6. Achillea lanulosa	Tr		
7. Hordeum jubatum	Tr		
8. C Utriculata ?	Tr		OBL
9.			
10.			
11.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	x 1 =	
FACW species	x 2 =	
FAC species	x 3 =	
FACU species	x 4 =	
UPL species	x 5 =	
Column Totals: (A)		(B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

- ___ 1 - Rapid Test for Hydrophytic Vegetation
- ✓ 2 - Dominance Test is >50%
- ___ 3 - Prevalence Index is ≤3.0[1]
- ___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ___ 5 - Wetland Non-Vascular Plants[1]
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

tr
R10

SOIL

Sampling Point: 5

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-14	10YR 2/1		—				P	Fibric

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ✓ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✓ No ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ✓ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) **(LRR A)**
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ✓ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) **(LRR A)**
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ___ No ✓ Depth (inches): _____

Water Table Present? Yes ___ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ___ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes ✓ No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Soil damp at 12". Located on bench close to water in creek.

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region 21

Project/Site: Sheep Creek Ranch City/County: Saguache County Sampling Date: 8/31/11

Applicant/Owner: Gregg Sease State: CO Sampling Point: 6

Investigator(s): Mehan Section, Township, Range: _____

Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope (%): _____

Subregion (LRR): _____ Lat: _____ Long: _____ Datum: _____

Soil Map Unit Name: Torsido Loam NWI classification: hydric

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No ✓	Is the Sampled Area within a Wetland? Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes _____	No ✓	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1. Salix spp	Tr		FACW
2.			
3.			
4.			
5.			
	_____ = Total Cover		
Herb Stratum (Plot size: _____)			
1. Deschampsia caespitosa	5		FACW
2. Potentilla gracilis	30	✓	FAC
3. Juncus tochii	25	✓	UP
4. Agropyron spp	20	✓	UP
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum 25

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 33% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species _____	x 1 =	_____
FACW species _____	x 2 =	_____
FAC species _____	x 3 =	_____
FACU species _____	x 4 =	_____
UPL species _____	x 5 =	_____
Column Totals: _____ (A)		_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

- ___ 1 - Rapid Test for Hydrophytic Vegetation
- ___ 2 - Dominance Test is >50%
- ___ 3 - Prevalence Index is ≤3.0[1]
- ___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ___ 5 - Wetland Non-Vascular Plants[1]
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No ✓

Remarks:

possibly disturbed in past.

SOIL

Sampling Point: 6

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 3/3	100	—					Very stony

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ____ No ✓

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) **(LRR A)**
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) **(LRR A)**
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ____ No ____ Depth (inches): _____

Water Table Present? Yes ____ No ____ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ____ No ____ Depth (inches): _____

Wetland Hydrology Present? Yes ____ No ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Located on high bank 2-3' above creek. No water source

R 32

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Sheep Creek Ranch City/County: Sagnache County Sampling Date: 8/31/11

Applicant/Owner: Gregg Sease State: CO Sampling Point: 7

Investigator(s): MEHAN Section, Township, Range: _____

Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope (%): _____

Subregion (LRR): _____ Lat: _____ Long: _____ Datum: _____

Soil Map Unit Name: Torsido Loam NWI classification: hydric

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✓ No _____	Is the Sampled Area within a Wetland?	Yes _____ No ✓
Hydric Soil Present?	Yes _____ No ✓		
Wetland Hydrology Present?	Yes _____ No ✓		

Remarks: hydrophytes invaded from irrigated field to West.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1. Salix spp			FAC
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: _____)			
1. Iris	40	✓	~~OBL~~
2. Potentilla Gracilis	20	✓	FAC
3. Juncus balticus	20	✓	FACW
4. Cirsium	T		UP
5. Achillea	T		"
6. Agropyron	5		"
7. Bromus	5		"
8. ~~Carex~~ Thermopsis	T		FAC
9. Puccinellia ?	10		FAC
10.			
11.			
	= Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	= Total Cover		
% Bare Ground in Herb Stratum _____			

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

- ___ 1 - Rapid Test for Hydrophytic Vegetation
- ✓ 2 - Dominance Test is >50%
- ___ 3 - Prevalence Index is ≤3.0[1]
- ___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ___ 5 - Wetland Non-Vascular Plants[1]
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

R32

SOIL

Sampling Point: 7

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR 3/1		NONE					Granular / struct

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ____ No ✓

Remarks:

NO redox features

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) **(LRR A)**
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (LRR A)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ____ No ✓ Depth (inches): _____

Water Table Present? Yes ____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes ____ No ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Located 3' above creek & away from irrigation. No water source

KC59

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Sheep Creek Ranch City/County: Saguache County Sampling Date: 9/1/11
Applicant/Owner: Gregg Sease State: CO Sampling Point: B
Investigator(s): MEHAN Section, Township, Range:
Landform (hillslope, terrace, etc.): Local relief (concave, convex, none): Slope (%):
Subregion (LRR): Lat: Long: Datum:
Soil Map Unit Name: Torsido Loam NWI classification: hydric
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No (If no, explain in Remarks.)
Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No
Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	No ✓	Is the Sampled Area within a Wetland? Yes No ✓
Hydric Soil Present?	Yes	No ✓	
Wetland Hydrology Present?	Yes	No ✓	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size:)			
1. Cirium	30	✓	UPL
2. Iris	20	✓	OBL
3. Agropyron spp	20	✓	UP
4. Juncus balticus	10		FACW
5. Festuca spp	20	✓	UP
6. Taraxicum officinale	Tr		UP
7. Brassica wiedy mustard	Tr		UP
8.			
9.			
10.			
11.			
	= Total Cover		
Woody Vine Stratum (Plot size:)			
1.			
2.			
	= Total Cover		
% Bare Ground in Herb Stratum			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
Total Number of Dominant Species Across All Strata: 4 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:
__ 1 - Rapid Test for Hydrophytic Vegetation
__ 2 - Dominance Test is >50%
__ 3 - Prevalence Index is ≤3.0[1]
__ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ 5 - Wetland Non-Vascular Plants[1]
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes No ✓

Remarks:

KC9

SOIL

Sampling Point: Pit 8

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR 2/2, 3/1		NONE				SL	Granular structure

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) (except MLRA 1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ____ No ✓

Remarks:

No redox features

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (LRR A)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (LRR A)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ____ No ✓ Depth (inches): _____

Water Table Present? Yes ____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes ____ No ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Soil dry at 12" location 3' above creek on dry bank, away from irrigation.

R78

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: SHEEP CREEK RANCH City/County: SAGUACHE COUNTY Sampling Date: 9/1/11
Applicant/Owner: GREGG SEASE State: CO Sampling Point: 9
Investigator(s): MEHAN Section, Township, Range:
Landform (hillslope, terrace, etc.): Local relief (concave, convex, none): Slope (%):
Subregion (LRR): Lat: Long: Datum:
Soil Map Unit Name: Torsido Loam NWI classification: hydric
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No (If no, explain in Remarks.)
Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No
Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	No ✓	Is the Sampled Area within a Wetland? Yes No ✓
Hydric Soil Present?	Yes	No ✓	
Wetland Hydrology Present?	Yes	No ✓	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size:)			
1. Agropyron Trachycaulum	50	✓	UP
2. Hordeum Jubatum	15	✓	FACW
3. Bot Gracilis	15	✓	FAC
4. Achillea lanulosa	10		FACU
5. Artemisia Frigida	5		FACU
6. Taraxicum officinale	Tr		U
7. Thermopsis	5		FAC
8.			
9.			
10.			
11.			
	= Total Cover		
Woody Vine Stratum (Plot size:)			
1.			
2.			
	= Total Cover		
% Bare Ground in Herb Stratum			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
Total Number of Dominant Species Across All Strata: 3 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 66 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:
__ 1 - Rapid Test for Hydrophytic Vegetation
__ 2 - Dominance Test is >50%
__ 3 - Prevalence Index is ≤3.0[1]
__ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ 5 - Wetland Non-Vascular Plants[1]
__ Problematic Hydrophytic Vegetation[1] (Explain)
[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes No ✓

Remarks: but most cover is Agropyron, UPG cloud

SOIL

Sampling Point: 9

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 5/2		NONE				SL	very hard to dig, stones

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ____ No ✓

Remarks:

No redox features

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (LRR A)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (LRR A)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ____ No ✓ Depth (inches): _____

Water Table Present? Yes ____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes ____ No ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Soil dry at 14". Located well above creek (4'). Also out of irrigated crops.

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Sheep Creek Ranch City/County: Saguache county Sampling Date: 6/27/13

Applicant/Owner: Gregg Sease State: CO Sampling Point: 1

Investigator(s): Mehan (BWC) Section, Township, Range: Sec 5,7,8, T45N, R5E NMPM

Landform (hillslope, terrace, etc.): Local relief (concave, convex, none): Slope (%):

Subregion (LRR): Lat: 38° 10' 30" N Long: 106° 27' 00" W Datum: NAD 83

Soil Map Unit Name: Torsido Loam – hydric NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No ✓ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✓	No ____	**Is the Sampled Area within a Wetland?** Yes ✓ No ____
Hydric Soil Present?	Yes ✓	No ____	
Wetland Hydrology Present?	Yes ✓	No ____	

Remarks: This is a relatively dry year.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: ____)			
1. Salix spp	10	✓	≥FAC
2.			
3.			
4.			
5.			
	10 = Total Cover		
Herb Stratum (Plot size: ____)			
1. Eleocharis palustris	90	✓	OBL
2. Poa pratensis	5		FAC
3. Potentilla	5		FAC
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	101 = Total Cover		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum ____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	x 1 =	
FACW species	x 2 =	
FAC species	x 3 =	
FACU species	x 4 =	
UPL species	x 5 =	
Column Totals: (A)		(B)

Prevalence Index = B/A = ____

Hydrophytic Vegetation Indicators:

- ✓ 1 - Rapid Test for Hydrophytic Vegetation
- ____ 2 - Dominance Test is >50%
- ____ 3 - Prevalence Index is ≤3.0[1]
- ____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ____ 5 - Wetland Non-Vascular Plants[1]
- ____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No ____

Remarks: Salix monticola ?

SOIL

Sampling Point: 1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	10 YR 2/1						Sa lo	very Rocky
	2.5Y 3/0							

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✓ No ___

Remarks: Soil very hard to dig > 8",

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ✓ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) **(LRR A)**
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) **(LRR A)**
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ___ No ✓ Depth (inches): _____

Water Table Present? Yes ___ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ✓ No ___ Depth (inches): 6

Wetland Hydrology Present? Yes ✓ No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Located at terrace close to the creek & flow.

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Sheep Creek Ranch City/County: Saguache County Sampling Date: 6/11/13

Applicant/Owner: Gigge Lease State: CO Sampling Point: 2

Investigator(s): Mehan (BWC) Section, Township, Range: Sec 5, 7, 8, T45N, R5E NMPM

Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope (%): _____

Subregion (LRR): _____ Lat: 38°10'30" N Long: 106°27'00" W Datum: NAD 83

Soil Map Unit Name: Torsido Loam – hydric NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No ✓ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes _____ No 2

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No ✓	Is the Sampled Area within a Wetland? Yes _____ No ✓
Hydric Soil Present?	Yes _____	No _____	
Wetland Hydrology Present?	Yes _____	No ✓	

Remarks: This is a relatively dry year.

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	_____ = Total Cover		
Herb Stratum (Plot size: _____)			
1. Iris missouriensis	10		FACW
2. Taraxacum officinale	20	✓	FACU
3. Juncus Arcticus	10		FACW
4. Poa pratensis	Tr		FAC
5. Trifolium pratense	40	✓	FACU
6. Agropyron Smithii	10		FACU
7.			
8.			
9.			
10.			
11.			
	90 = Total Cover		
Woody Vine Stratum (Plot size: _____)	45/18		
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ 5 - Wetland Non-Vascular Plants[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No ✓

Remarks:

SOIL

Sampling Point: 2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
6	10YR 3/2		NONE				sic	hard to dig

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ✓ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✓ No ___

Remarks: Soil very dark – no redox features

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) **(LRR A)**
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) **(LRR A)**
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ___ No ✓ Depth (inches): _____

Water Table Present? Yes ___ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ___ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes ___ No ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Located ± 100' from creek in old irrigated field. Soil is very dry.

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Sheep Creek Ranch City/County: Saguache County Sampling Date: 6/11/13

Applicant/Owner: Gregg Sease State: CO Sampling Point: 3

Investigator(s): Mehan (BWC) Section, Township, Range: Sec 5, 7, 8, T45N, R5E NMPM

Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope (%): _____

Subregion (LRR): _____ Lat: 38° 10' 30" N Long: 106° 27' 00" W Datum: NAD 83

Soil Map Unit Name: Torsido Loam – hydric NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No ✓ (If no, explain in Remarks.)

Are Vegetation ✓, Soil _____, or Hydrology ✓ significantly disturbed? Are "Normal Circumstances" present? Yes _____ No ✓

Are Vegetation _____, Soil _____, or Hydrology ✓ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✓	No _____	Is the Sampled Area within a Wetland? Yes _____ No ✓
Hydric Soil Present?	Yes _____	No _____	
Wetland Hydrology Present?	Yes _____	No ✓	

Remarks: This is a relatively dry year. Area has been grazed & irrigated in the past.

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: _____)			
1. _____			
2. _____			
3. _____			
4. _____			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1. _____			
2. _____			
3. _____			
4. _____			
5. _____			
	_____ = Total Cover		
Herb Stratum (Plot size: _____)			
1. Carex praegracilis	5		FACW
2. Poa pratensis	10		FAC
3. Juncus arcticus	70	✓	FACW
4. Iris missouriensis	5		FACW
5. _____			
6. _____			
7. _____			
8. _____			
9. _____			
10. _____			
11. _____			
	90 = Total Cover		
	45/19		
Woody Vine Stratum (Plot size: _____)			
1. _____			
2. _____			
	_____ = Total Cover		
% Bare Ground in Herb Stratum _____			

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

✓ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ 5 - Wetland Non-Vascular Plants[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

SOIL

Sampling Point: 3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
6	10 YR 2/2		NONE				si clay	very hard to dig

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (LRR A)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (LRR A)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: In formerly irrigated pasture. no water this year. soil is very dry. Located 100' from the creek.

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Sheep Creek Ranch City/County: Saguache County Sampling Date: 6/17/13
Applicant/Owner: Gregg Sease State: CO Sampling Point: 4
Investigator(s): Mehan (BWC) Section, Township, Range: Sec 5,7,8, T45N, R5E NMPM
Landform (hillslope, terrace, etc.): Local relief (concave, convex, none): Slope (%):
Subregion (LRR): Lat: 38°10'30" N Long: 106°27'00" W Datum: NAD 83
Soil Map Unit Name: Torsido Loam – hydric NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No ✓ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✓	No ____	Is the Sampled Area within a Wetland? Yes ✓ No ____
Hydric Soil Present?	Yes ✓	No ____	
Wetland Hydrology Present?	Yes ✓	No ____	

Remarks: This is a relatively dry year.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: ____)			
1. Salix spp	10	✓	≥ FAC
2.			
3.			
4.			
5.			
	10 = Total Cover		
Herb Stratum (Plot size: ____)			
1. Eleocharis	80	✓	= FACW
2. Agrostis alba	10		FACW
3. Carex praegracilis	5		FACW
4. Potentilla	5		= FAC
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	101 = Total Cover		
	50/20		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum ____

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
Total Number of Dominant Species Across All Strata: 2 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species ____	x 1 = ____
FACW species ____	x 2 = ____
FAC species ____	x 3 = ____
FACU species ____	x 4 = ____
UPL species ____	x 5 = ____
Column Totals: ____ (A)	____ (B)

Prevalence Index = B/A = ____

Hydrophytic Vegetation Indicators:
___ 1 - Rapid Test for Hydrophytic Vegetation
✓ 2 - Dominance Test is >50%
___ 3 - Prevalence Index is ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ 5 - Wetland Non-Vascular Plants[1]
___ Problematic Hydrophytic Vegetation[1] (Explain)
[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? ✓ Yes ____ No ____

Remarks:

SOIL

Sampling Point: 4

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 3/1				C	M	lo	
6-10	2.5Y 8/0						Silo	Sandy

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: ___

Depth (inches): ___

Hydric Soil Present? Yes ✓ No ___

Remarks:

possibly some old plant Redox features not distinct.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) **(LRR A)**
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) **(LRR A)**
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ___ No ✓ Depth (inches): ___

Water Table Present? Yes ___ No ✓ Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ✓ No ___ Depth (inches): 10

Wetland Hydrology Present? Yes ✓ No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

on island close to creek.

Appendix B:
Work Plans for Instream Impoundment/Obstructions (86 Sites Required by CDWR)

Appendix B
Work Plans for Instream Impoundment/Obstructions

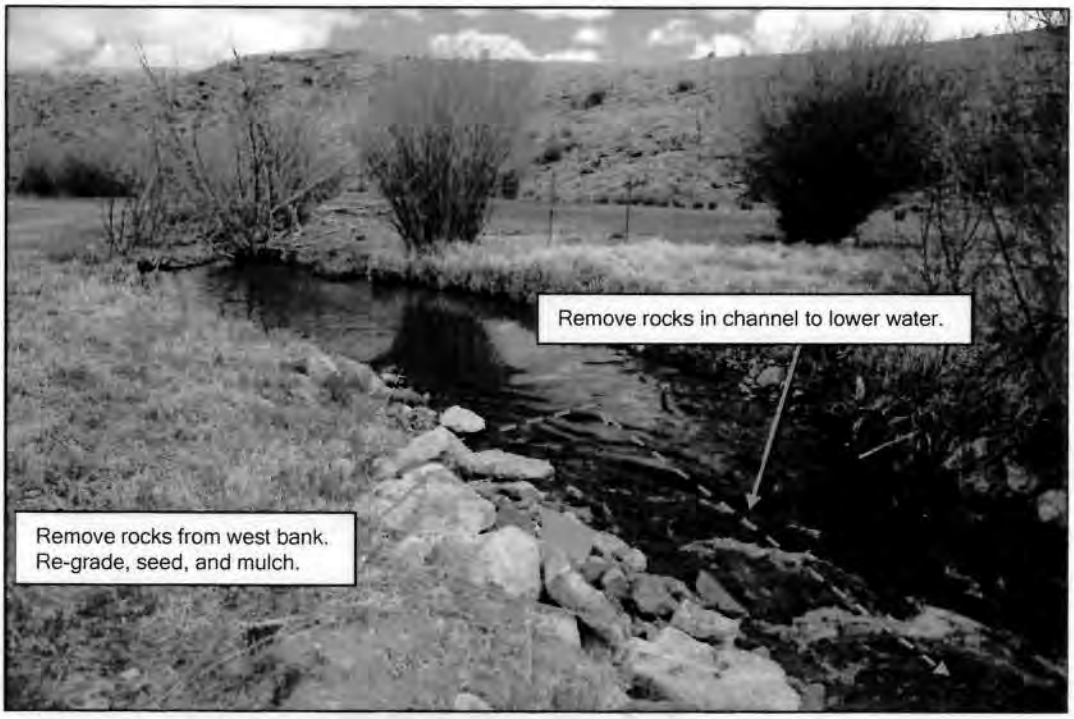


Figure B-1. Work plan for site 1.

Figure B-2. Work plan for site 2.

Appendix B
Work Plans for Instream Impoundment/Obstructions

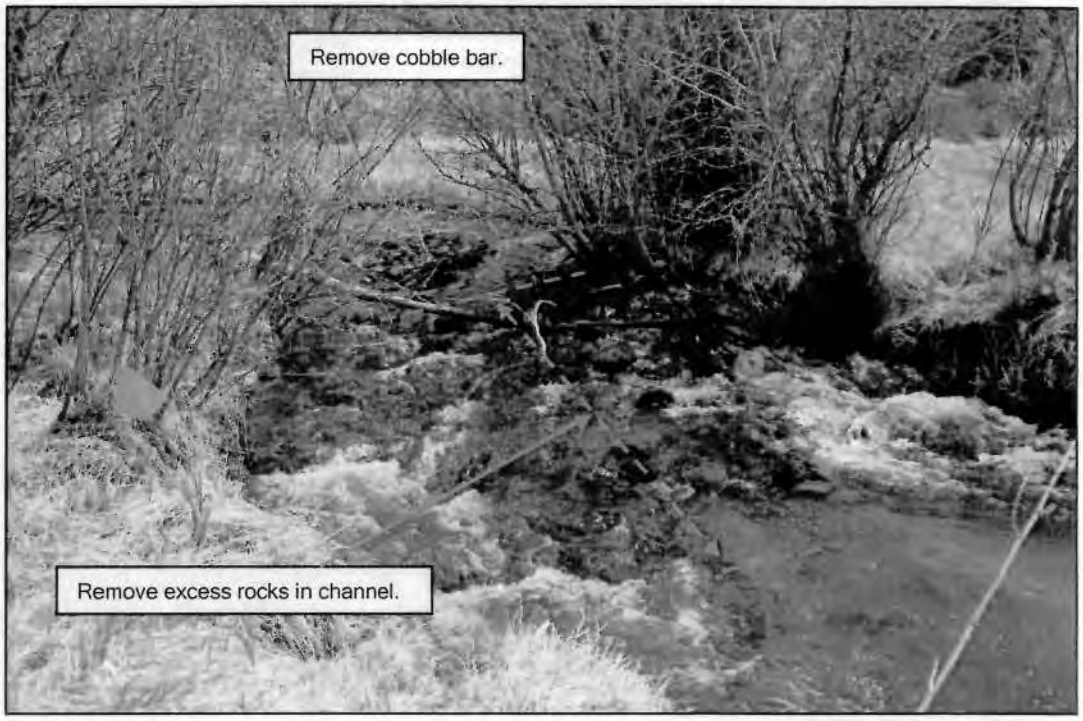


Figure B-4. Work plan for site 4.

Figure B-5. Work plan for site 5.

Appendix B
Work Plans for Instream Impoundment/Obstructions

Figure B-6. Work plan for site 6.

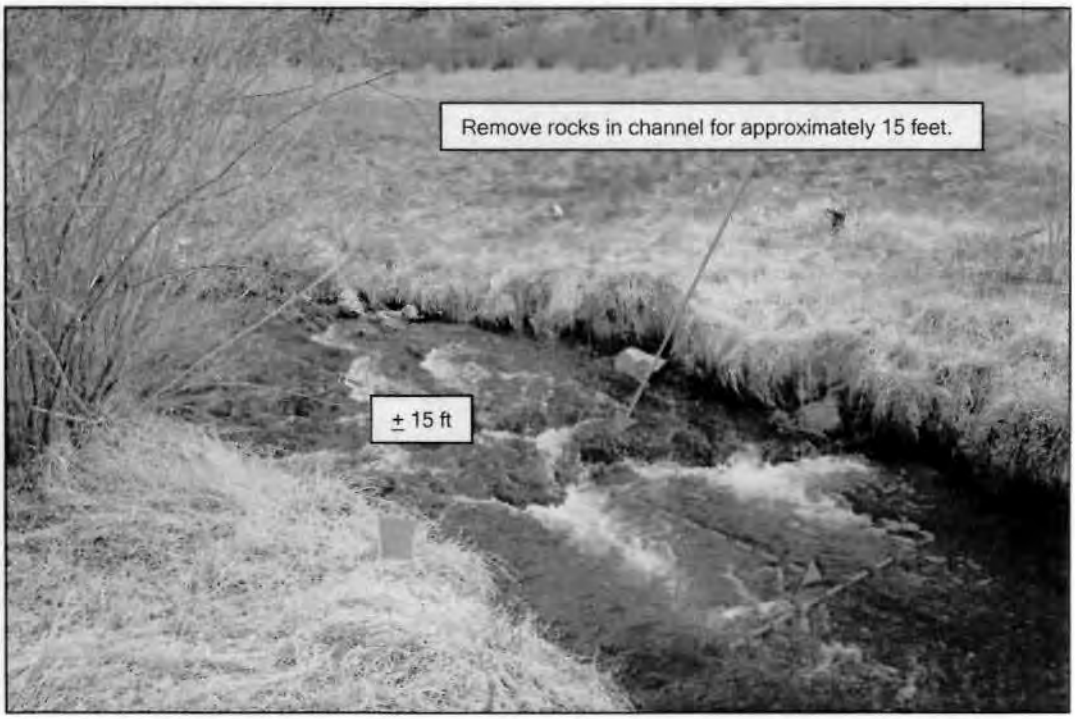


Figure B-7. Work plan for site 7.

Appendix B
Work Plans for Instream Impoundment/Obstructions

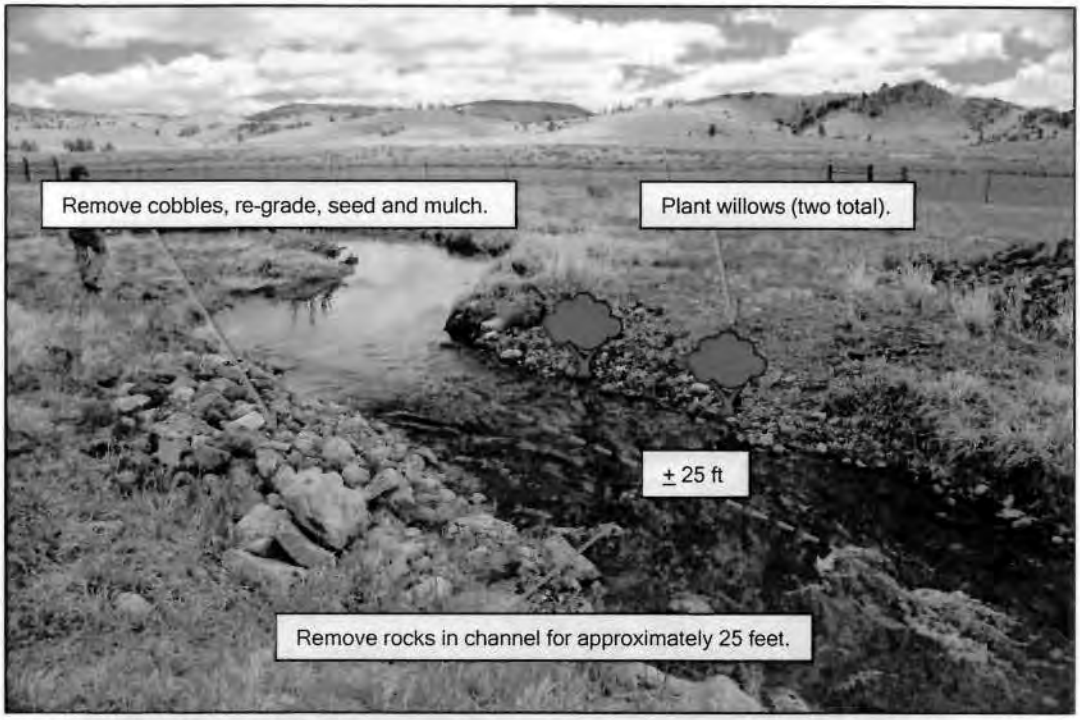


Figure B-9. Work plan for site 9.

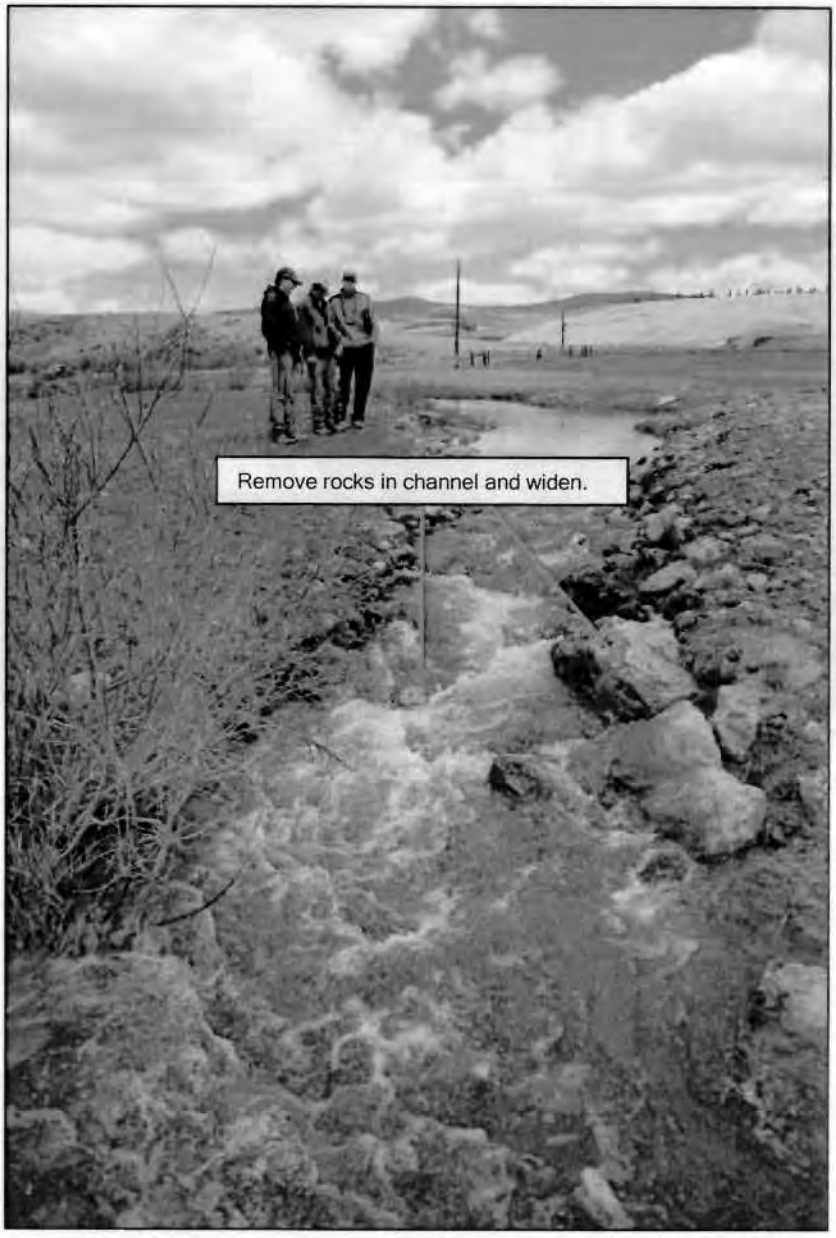


Figure B-11. Work plan for site 11.

Figure B-12 . Work plan for site 12.

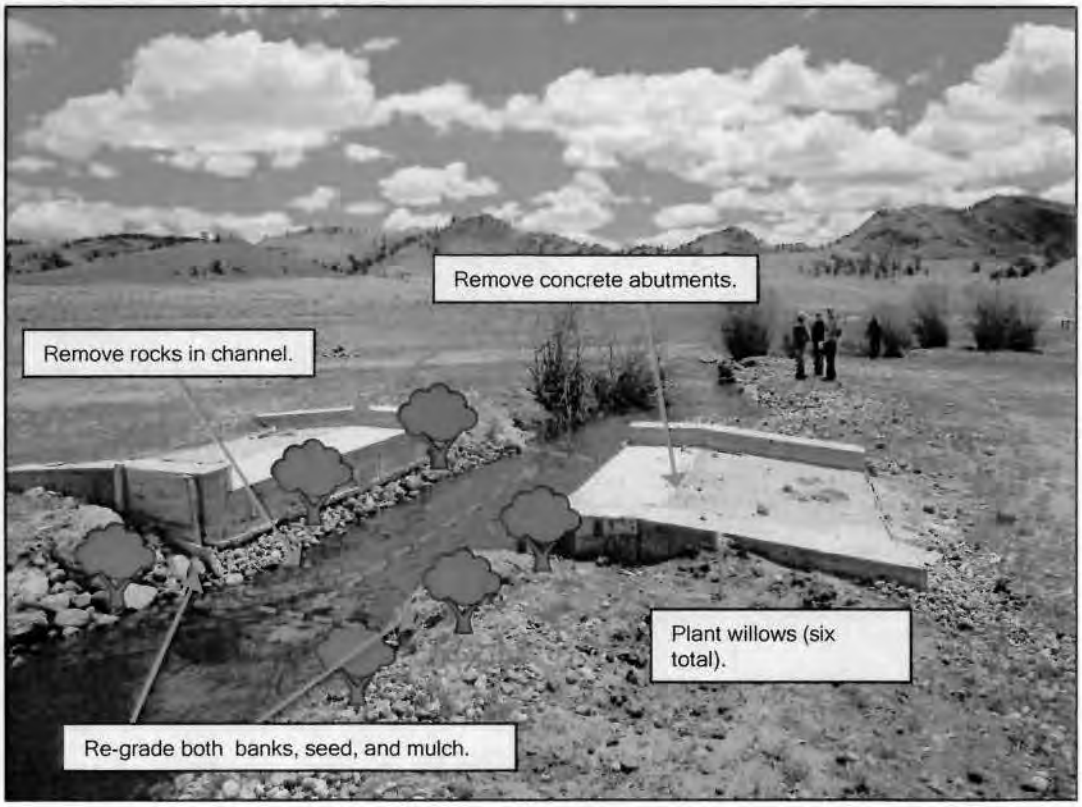


Figure B-13 . Work plan for site 13.

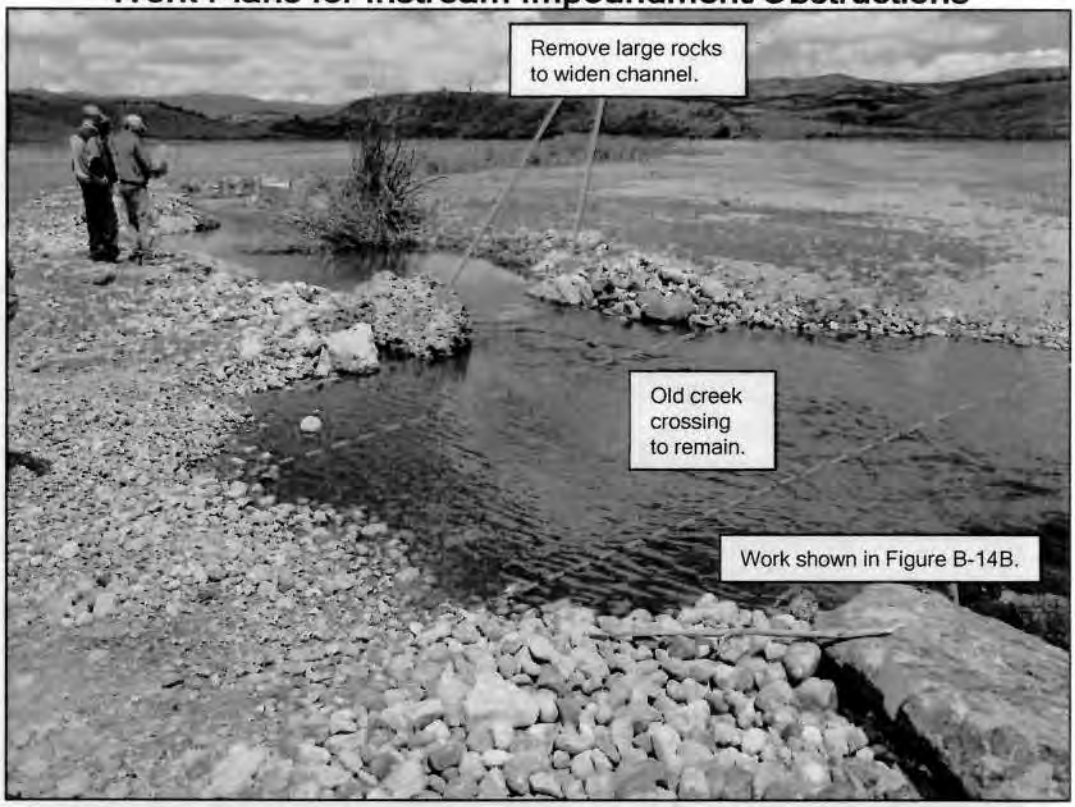


Figure B-14. Work plan for site 14.

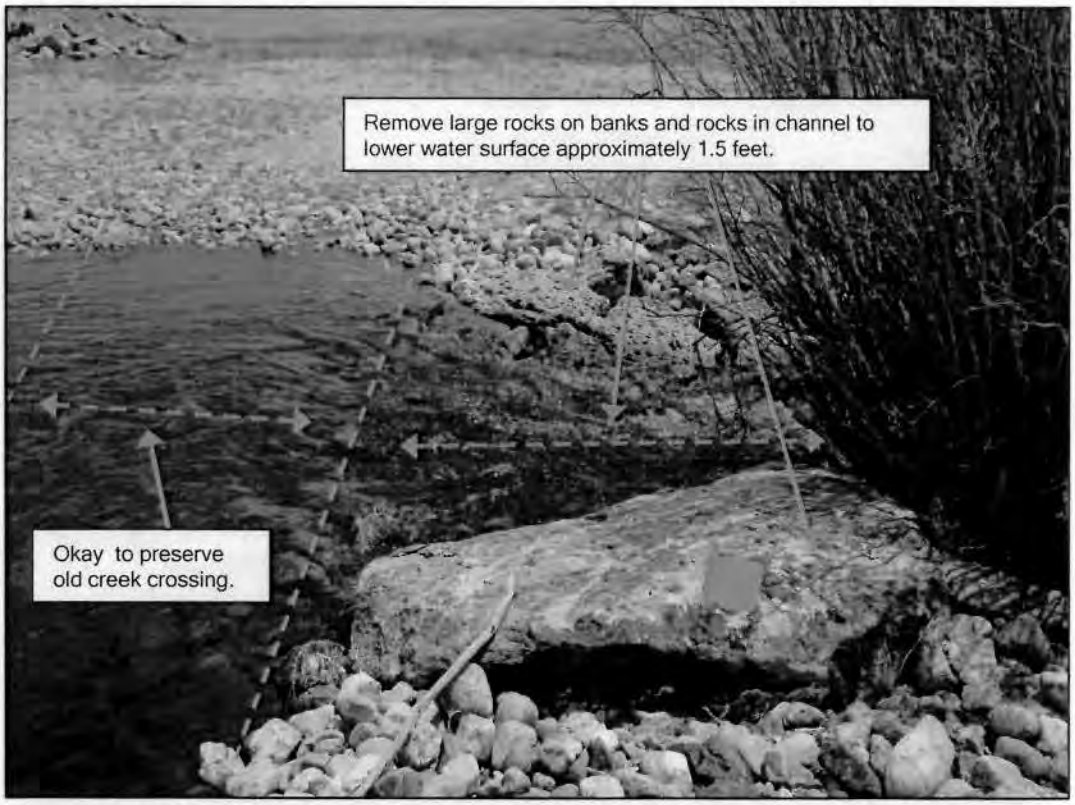


Figure B-14. Work plan for site 14 (continued).

Appendix B
Work Plans for Instream Impoundment/Obstructions

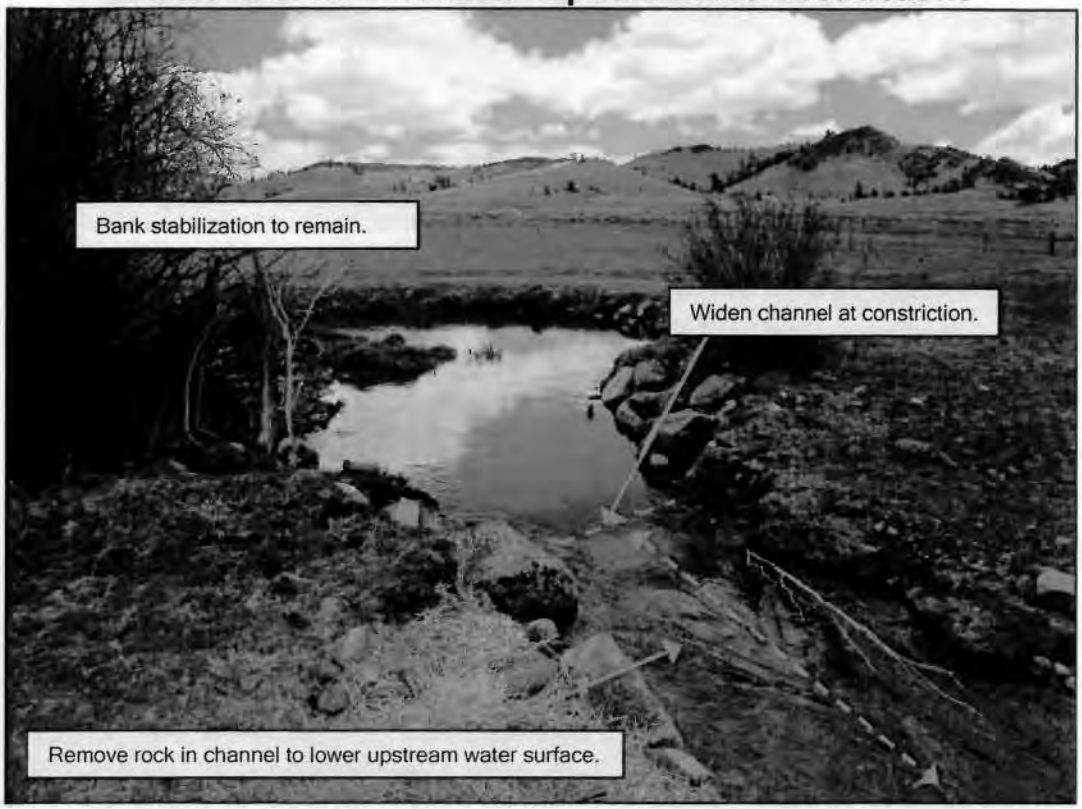


Figure B-15. Work plan for site 15.

Figure B-16 . Work plan for site 16.

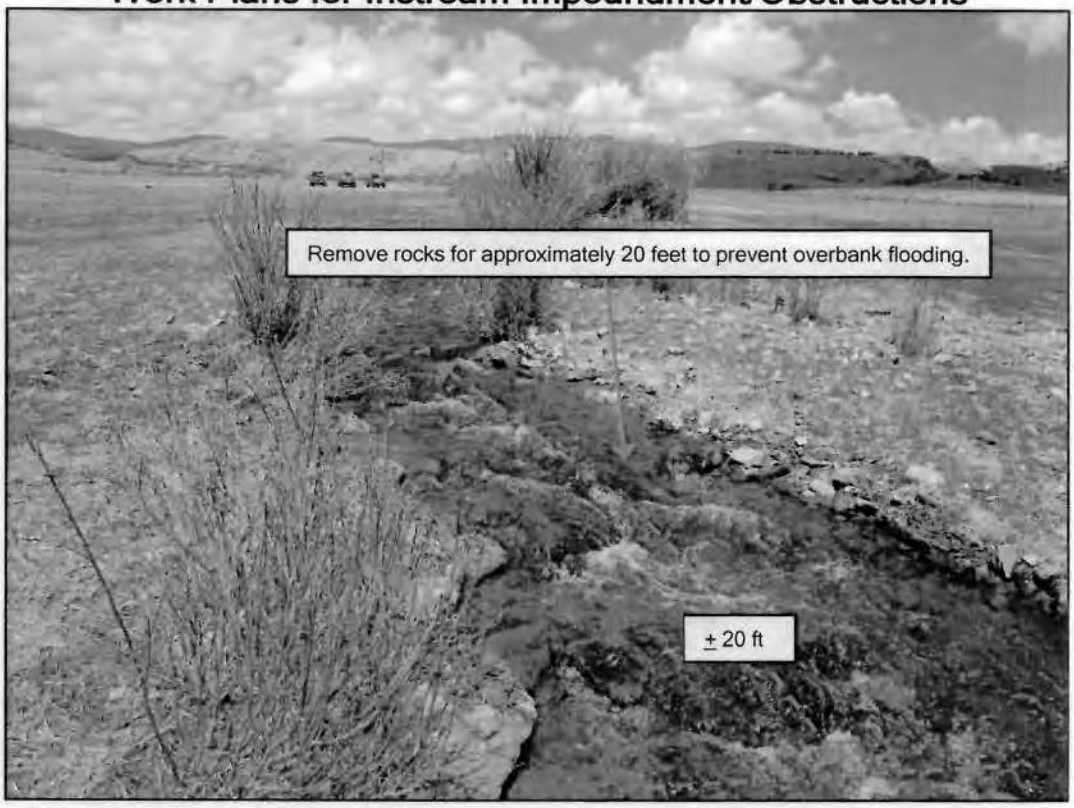


Figure B-17. Work plan for site 17.

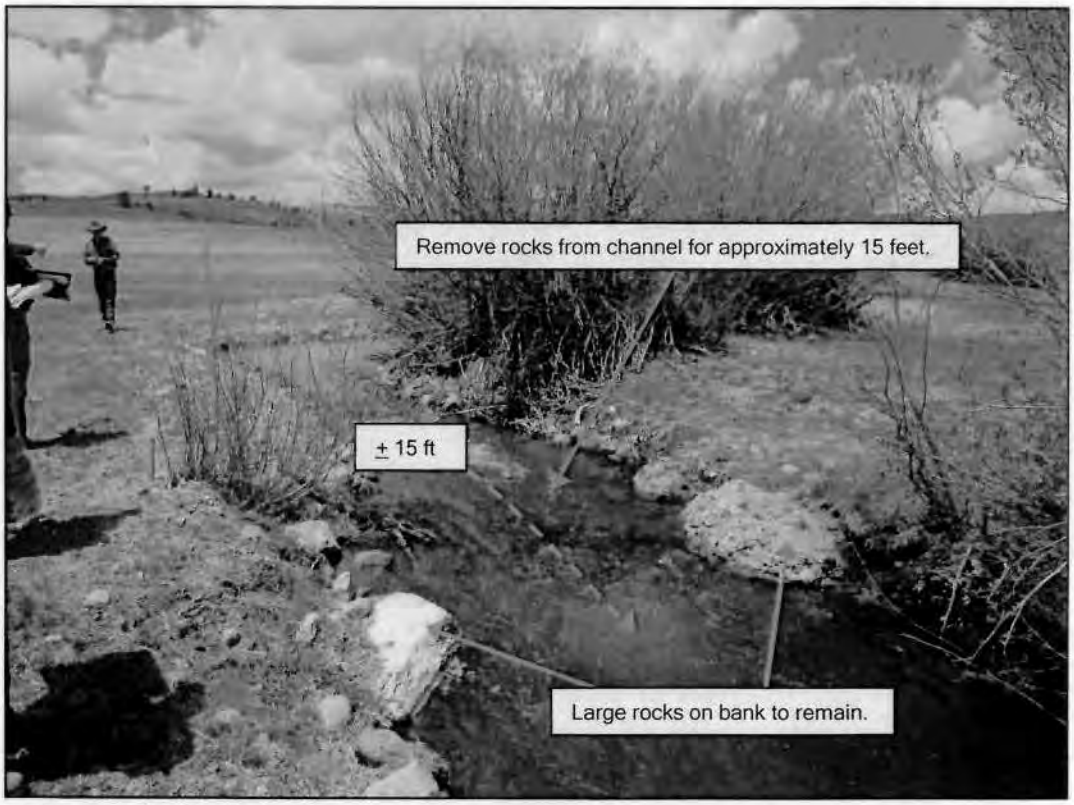


Figure B-18. Work plan for site 18.

Appendix B
Work Plans for Instream Impoundment/Obstructions

Figure B-19. Work plan for site 19.

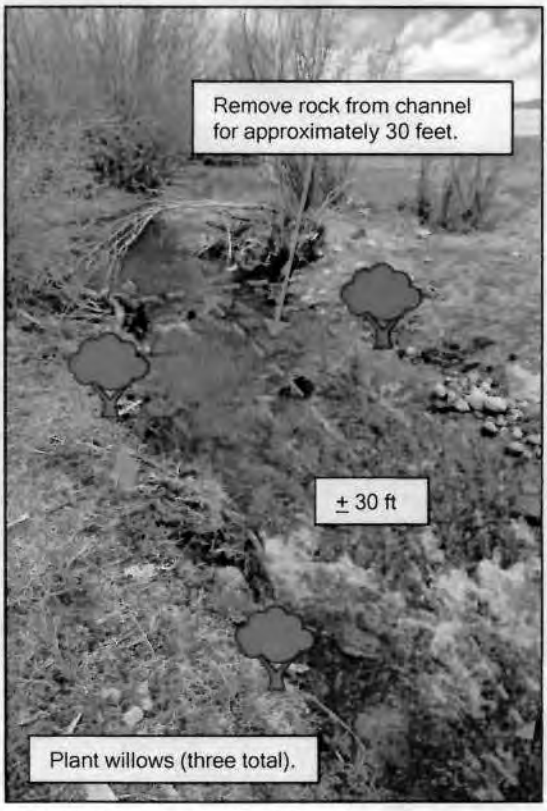


Figure B-20. Work plan for site 20.

Appendix B
Work Plans for Instream Impoundment/Obstructions

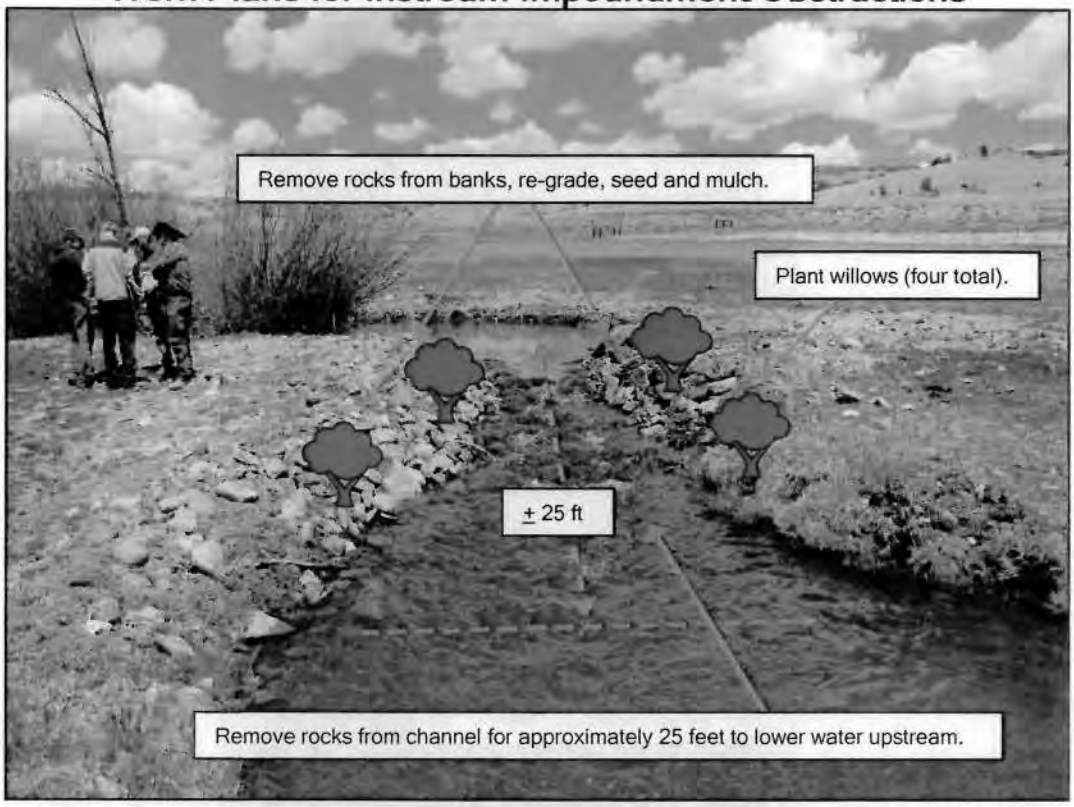


Figure B-21. Work plan for site 21.

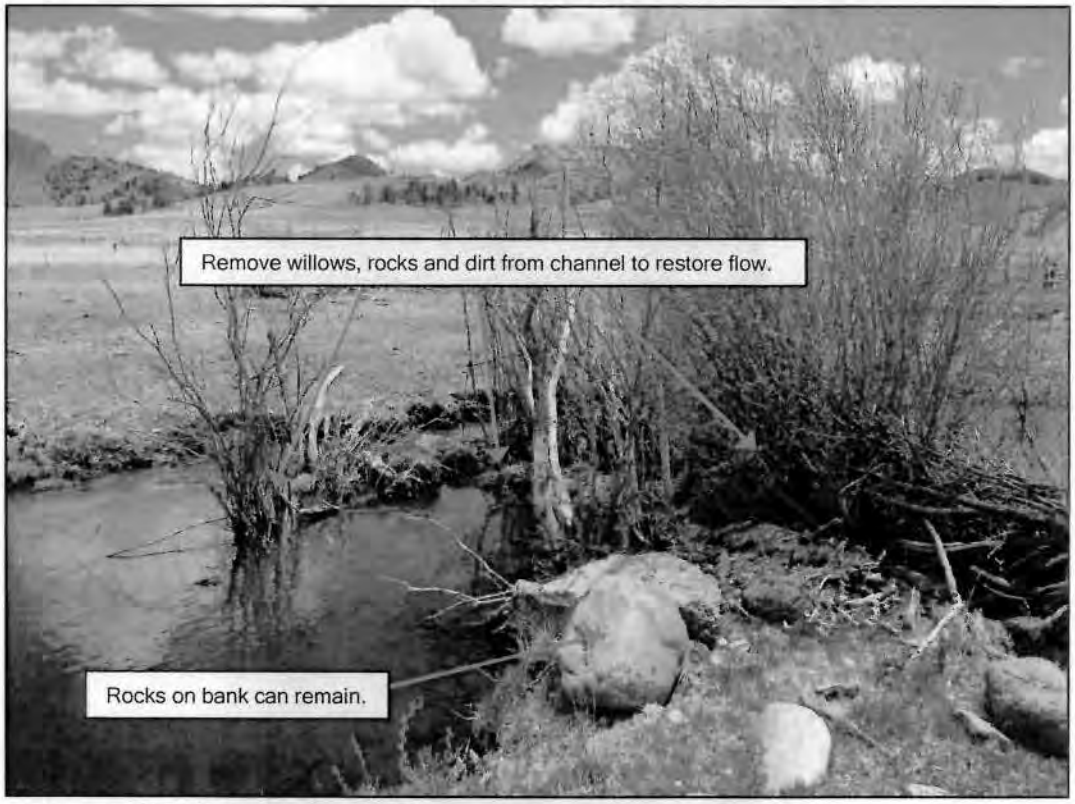


Figure B-22. Work plan for site 22.

Appendix B
Work Plans for Instream Impoundment/Obstructions

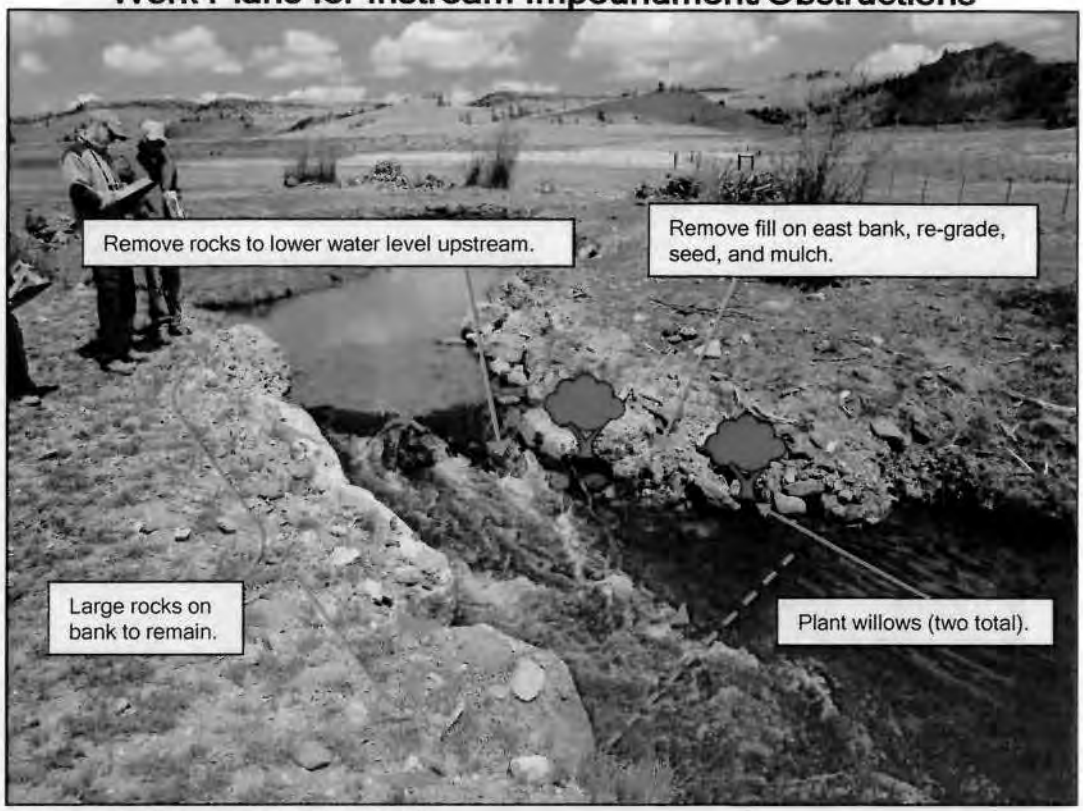


Figure B-23. Work plan for site 23.

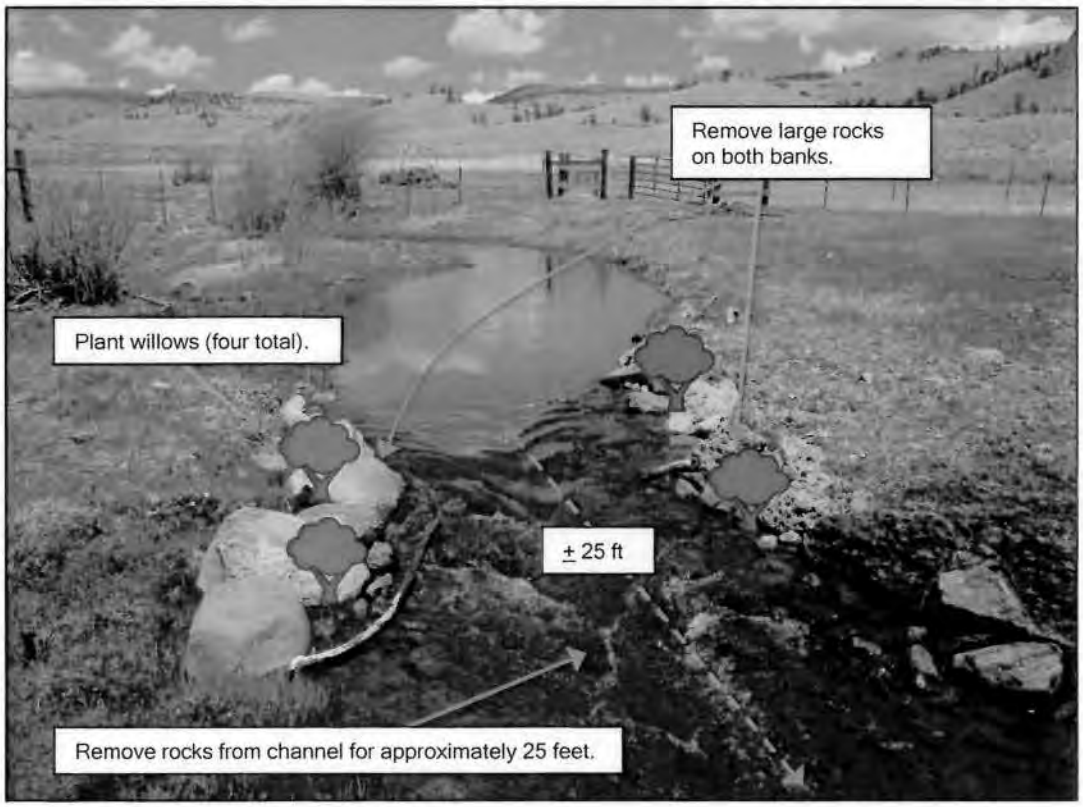


Figure B-23A. Work plan for site 23A.

Appendix B
Work Plans for Instream Impoundment/Obstructions

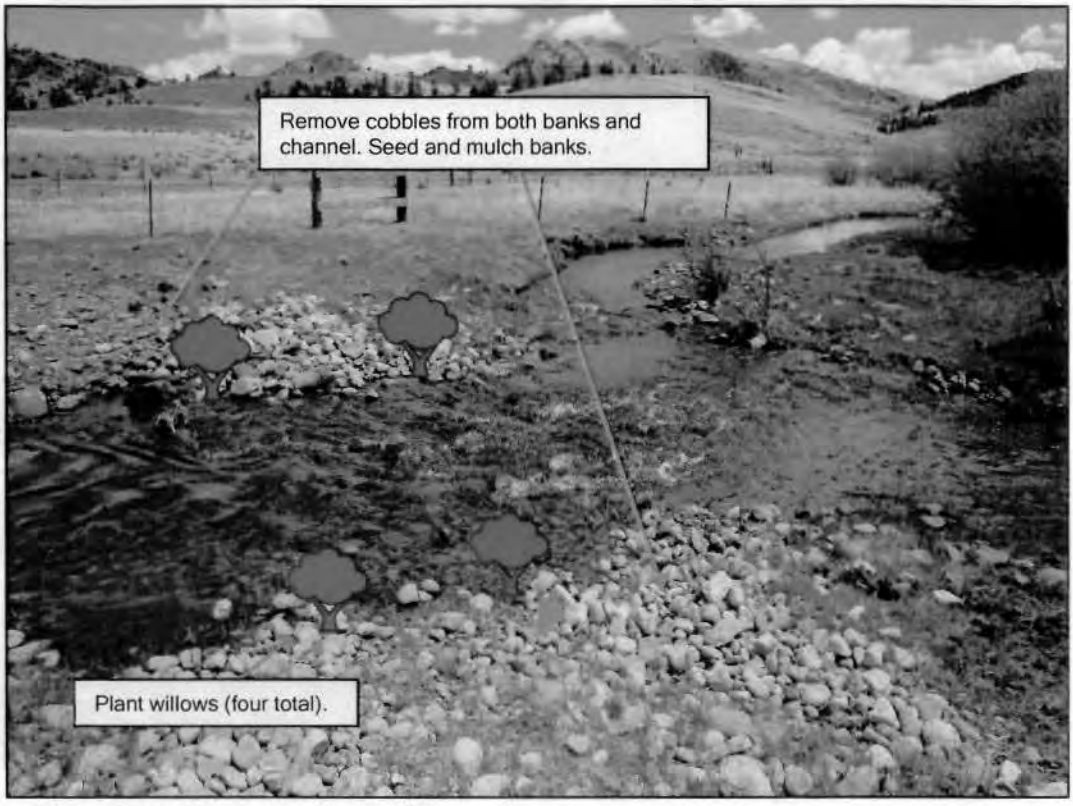


Figure B-24 . Work plan for site 24.

Appendix B
Work Plans for Instream Impoundment/Obstructions

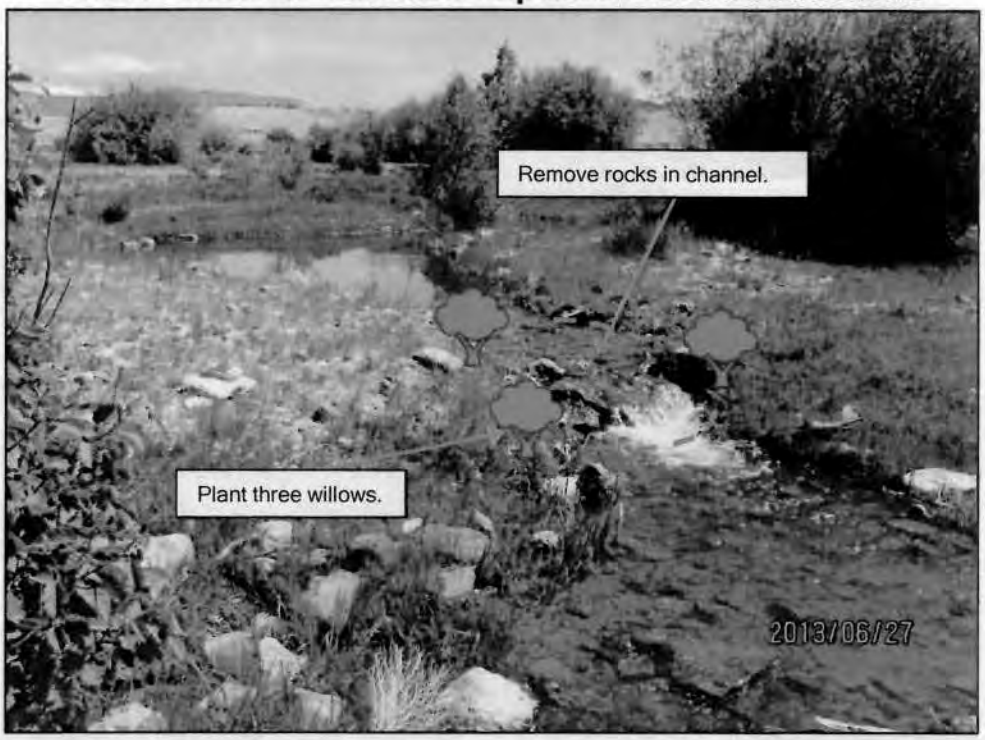


Figure B-25. Plan for Site 25.

Figure B-25A . Work plan for site 25A.

Figure B-25B. Work plan for site 25B.

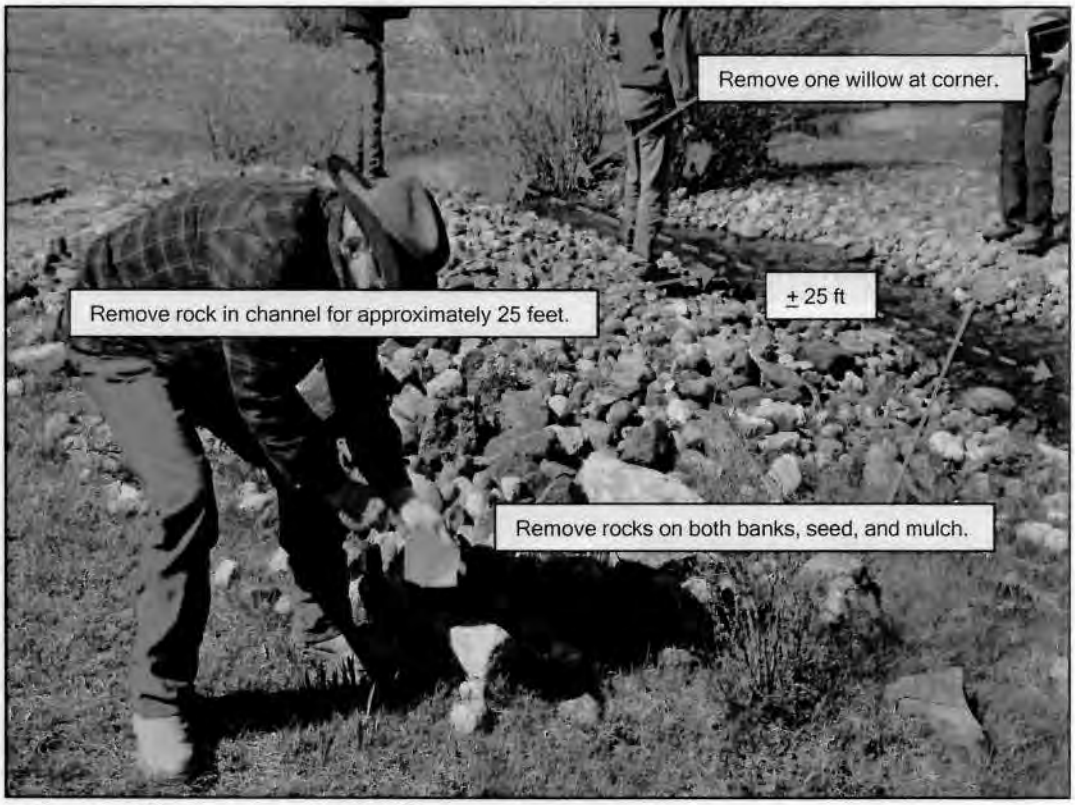


Figure B-26. Work plan for site 26.

Appendix B
Work Plans for Instream Impoundment/Obstructions

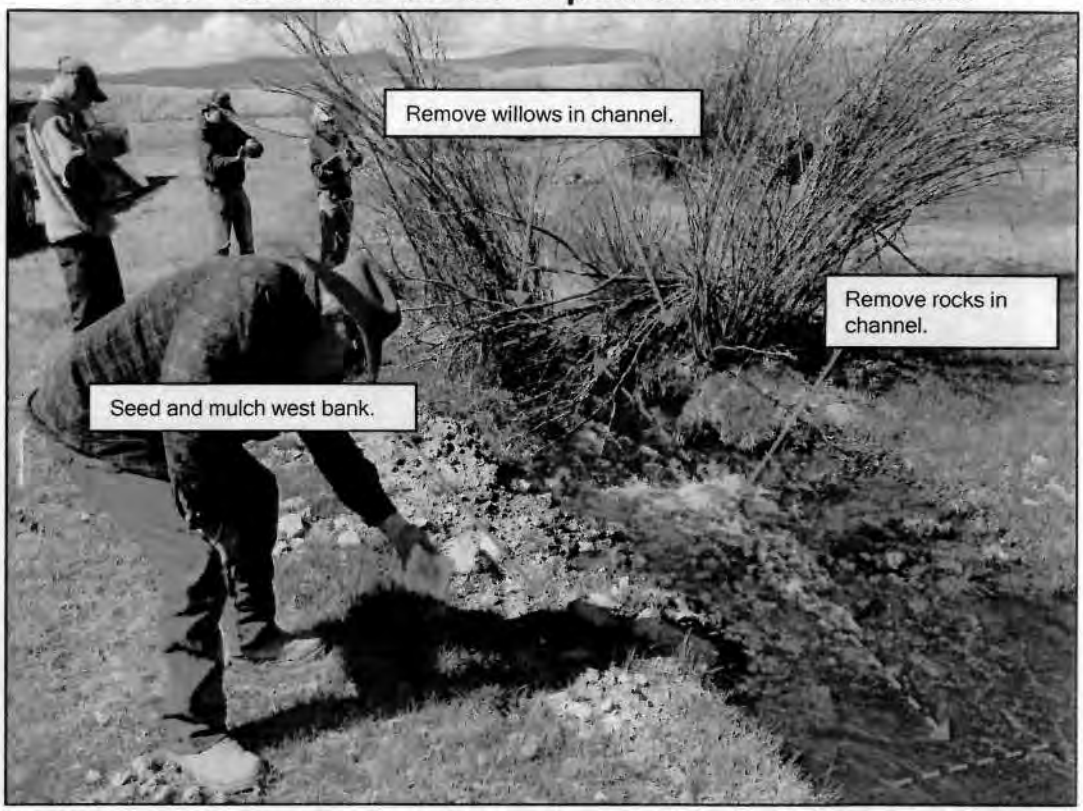


Figure B-27. Work plan for site 27.

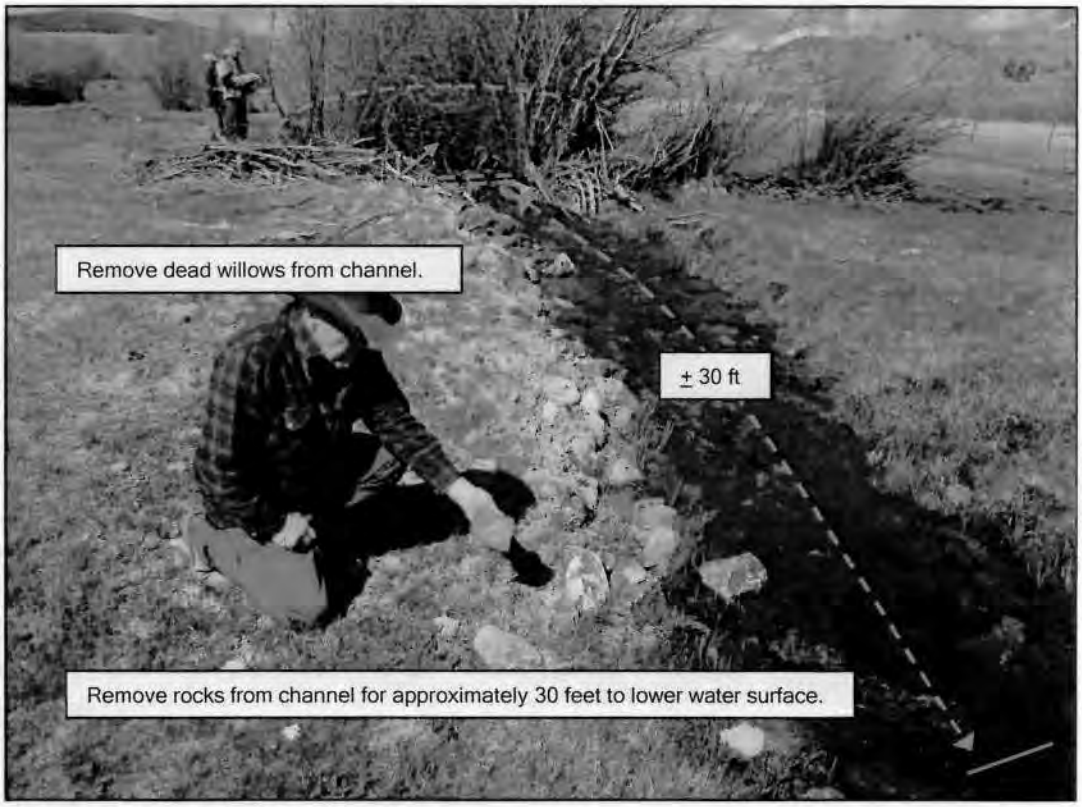


Figure B-28. Work plan for site 28.

Figure B-29. Work plan for site 29.

Figure B-30. Work plan for site 30.

Figure B-31. Work plan for site 31.

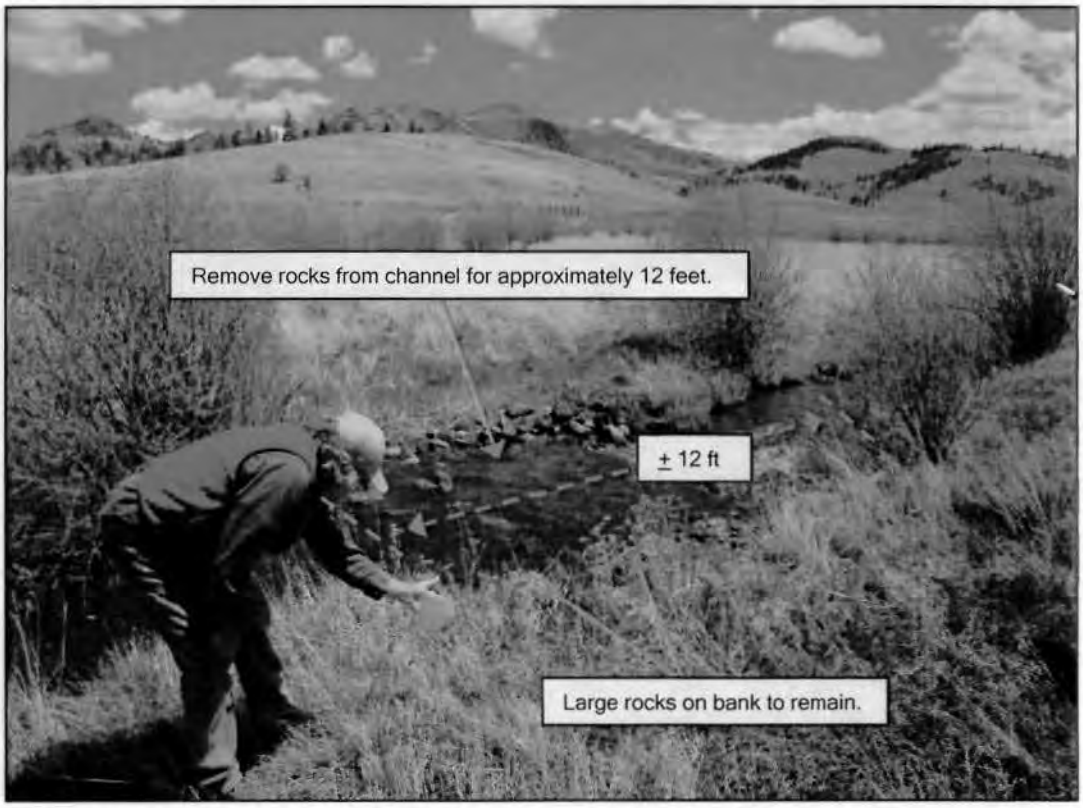


Figure B-32. Work plan for site 32.

Appendix B
Work Plans for Instream Impoundment/Obstructions

Figure B-33. Work plan for site 33.

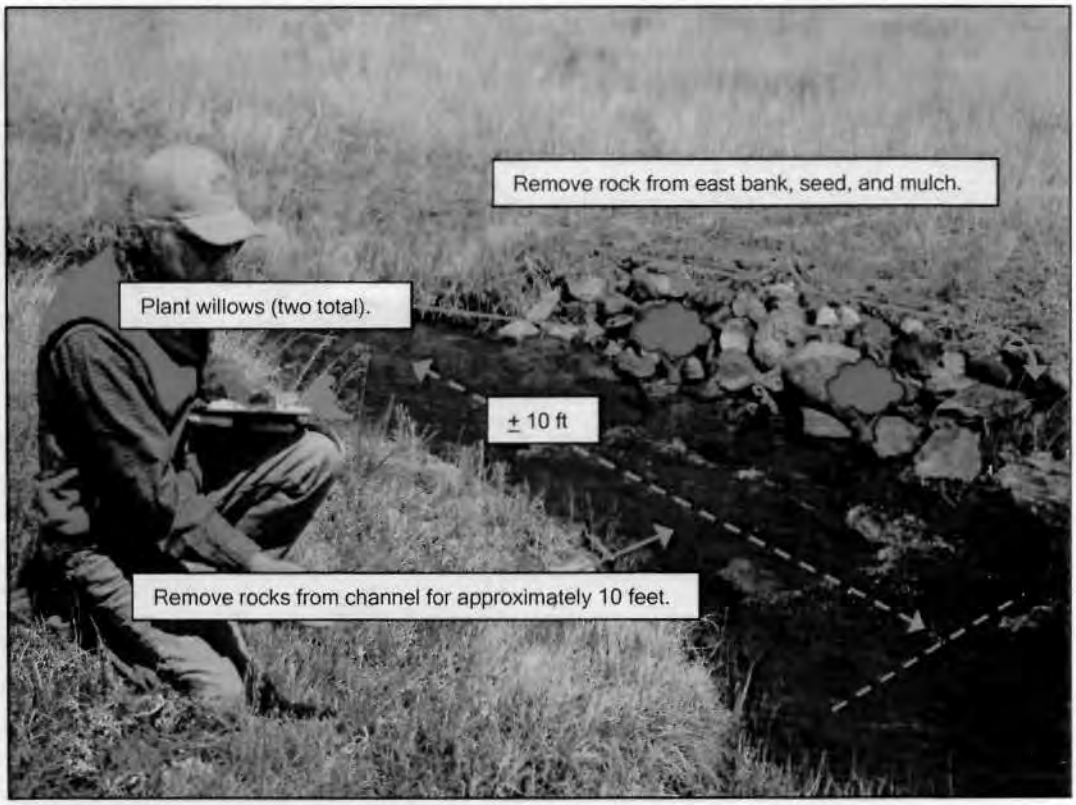


Figure B-34. Work plan for site 34.

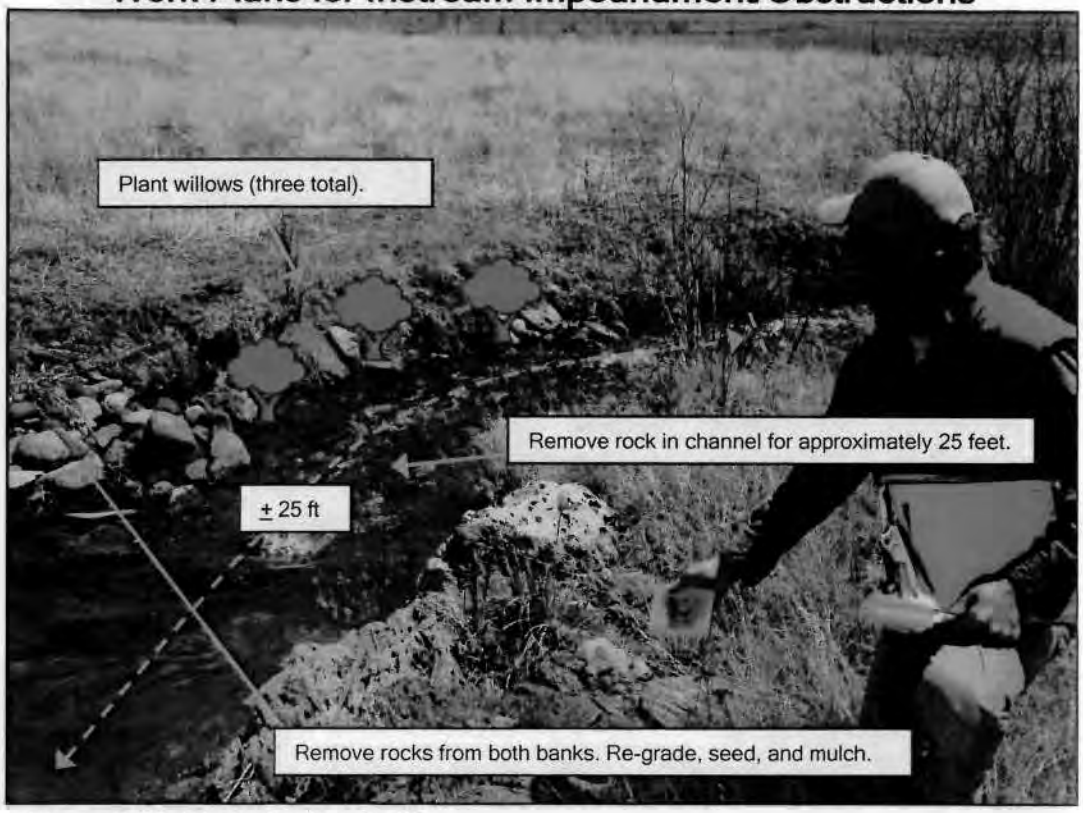


Figure B-35. Work plan for site 35.

Figure B-36. Work plan for site 36.

Appendix B
Work Plans for Instream Impoundment/Obstructions

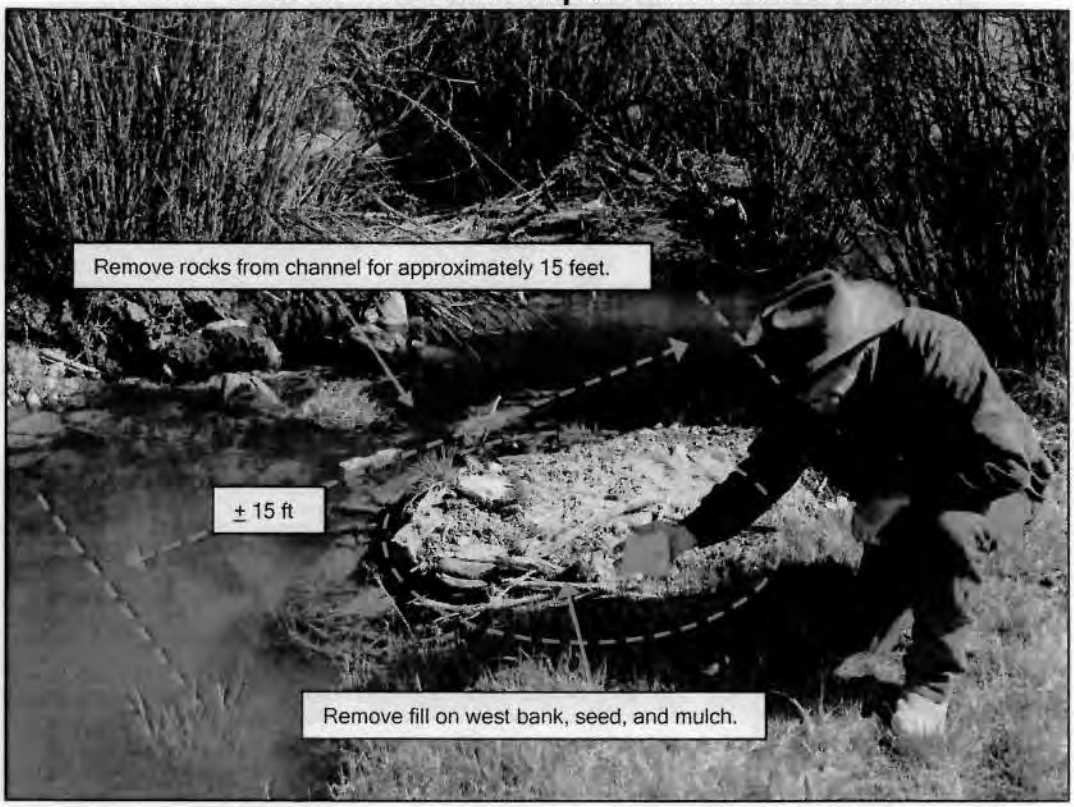


Figure B-37. Work plan for site 37.

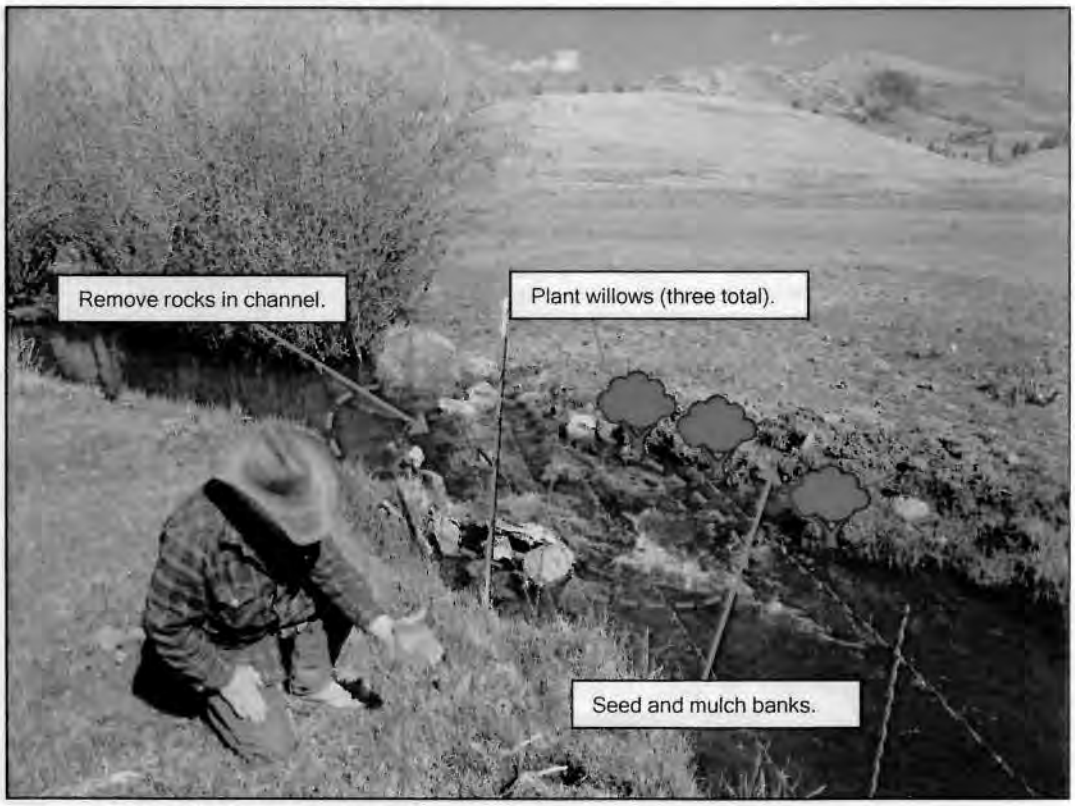


Figure B-38. Work plan for site 38.

Appendix B
Work Plans for Instream Impoundment/Obstructions

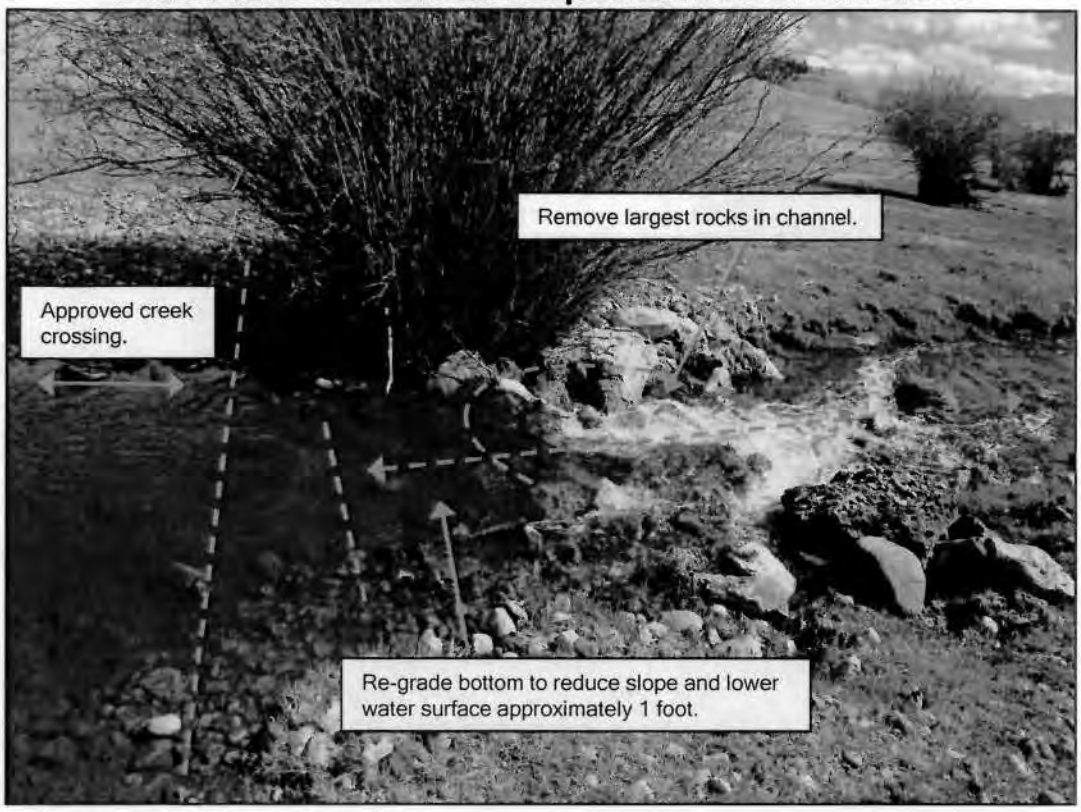


Figure B-39. Work plan for site 39.

Figure B-40A. Work plan for site 40A.

Appendix B
Work Plans for Instream Impoundment/Obstructions

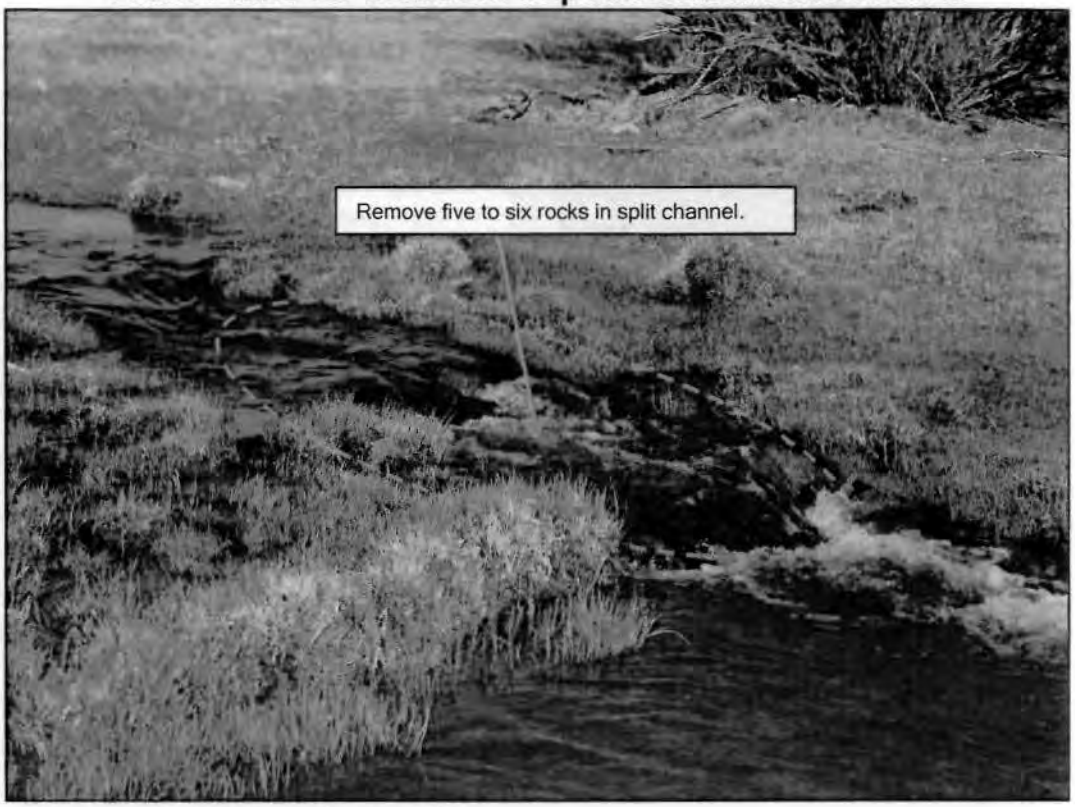


Figure B-40B. Work plan for site 40B.

Figure B-41. Work plan for site 41.

Appendix B
Work Plans for Instream Impoundment/Obstructions

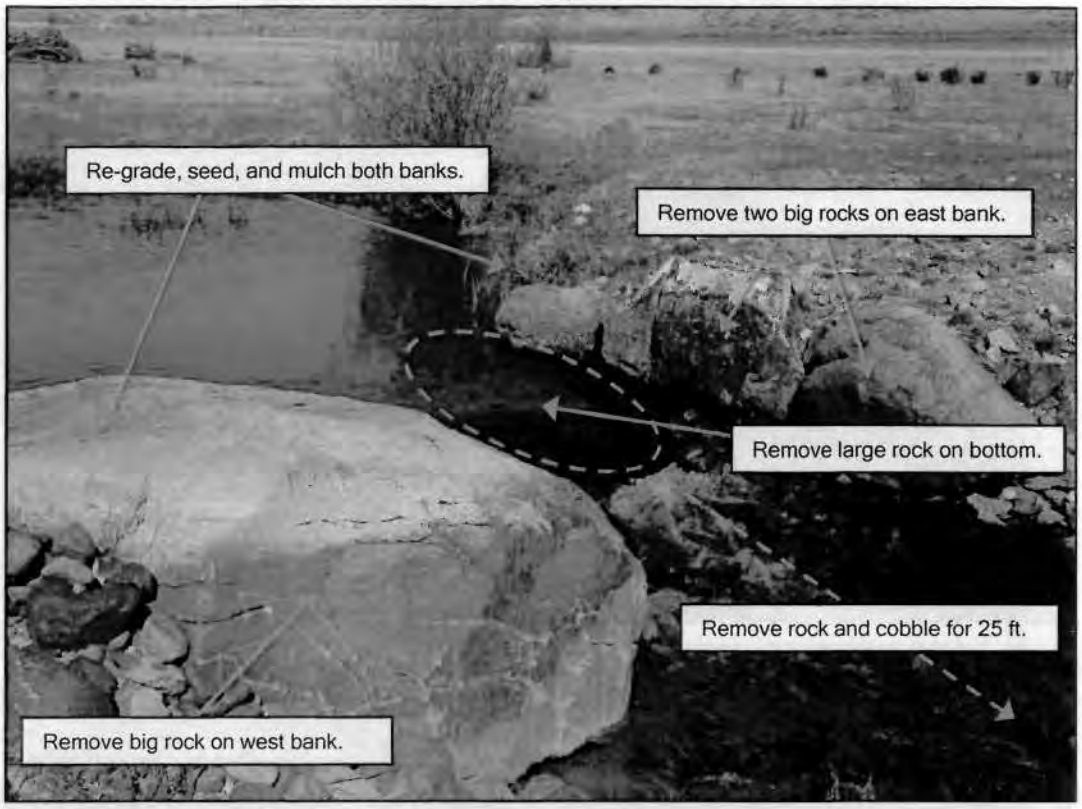


Figure B-42. Work plan for site 42.

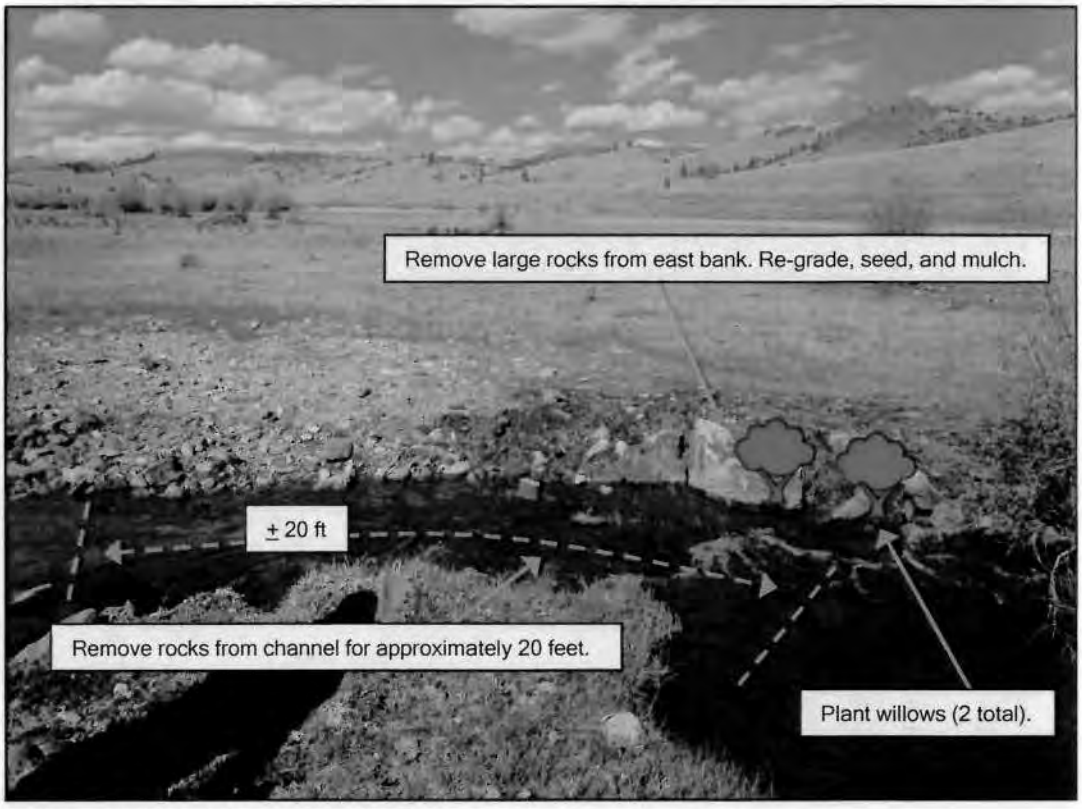


Figure B-43. Work plan for site 43.

Appendix B
Work Plans for Instream Impoundment/Obstructions

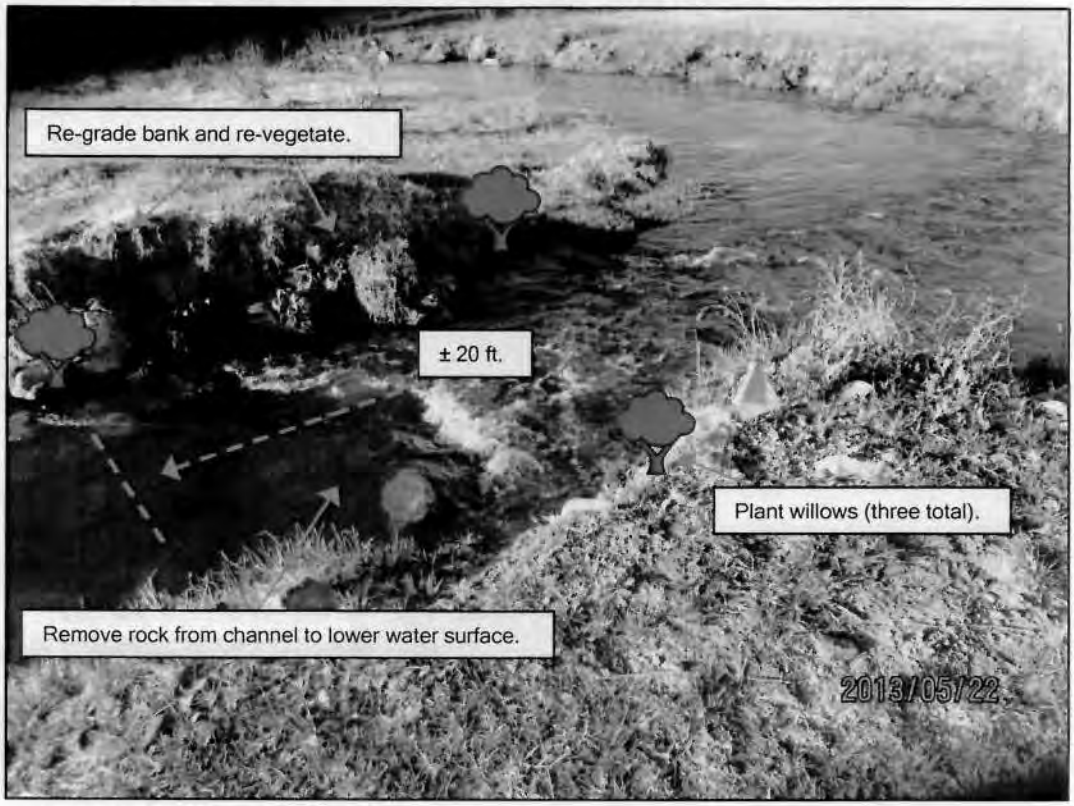


Figure B-44. Work plan for Site 44.

Figure B-45. Work plan for Sites 45.

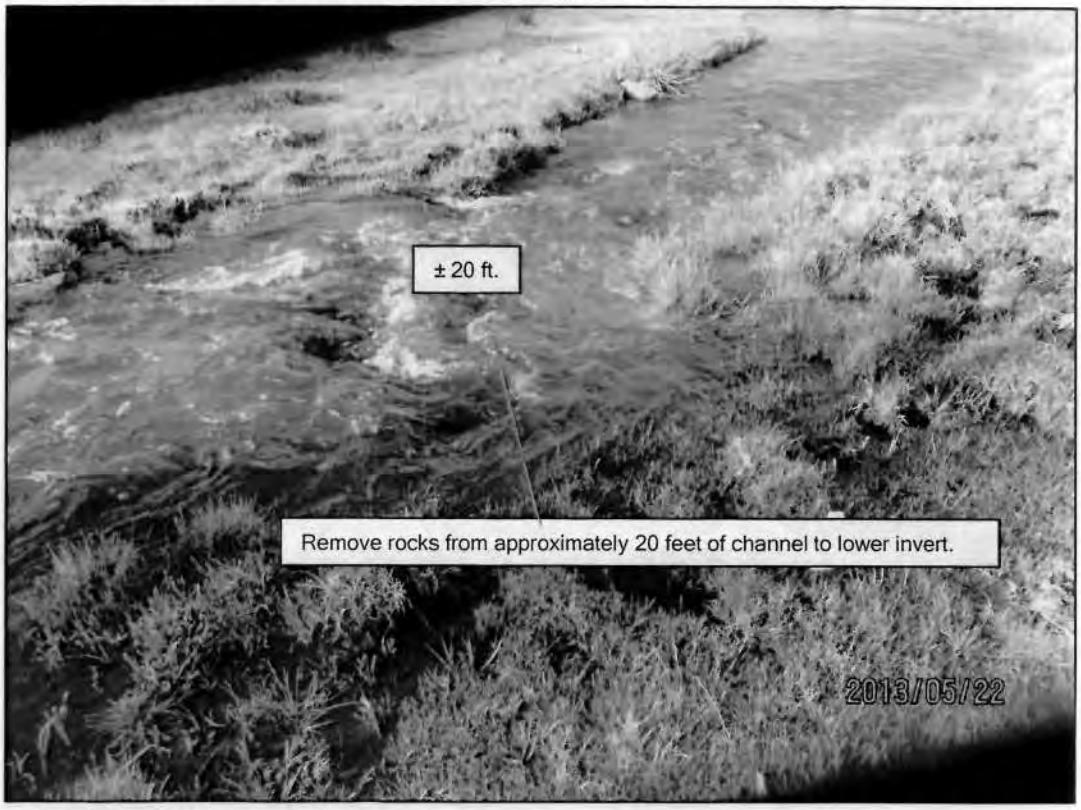


Figure B- 46. Work plan for Site 46.

Figure B-48. Work plan for Site 48.

Appendix B
Work Plans for Instream Impoundment/Obstructions

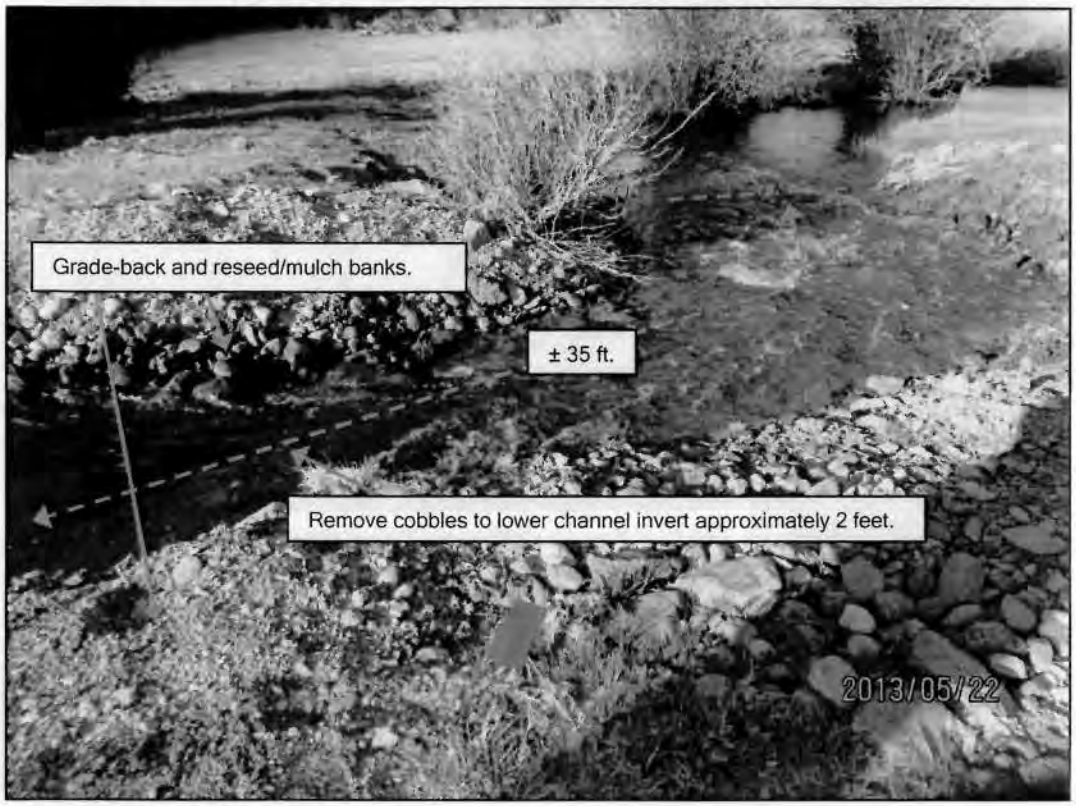


Figure B-49A. Work Plan for Site 49.

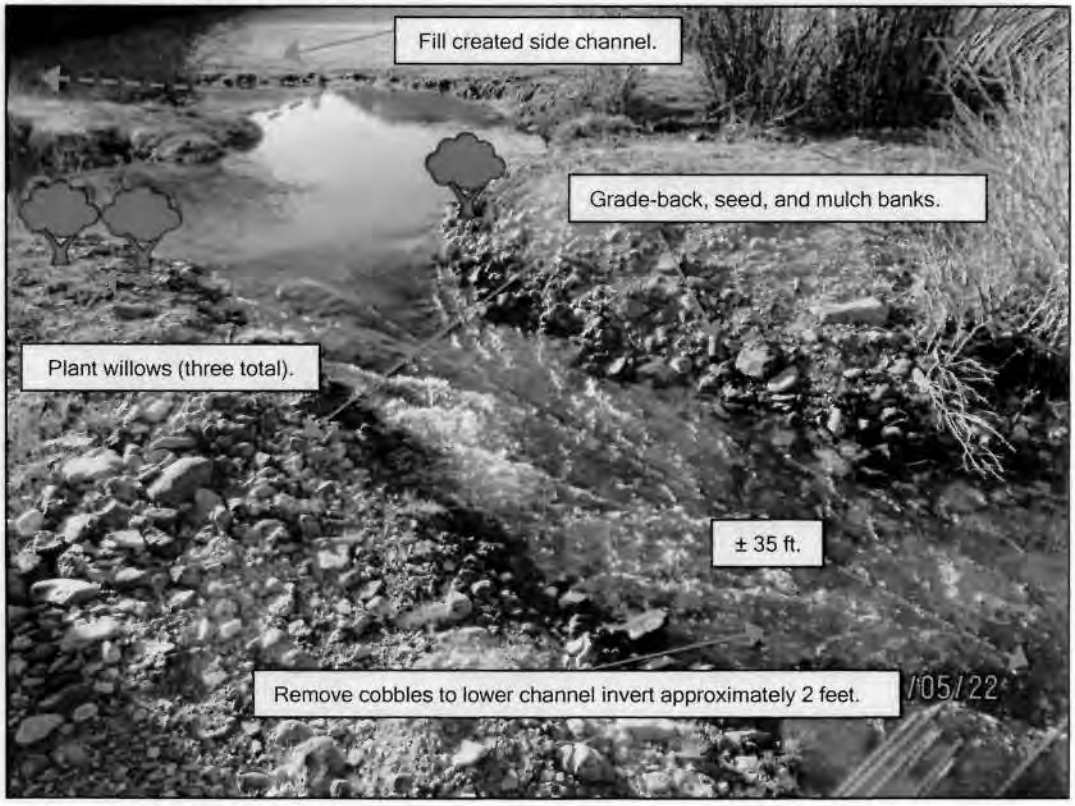


Figure B-49B. Work Plan for Site 49.

Appendix B
Work Plans for Instream Impoundment/Obstructions

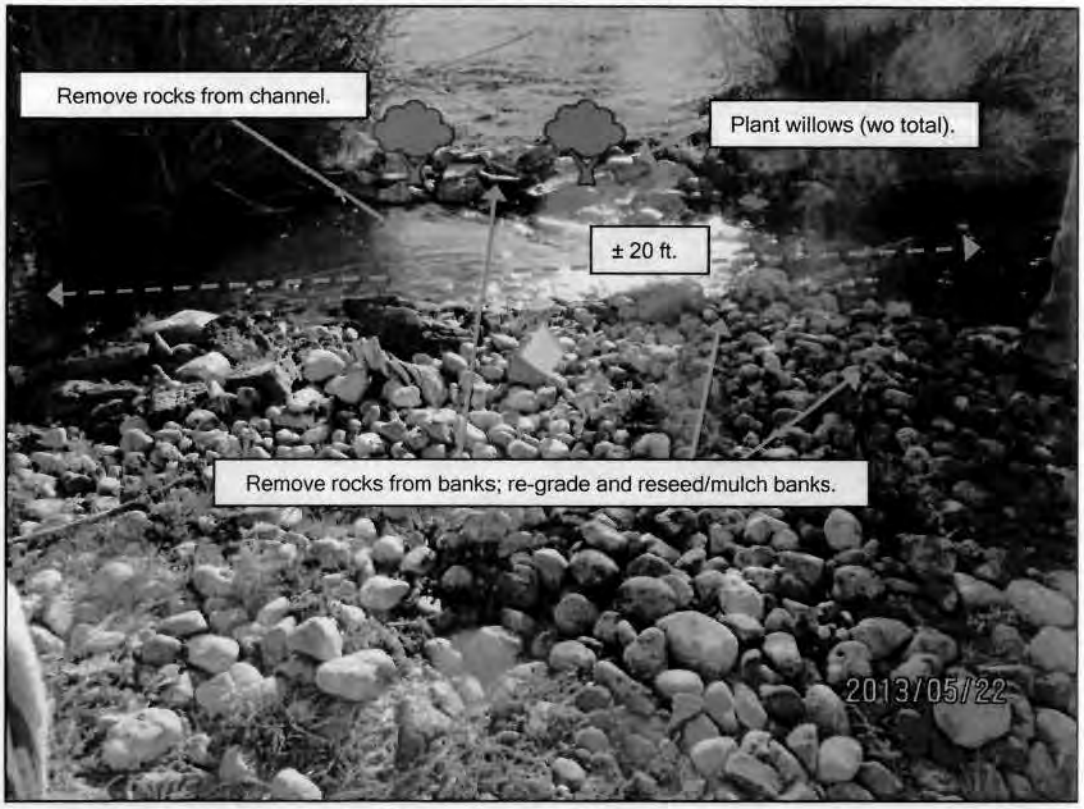


Figure B-50. Work plan for Site 50.

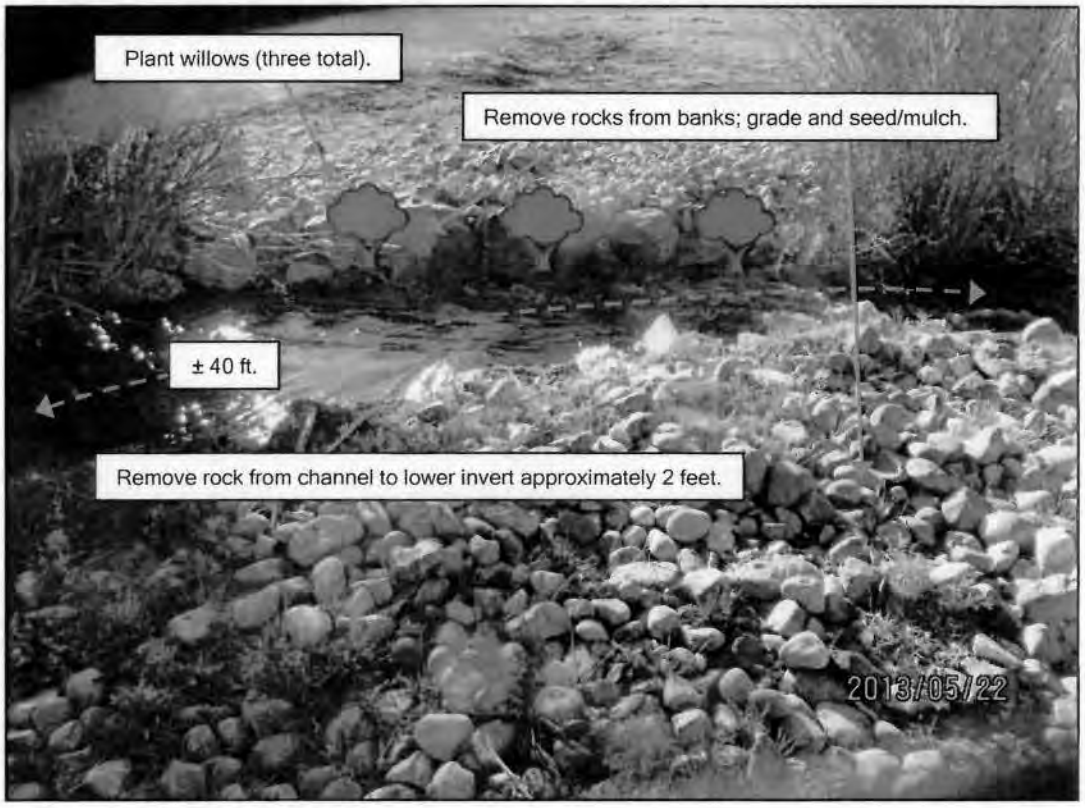


Figure B-51. Work plan for Site 51.

Appendix B
Work Plans for Instream Impoundment/Obstructions

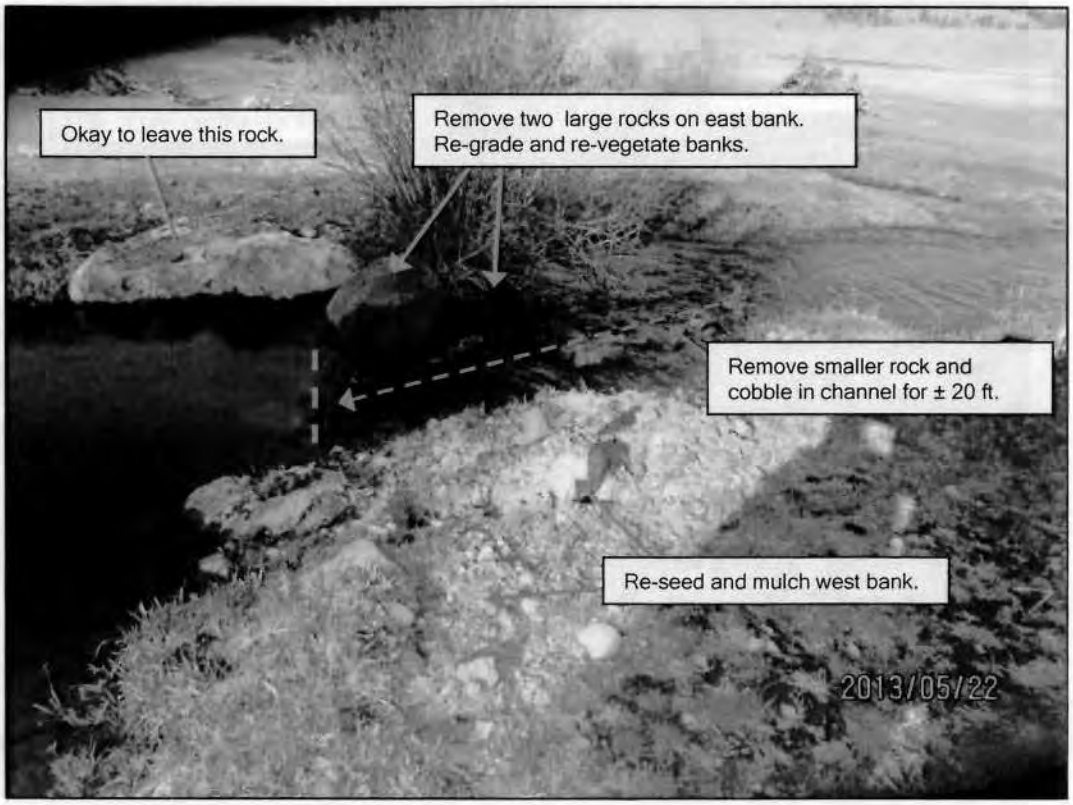


Figure B-52. Work plan for Site 52.

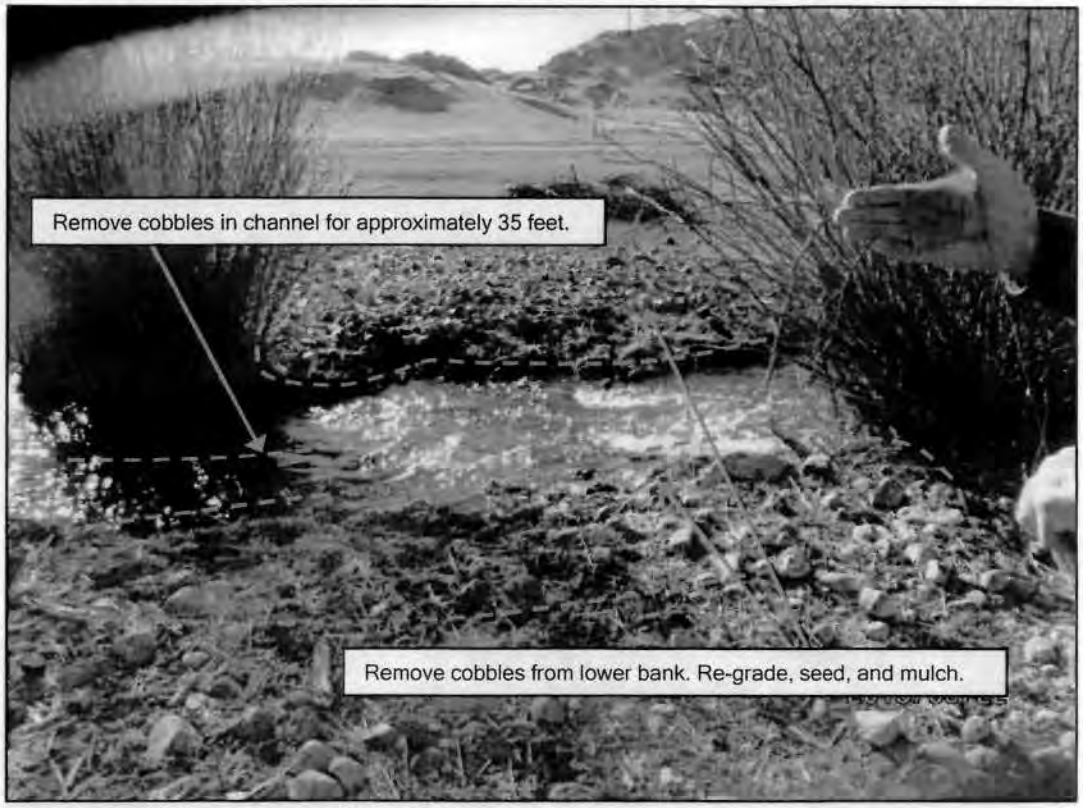


Figure B-54. Work plan for Site 54.

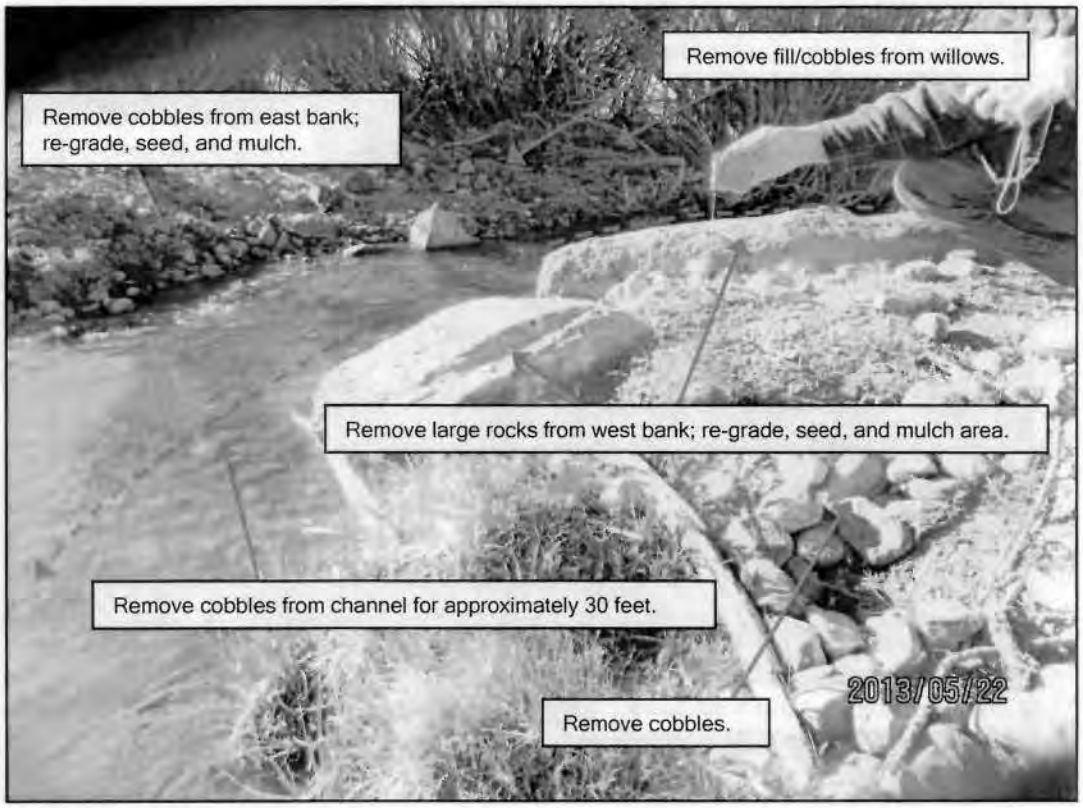


Figure B-55. Work plan for Site 55.

Appendix B
Work Plans for Instream Impoundment/Obstructions

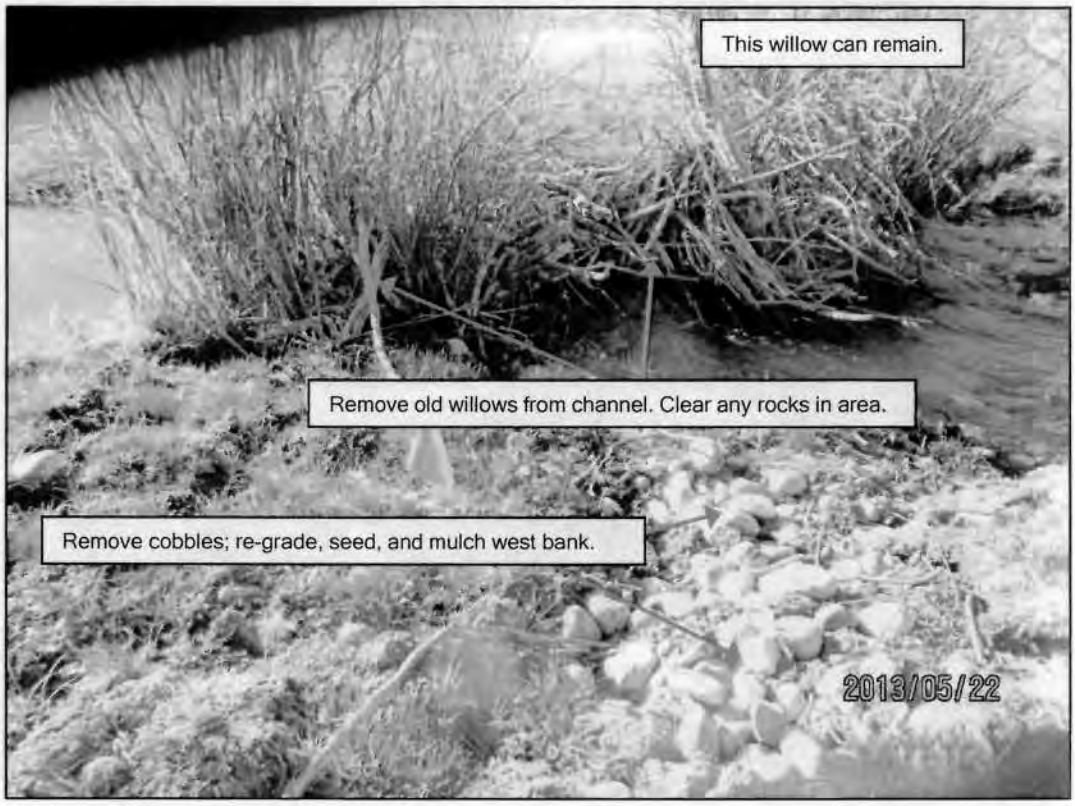


Figure B-56. Work plan for site 56.

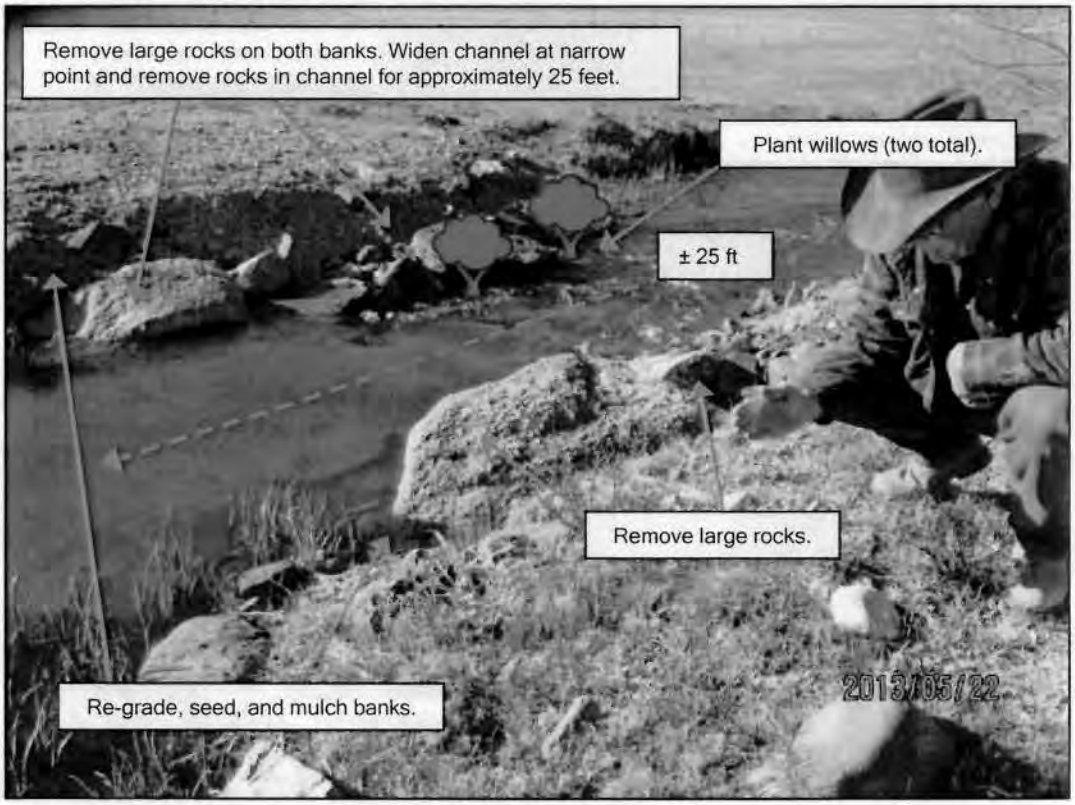


Figure B-57. Work plan for Site 57.

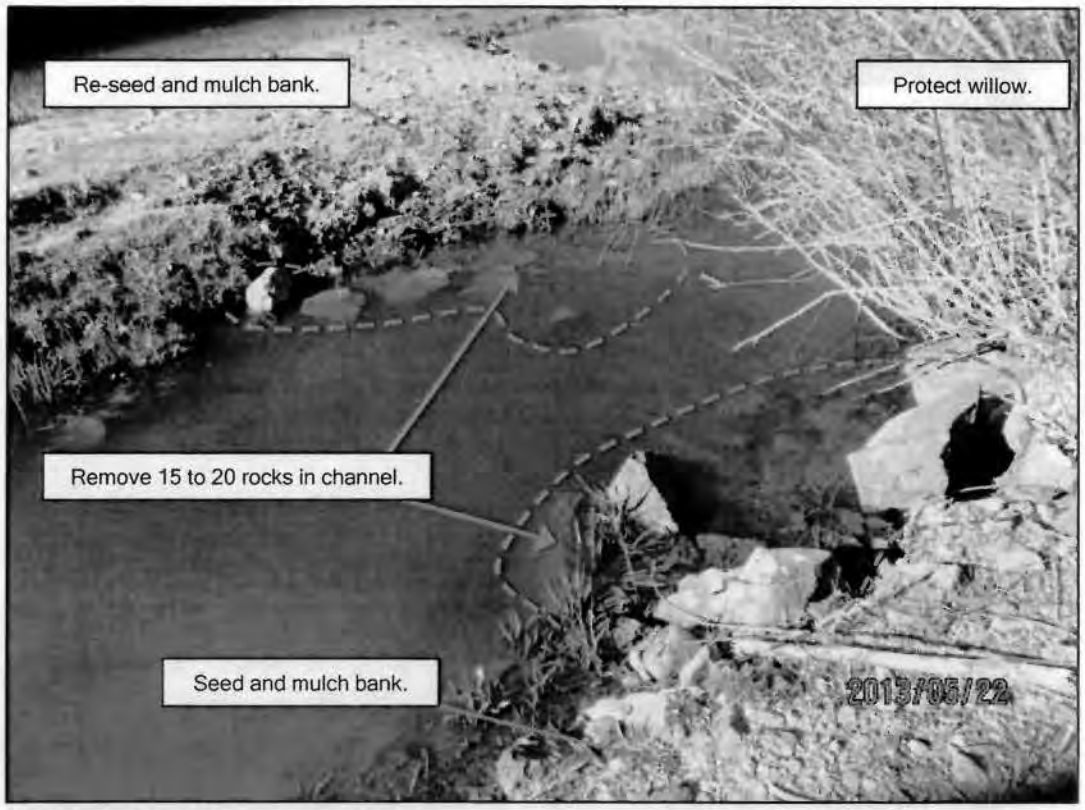


Figure B-58. Work plan for Site 58.

Figure B-59. Work plan for Site 59.

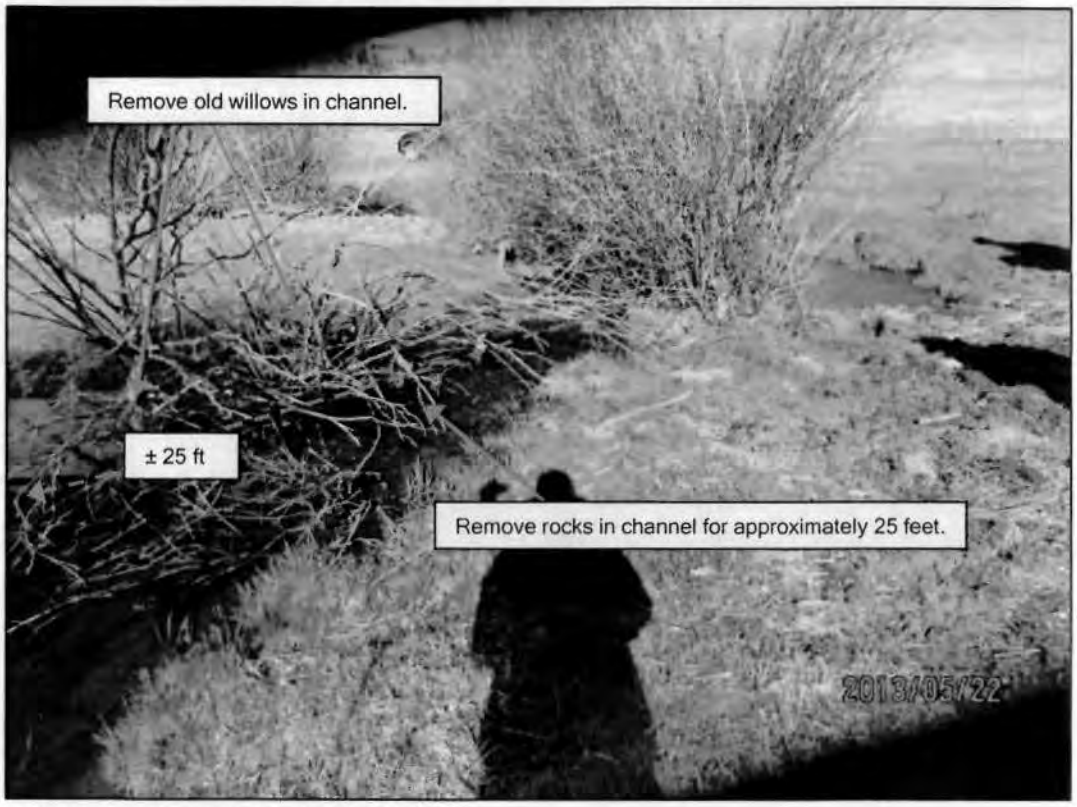


Figure B-60. Work plan for Site 60.

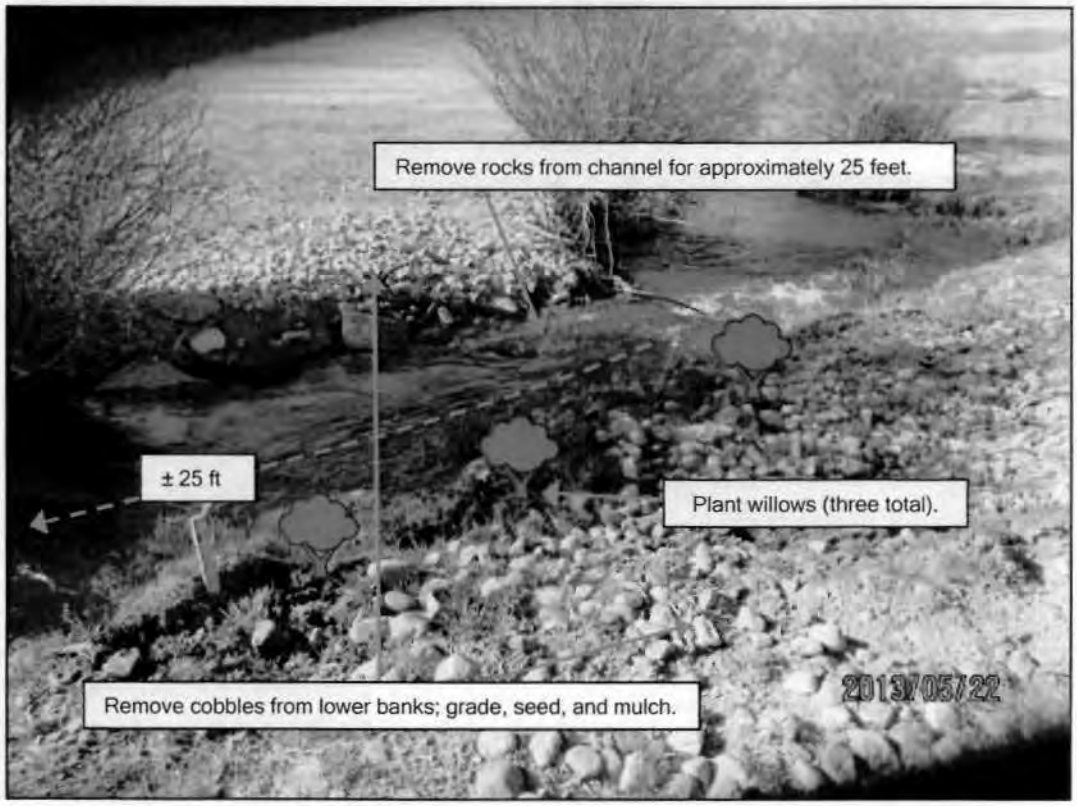


Figure B-61. Work plan for Site 61.

Appendix B
Work Plans for Instream Impoundment/Obstructions

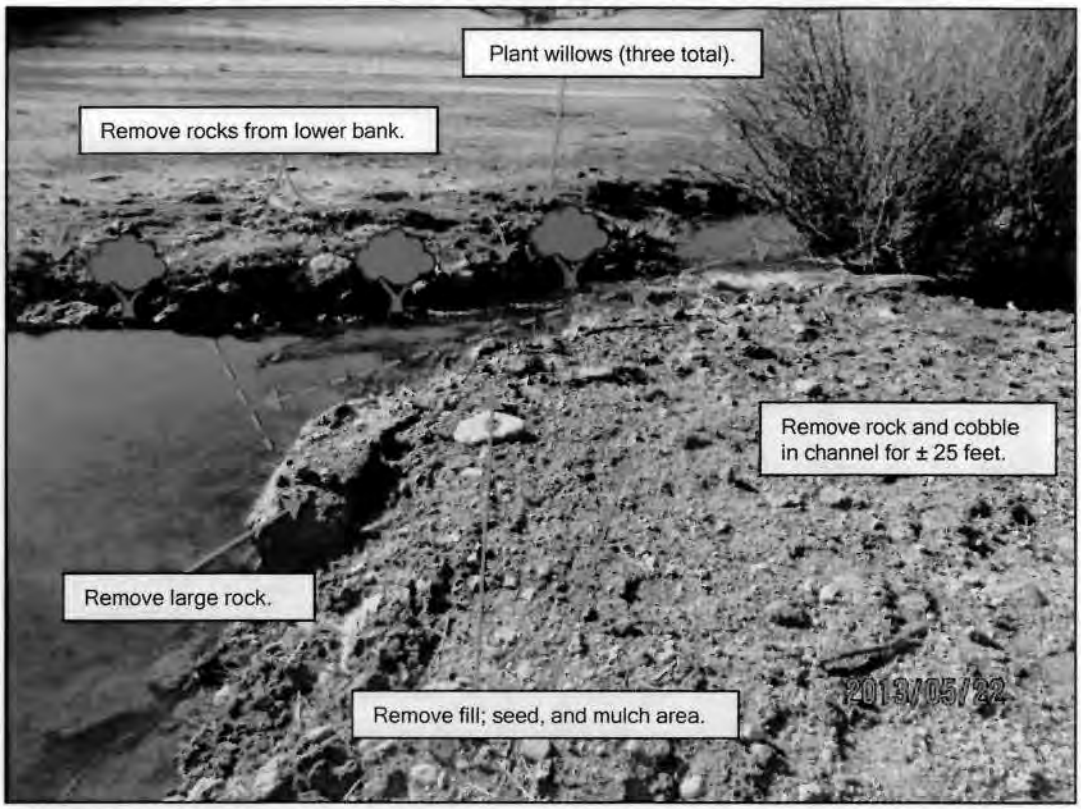


Figure B-62. Work plan for site 62.

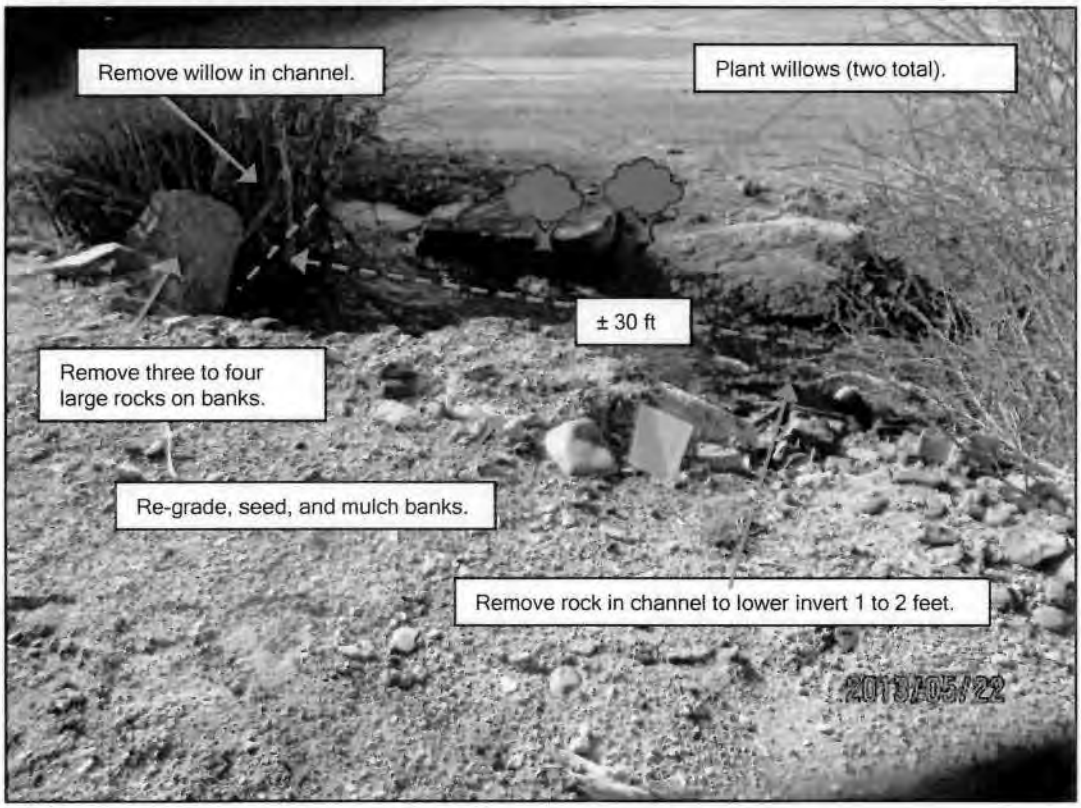


Figure B-63. Work plan for site 63.

Appendix B
Work Plans for Instream Impoundment/Obstructions

Figure B-64. Work plan for site 64.

Appendix B
Work Plans for Instream Impoundment/Obstructions

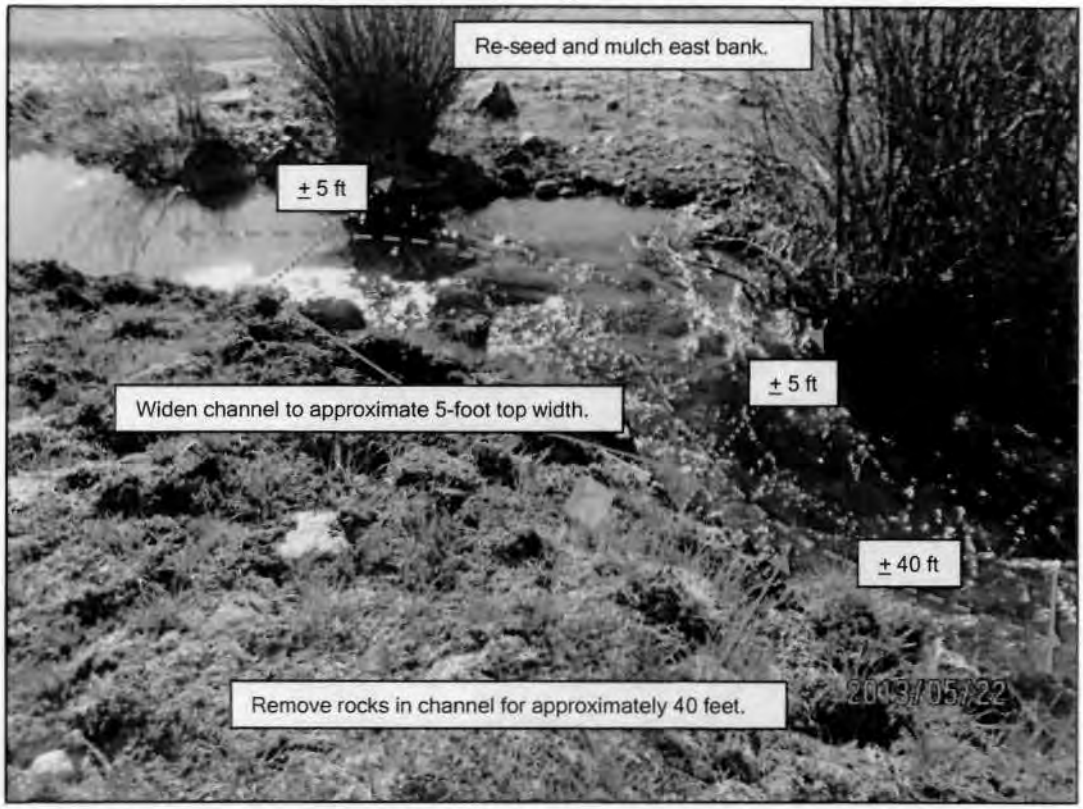


Figure B-66. Work plan for site 66.

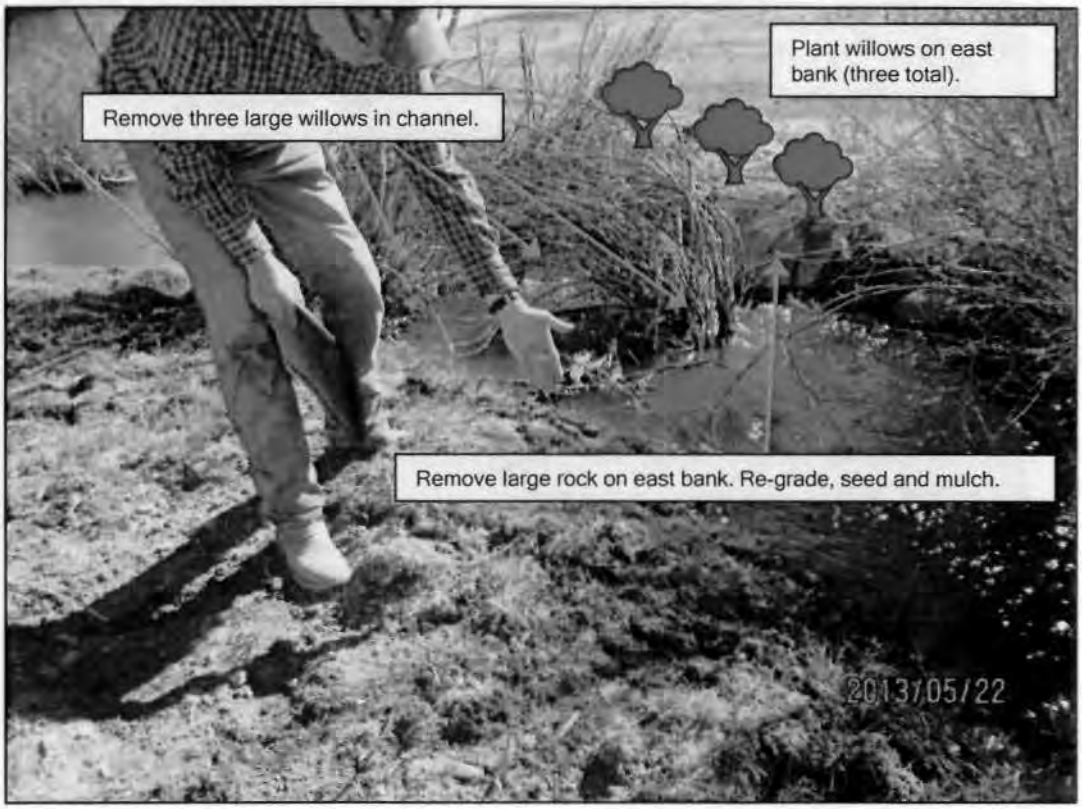


Figure B-67. Work plan for site 67.

Figure B-68. Work plan for site 68.

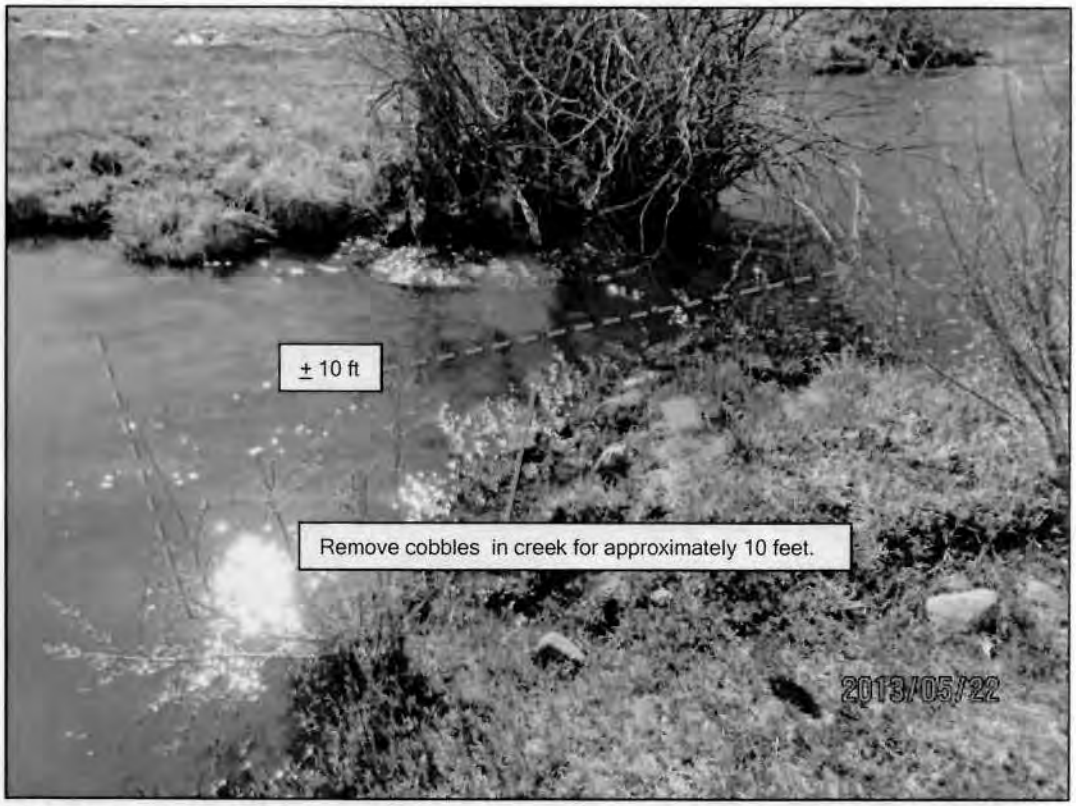


Figure B-69. Work plan for site 69.

Figure B-70. Work plan for site 70.

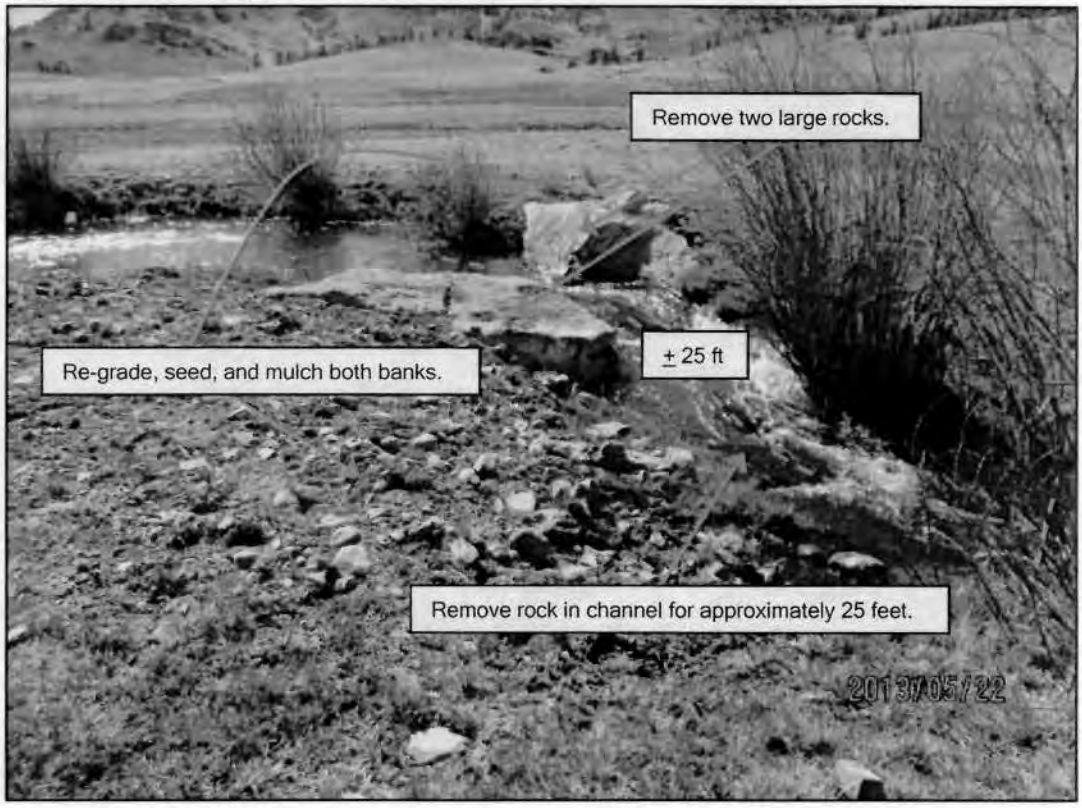


Figure B-71. Work plan for site 71.

Appendix B
Work Plans for Instream Impoundment/Obstructions

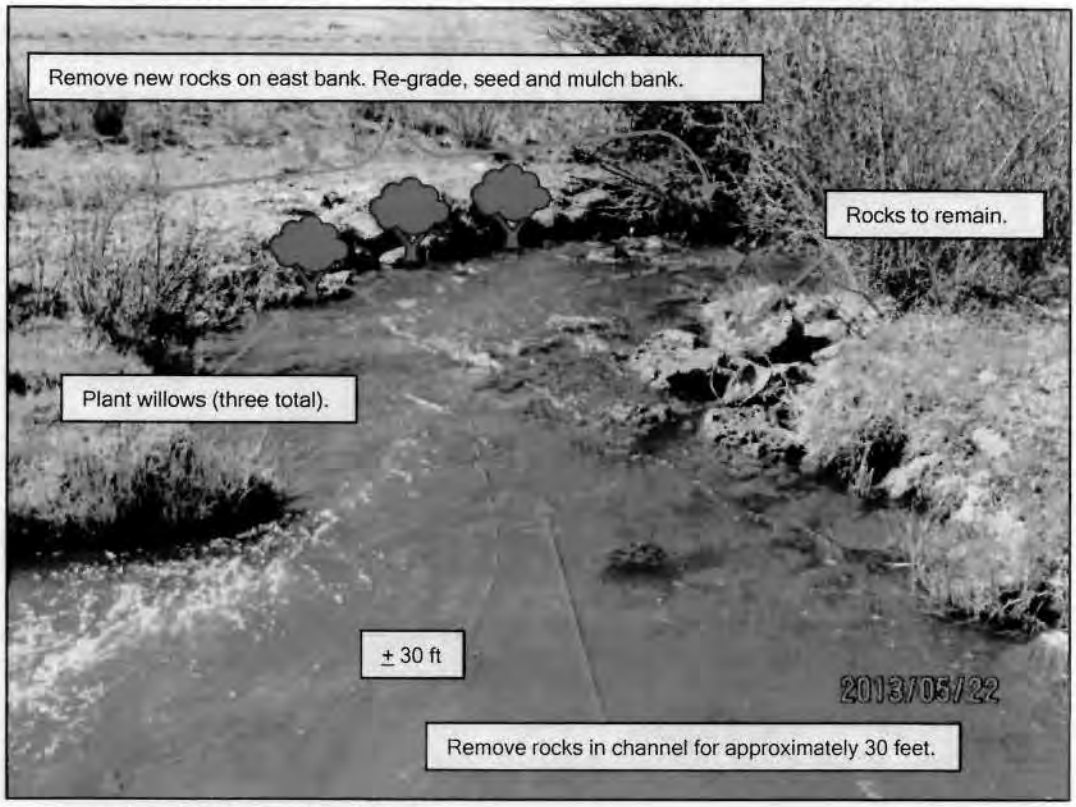


Figure B-72. Work plan for site 72.

Figure B-73A. Work plan for site 73A.

Figure B-73B. Work plan for site 73B.

Figure B-74. Work plan for site 74.

Appendix B
Work Plans for Instream Impoundment/Obstructions

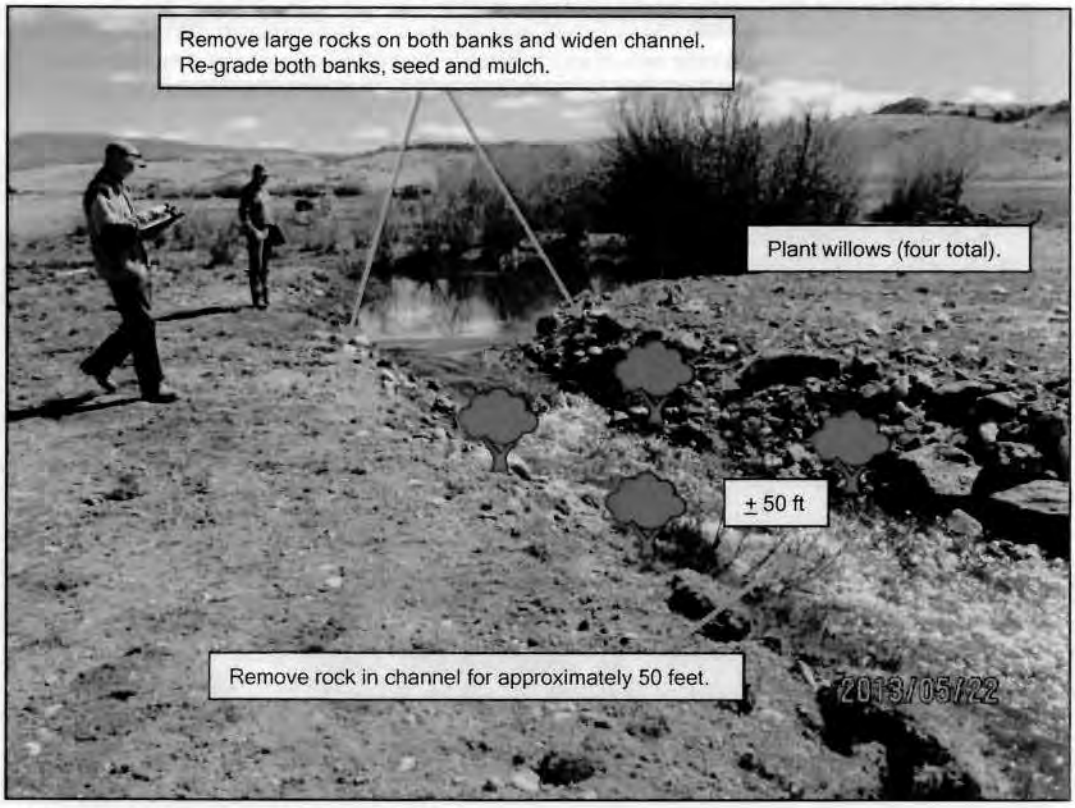


Figure B-75A. Work plan for site 75A.

Figure B-75B. Work plan for site 75B.

Figure B-76. Work plan for site 76.

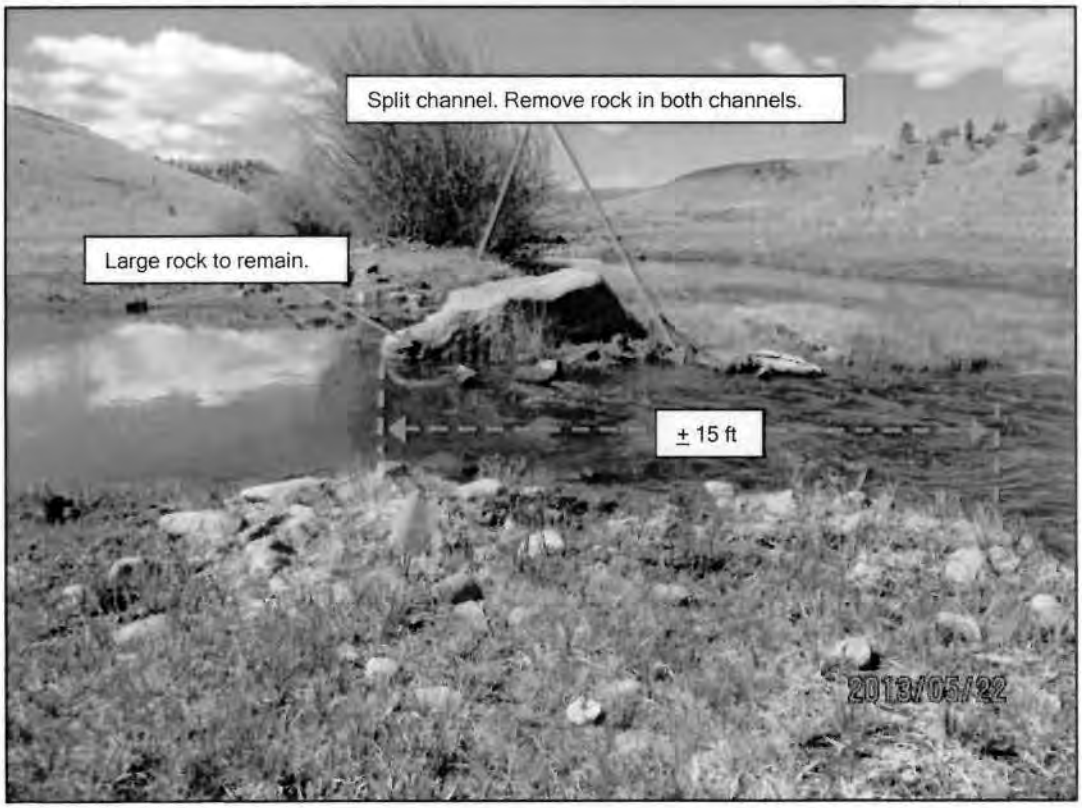


Figure B-77. Work plan for site 77.

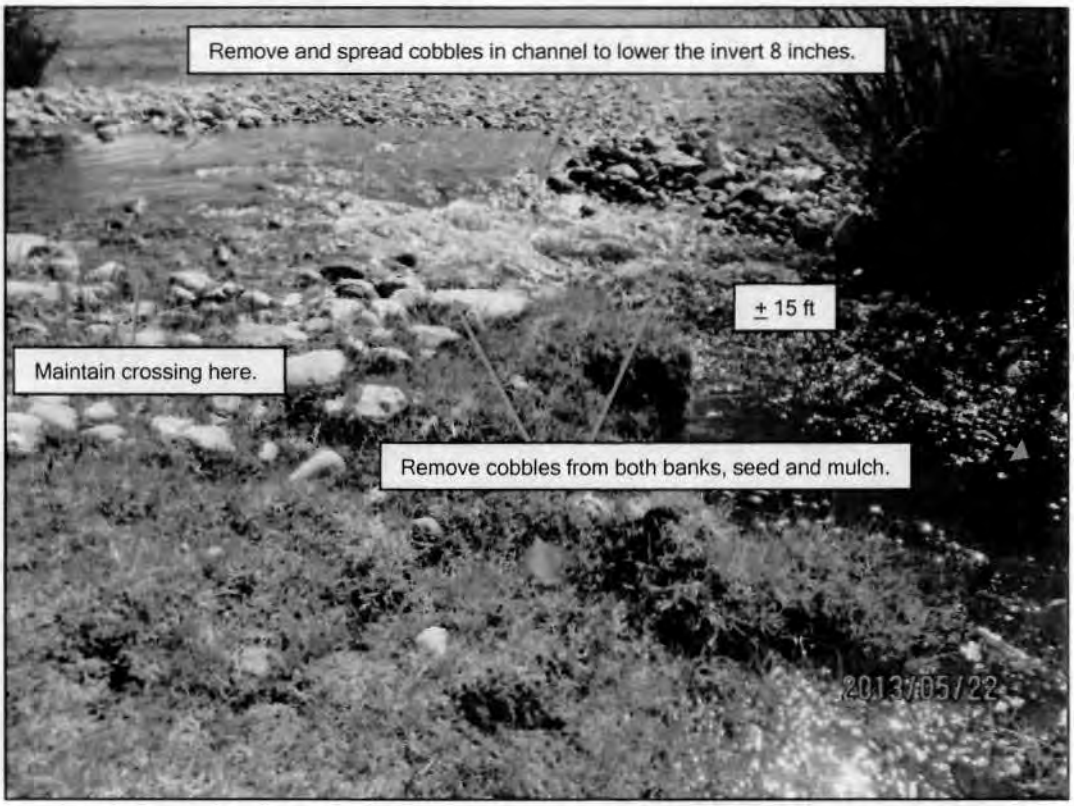


Figure B-78B. Work plan for site 78B.

Appendix B
Work Plans for Instream Impoundment/Obstructions

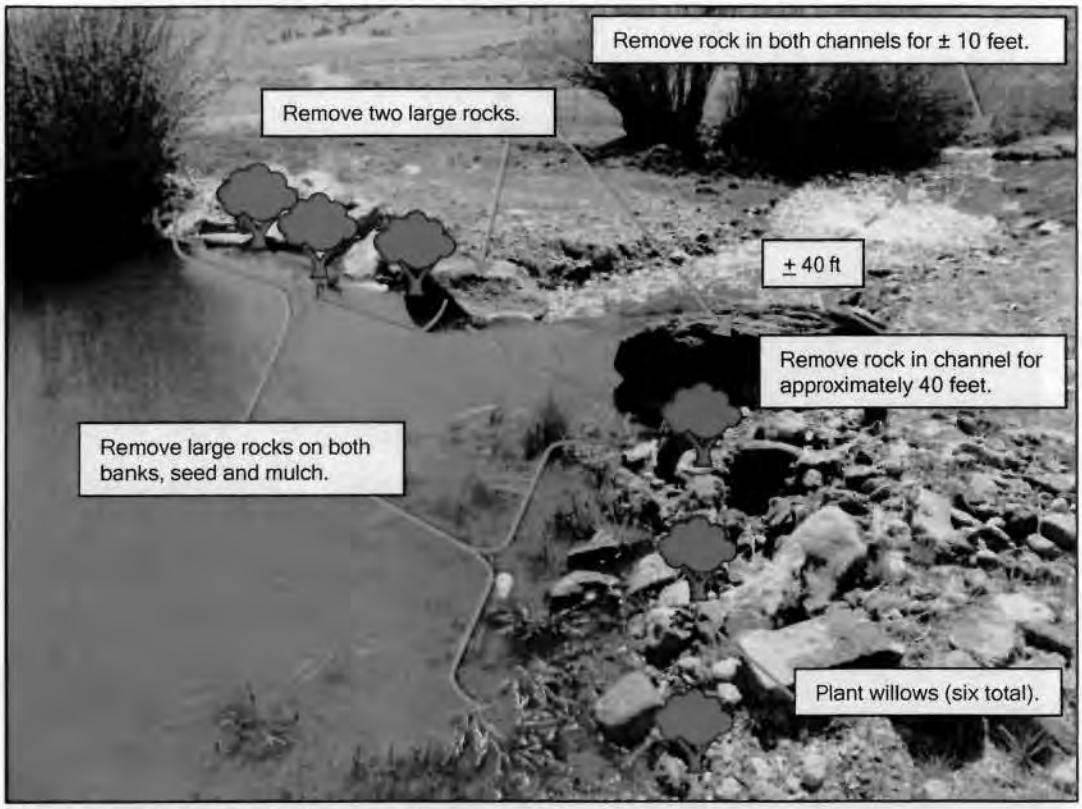


Figure B-79. Work plan for site 79.

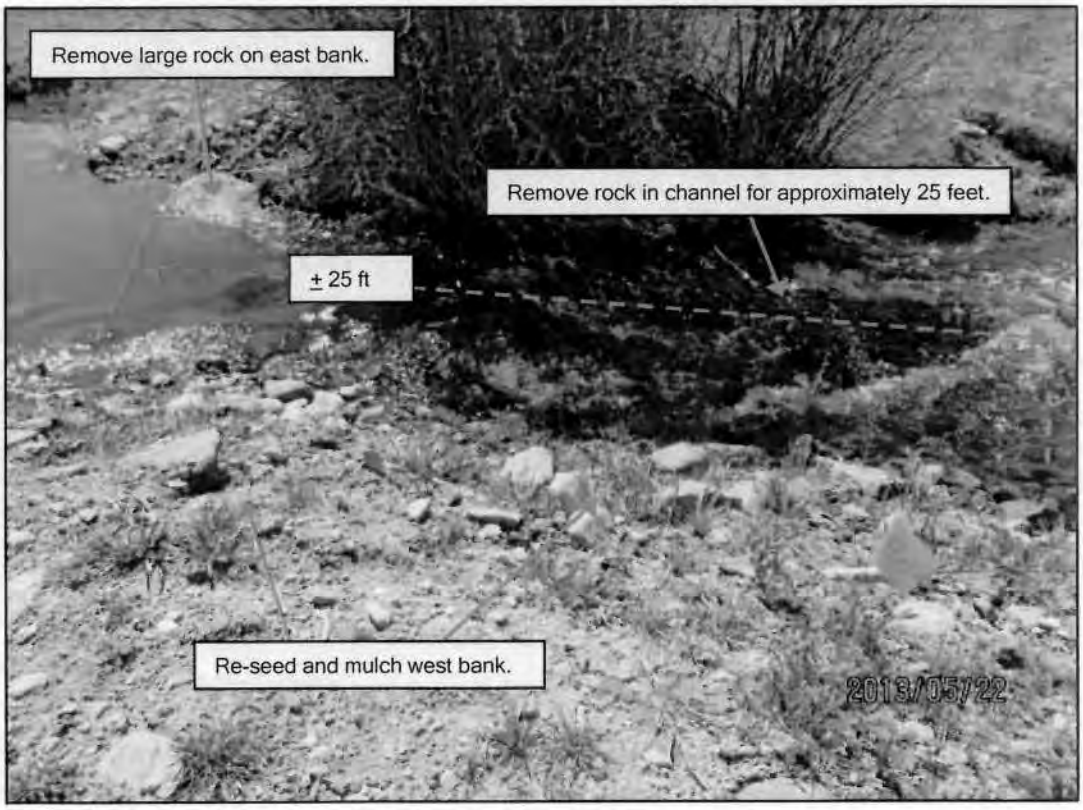


Figure B-80. Work plan for site 80.

Figure B-81. Work plan for site 81.

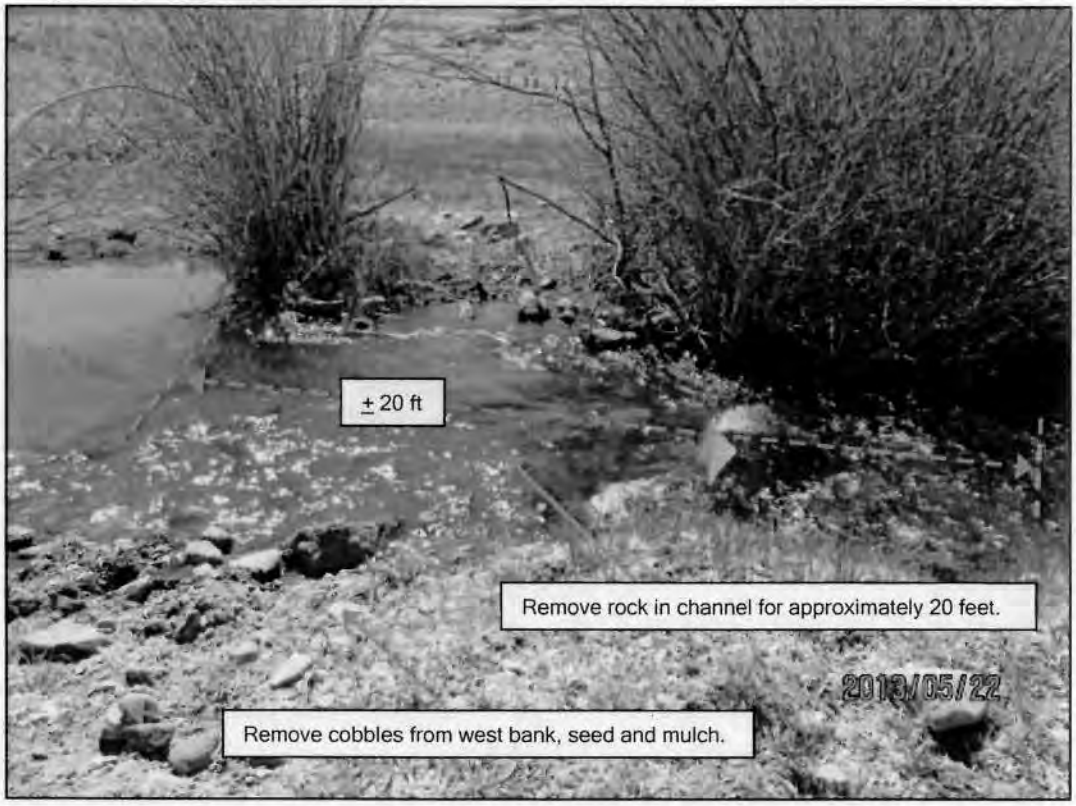


Figure B-82. Work plan for site 82.

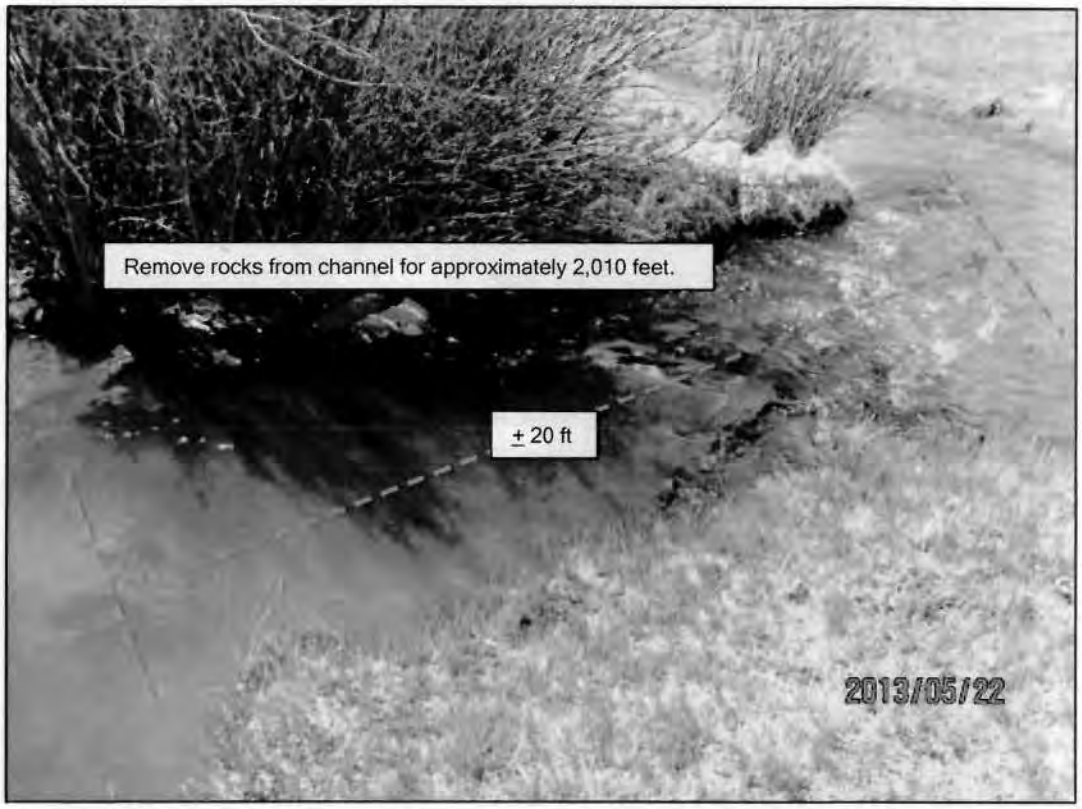


Figure B-83. Work plan for site 83.

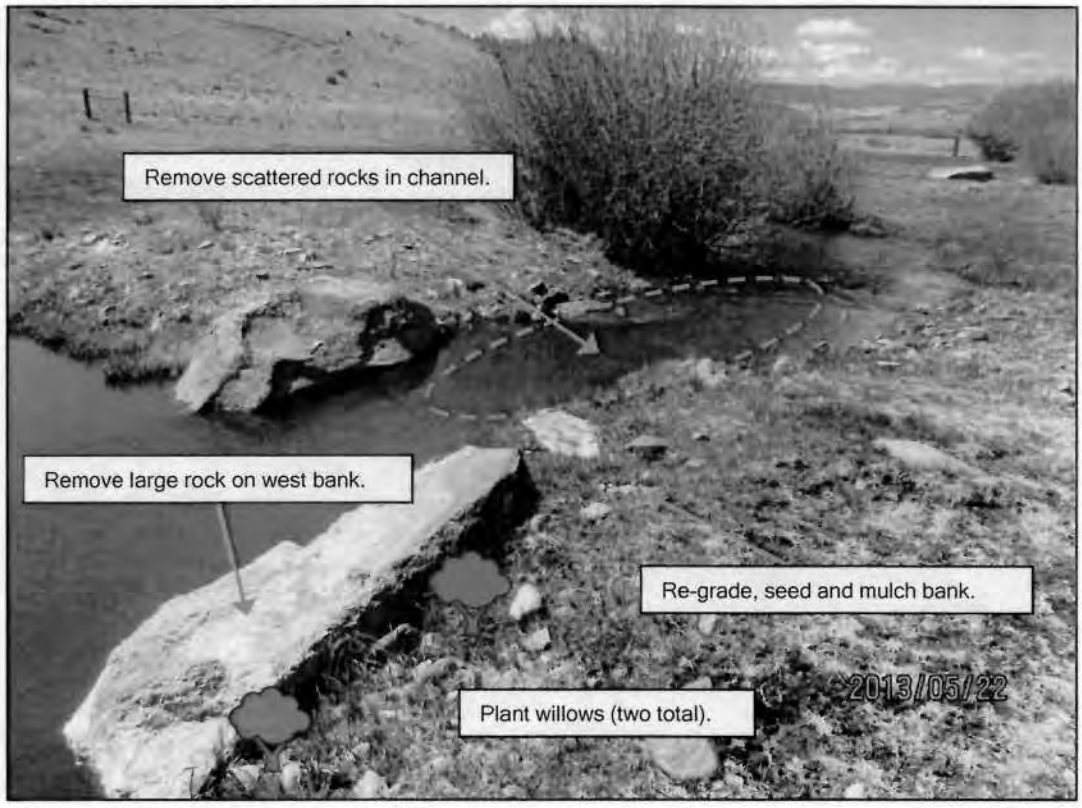


Figure B-84. Work plan for site 84.

Appendix B
Work Plans for Instream Impoundment/Obstructions

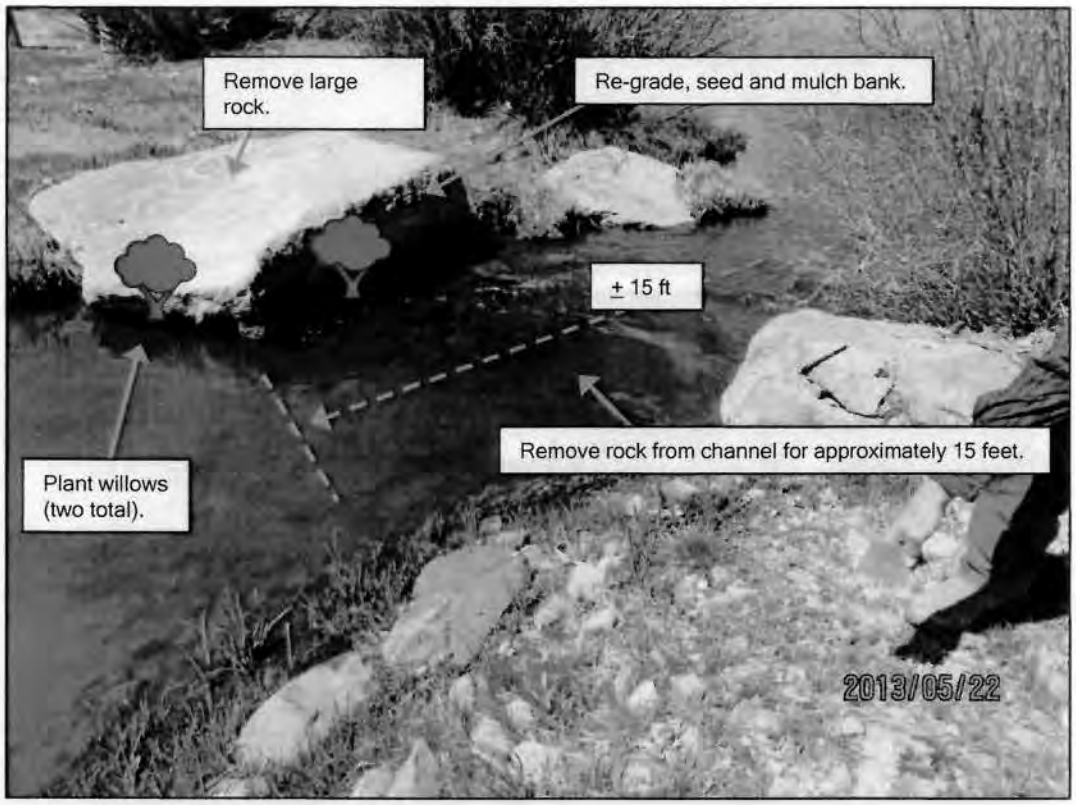


Figure B-85. Work plan for site 85.

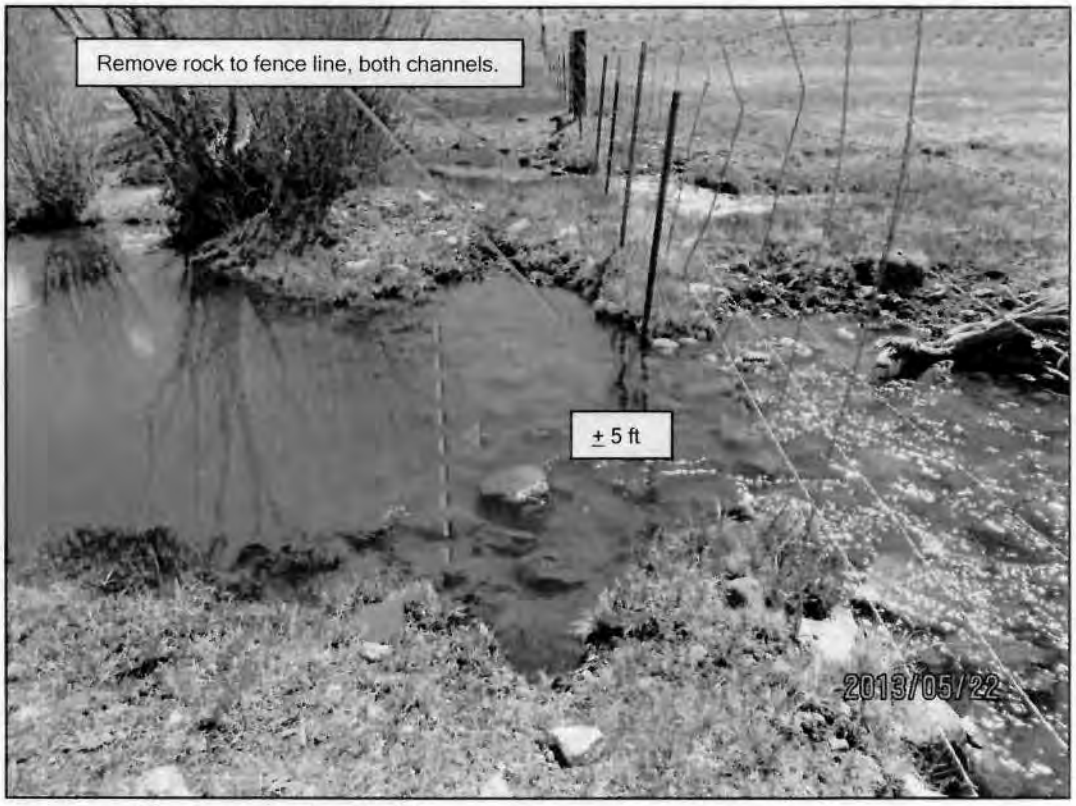


Figure B-86. Work plan for site 86.

Appendix C:
Photographs of Storage Disposal Areas

Appendix C
Photographs of Disposal Areas

Figure C-1. Storage Area 1.

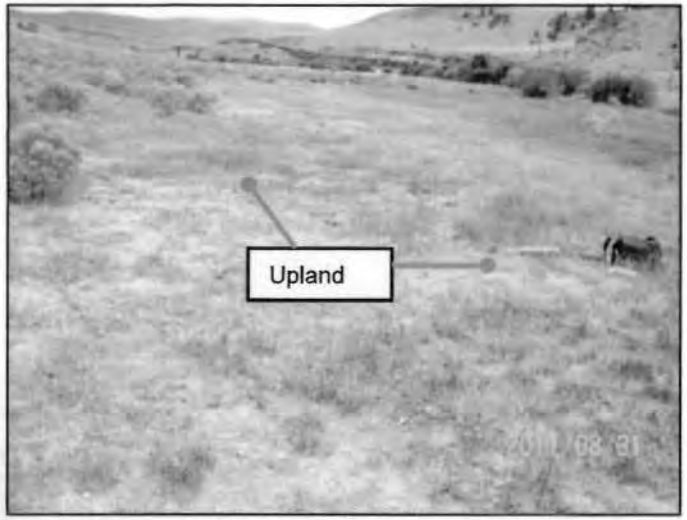


Figure C-2. Storage Area 3.

Figure C-3. Storage Area 5.

Figure C-4. Storage Area 6.

Appendix C
Photographs of Disposal Areas

Figure C-5. Storage Area 7.

Figure C-6. Storage Area 8.

Figure C-7. Storage Area 10 (white flowers are yarrow).

Figure C-8. Storage Area 12.

Appendix C
Photographs of Disposal Areas

Figure C-9. Storage Area 13.

Figure C-10. Storage Area 14.

Figure C-11. Storage Area 16.

Figure C-12. Storage Area 17.

Appendix C
Photographs of Disposal Areas

Figure C-13. Storage Area 18.

Figure C-14. Storage Area 19.

Figure C-15. Storage Area 20.

Appendix D:
Work Plans for Wetland Fills
USEPA-only Sites

Appendix D
Work Plans for Wetland Fills - USEPA-Only Sites

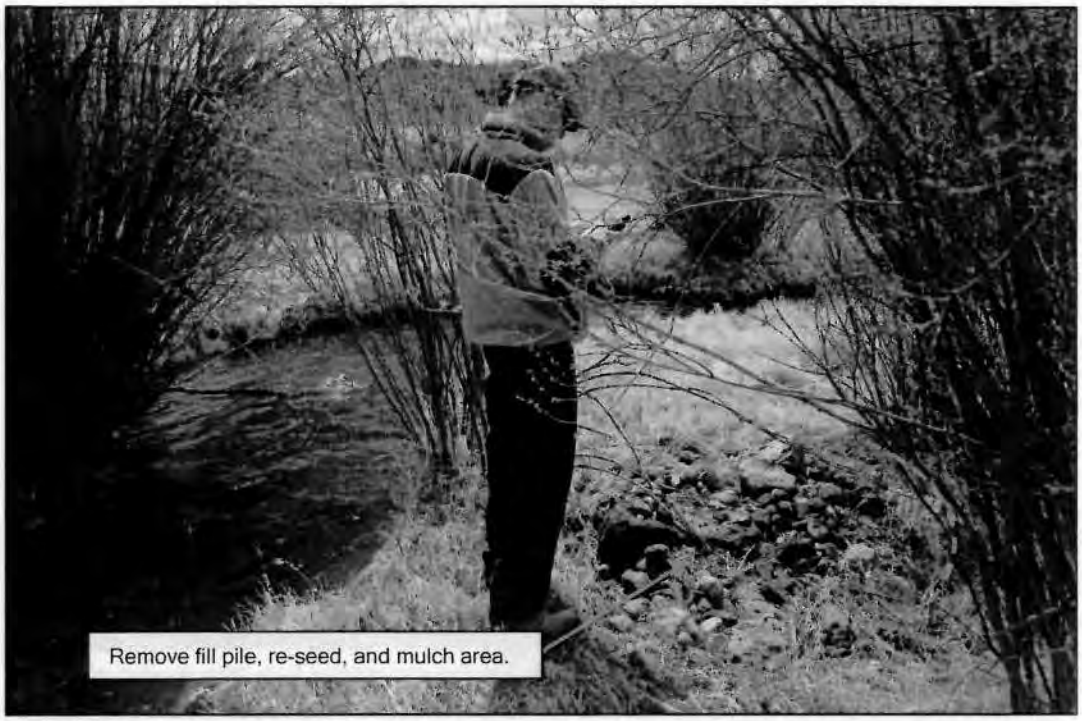


Figure D-4A. Work plan for site 4A.

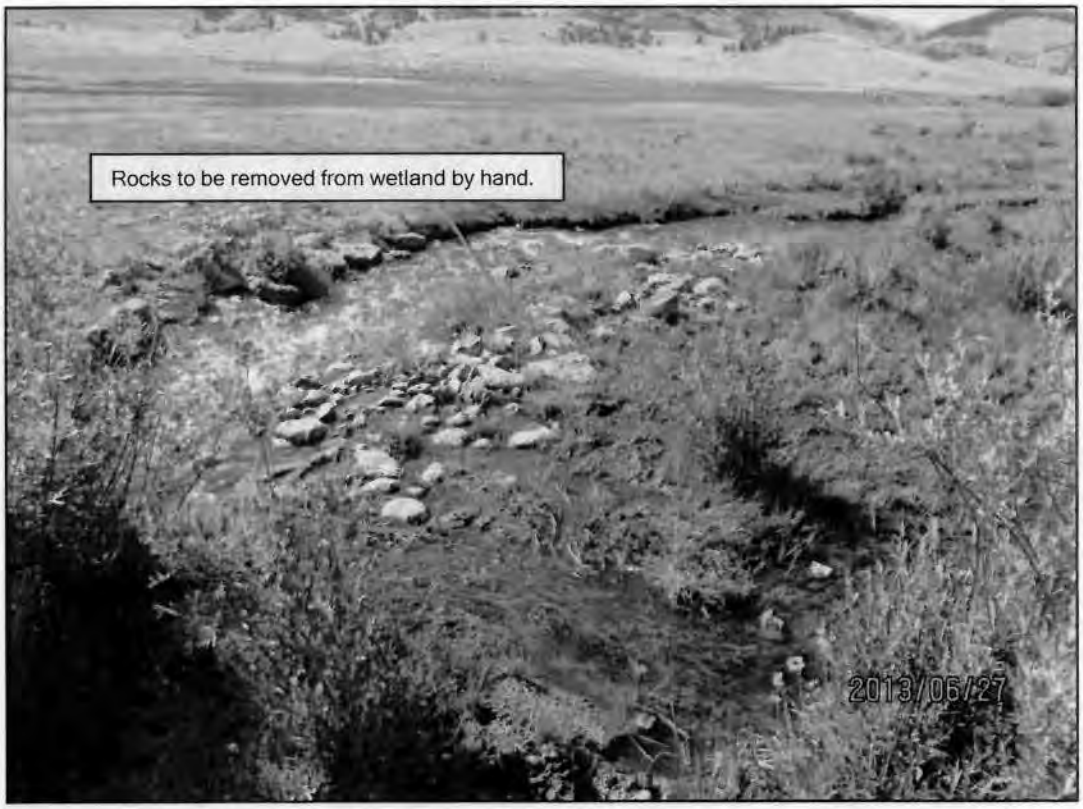


Figure D-2. Work plan for Site B (near CDWR Site 11).

Appendix D
Work Plans for Wetland Fills - USEPA-Only Sites

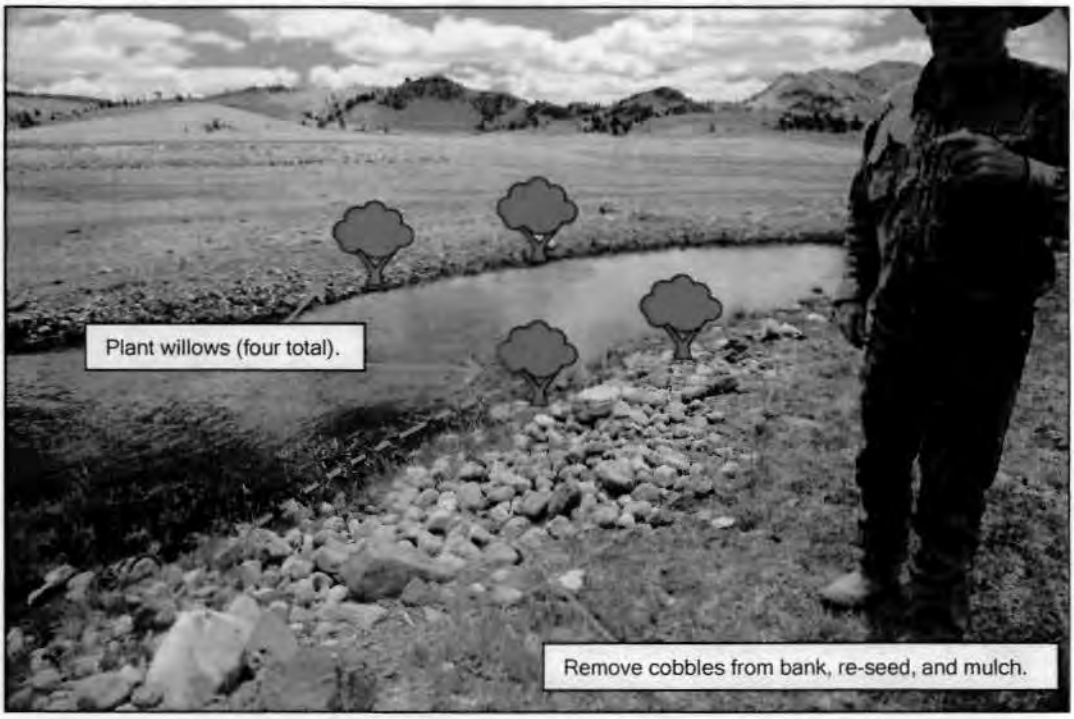


Figure D-11A. Work plan for site 11A.

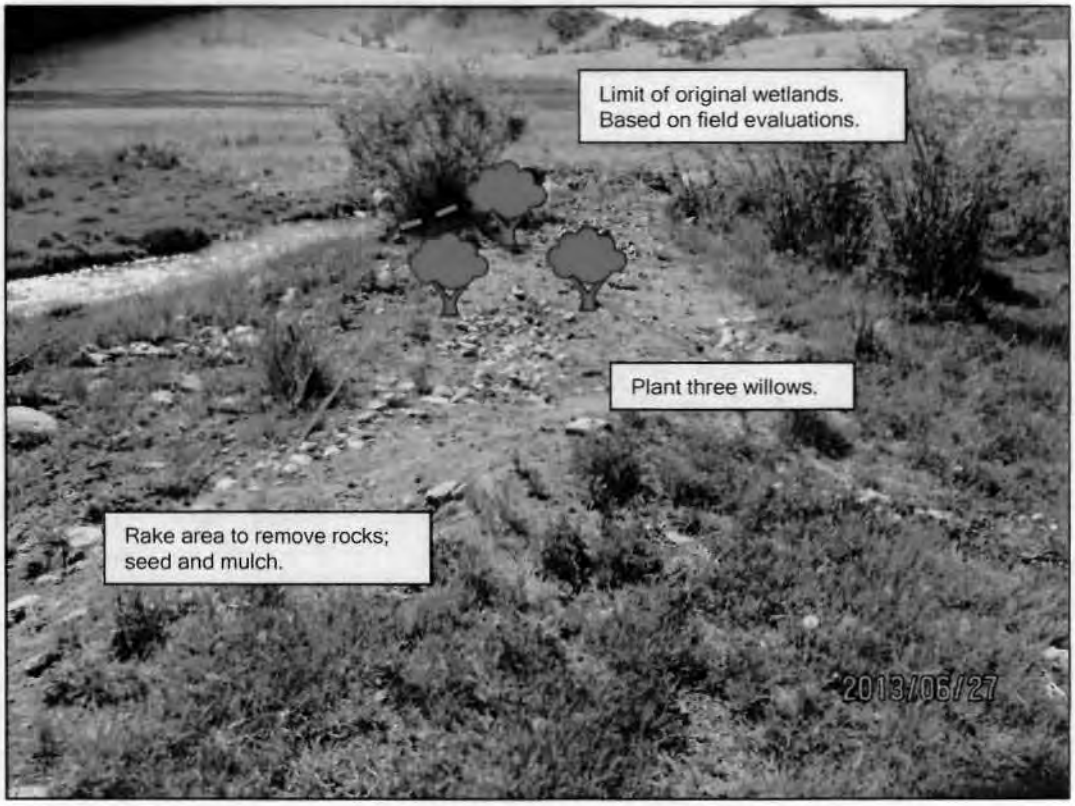


Figure D12A. Work plan for Site 12A (near CDWR Site 12).

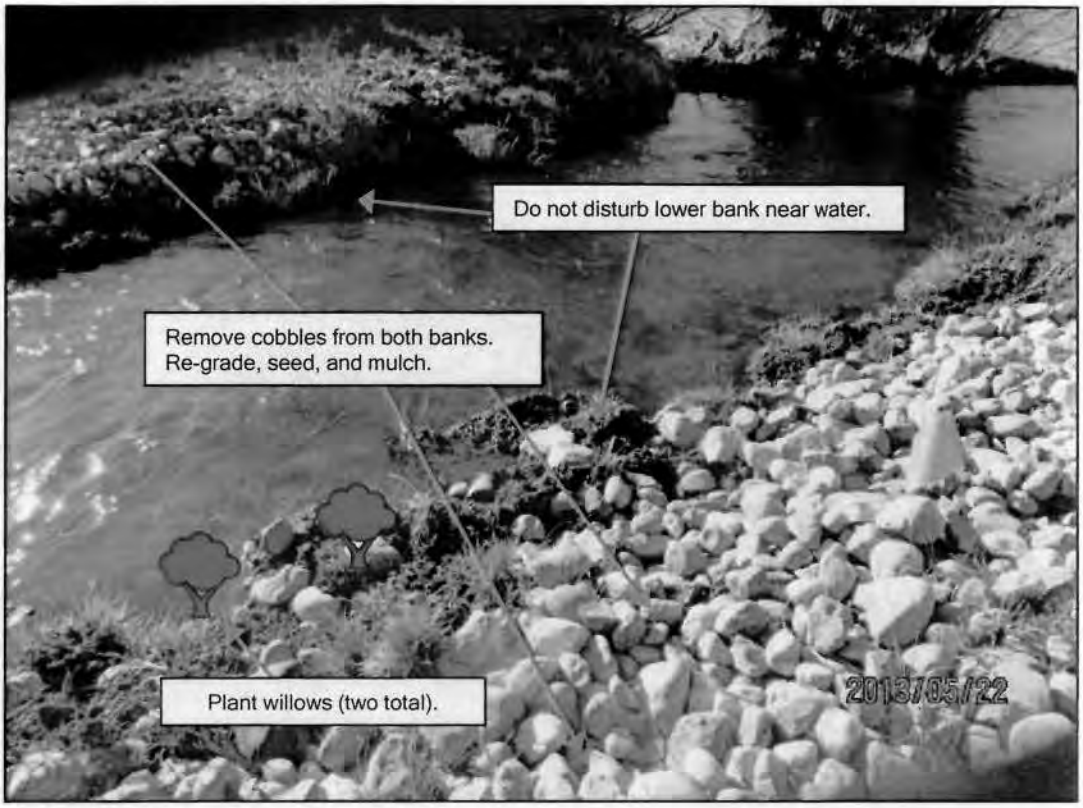


Figure D-53A. Work plan for Site 53A.

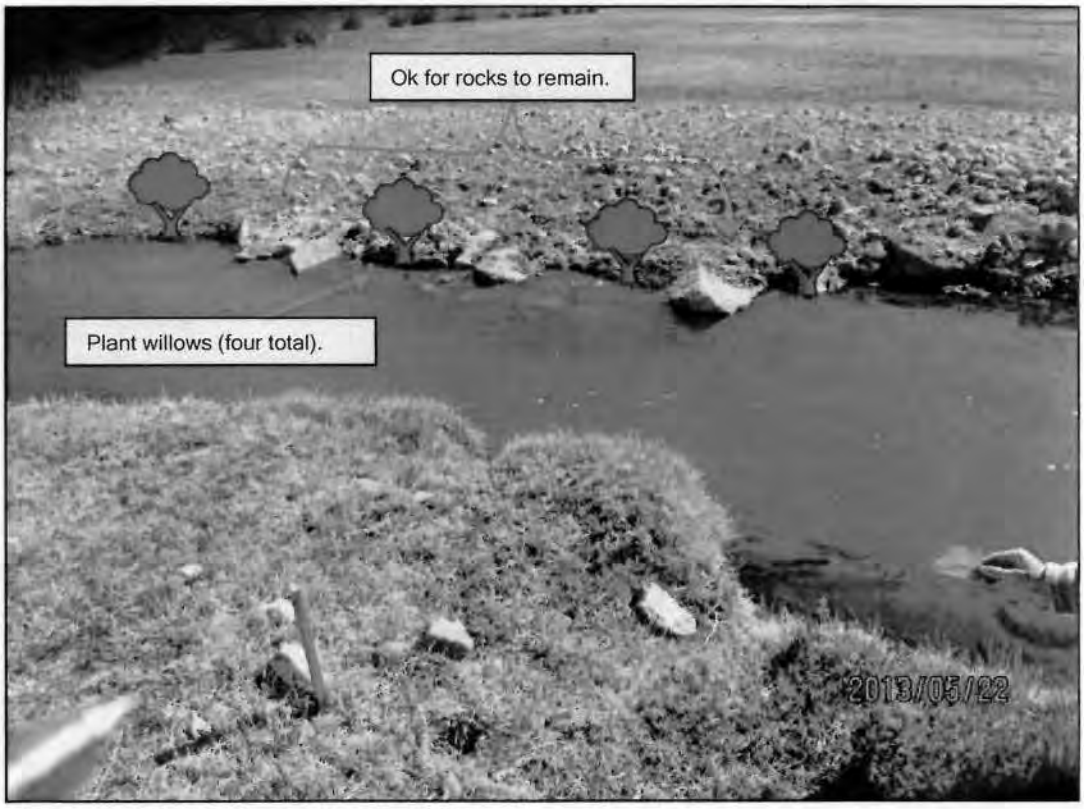


Figure D-65A. Work plan for site 65A.

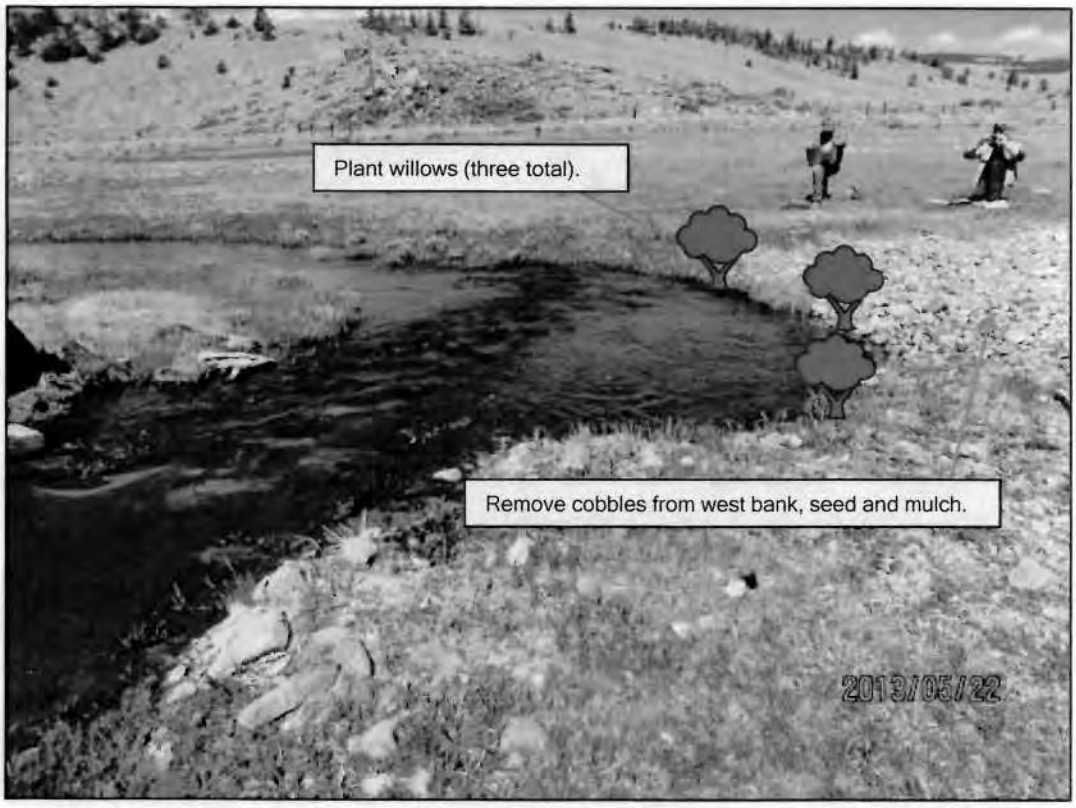


Figure D-77A. Work plan for site 77A.

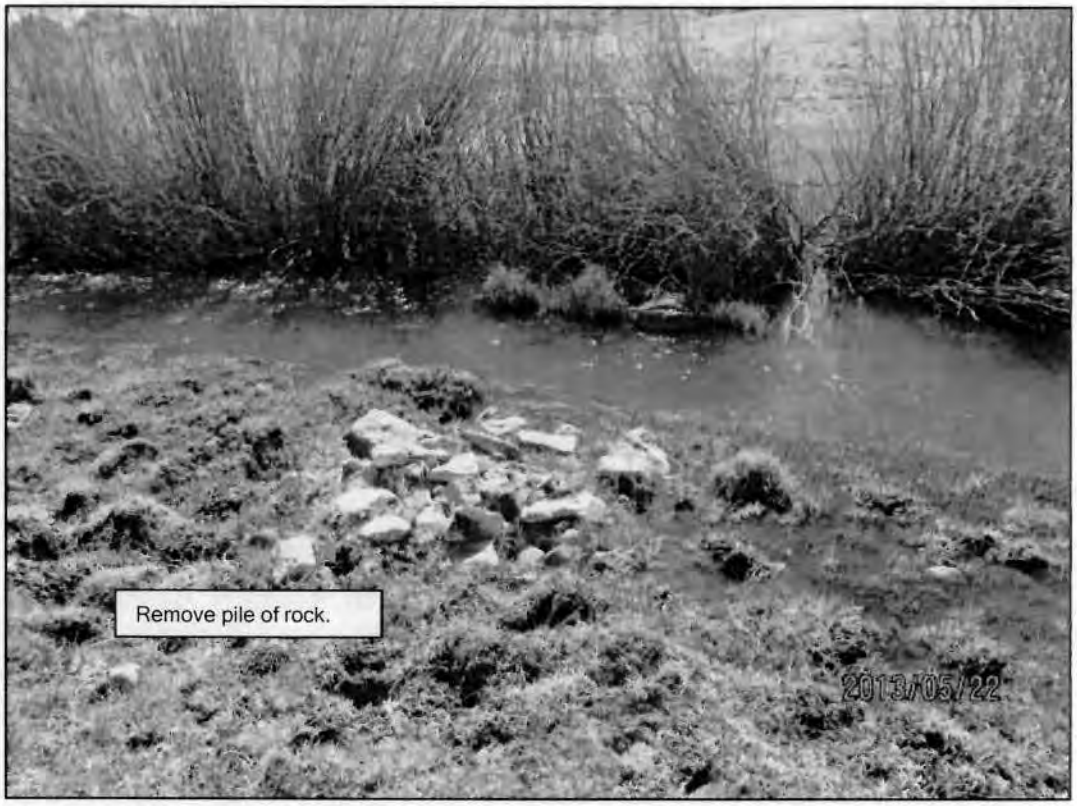


Figure D-78A. Work plan for site 78A.

Appendix E:
Work Plans for Bank Stabilization Sites and Old Fills

Appendix E
Work Plans for Bank Stabilization Sites and Old Fills

Figure E-1. Bank stabilization above the ordinary high water mark (OHWM) of Sheep Creek at BW-1. Material to remain.

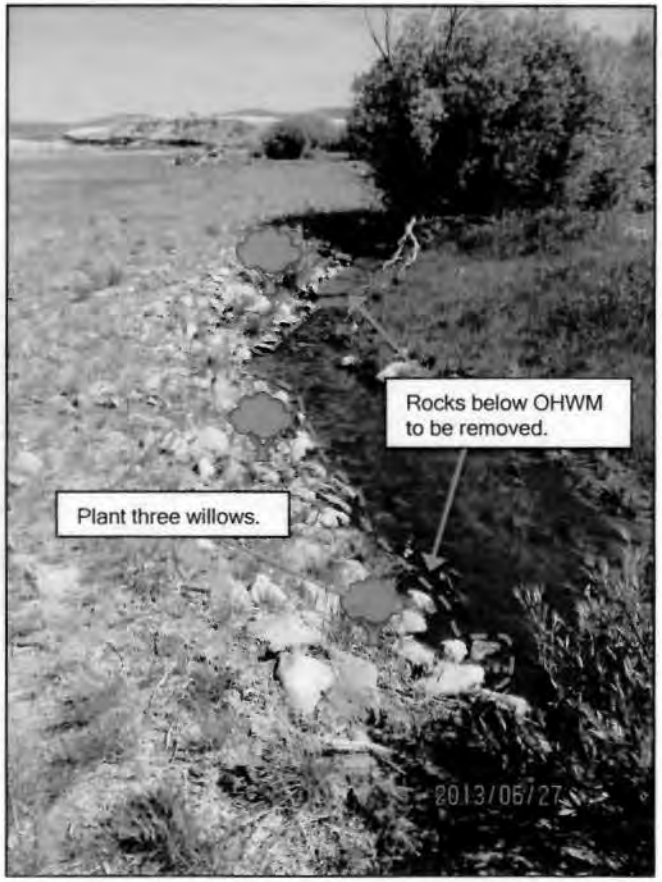


Figure E-2. Bank stabilization with some rocks in the creek BS-2.

Appendix E
Work Plans for Bank Stabilization Sites and Old Fills

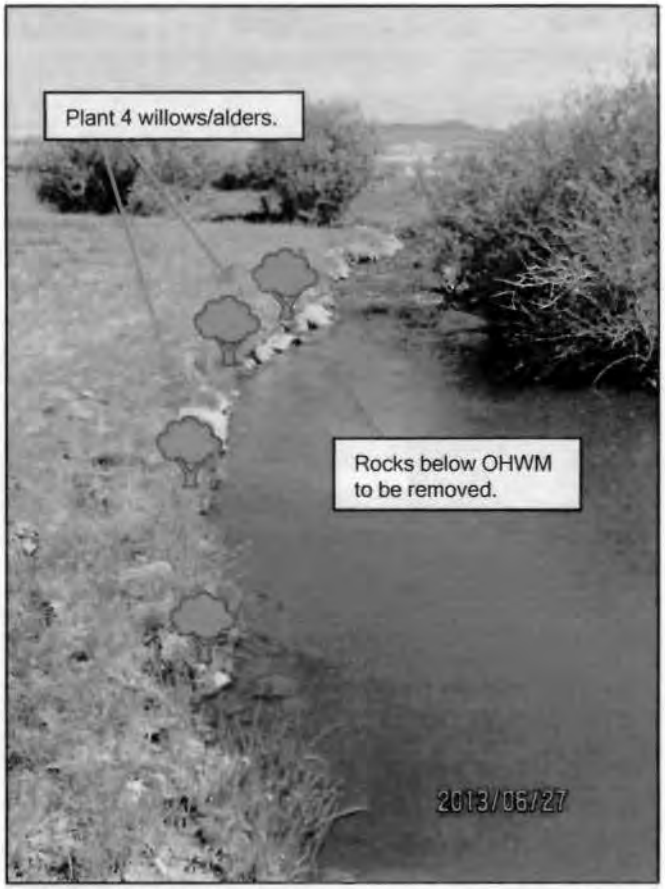


Figure E-3. Bank stabilization at BS-2. Material to be removed.

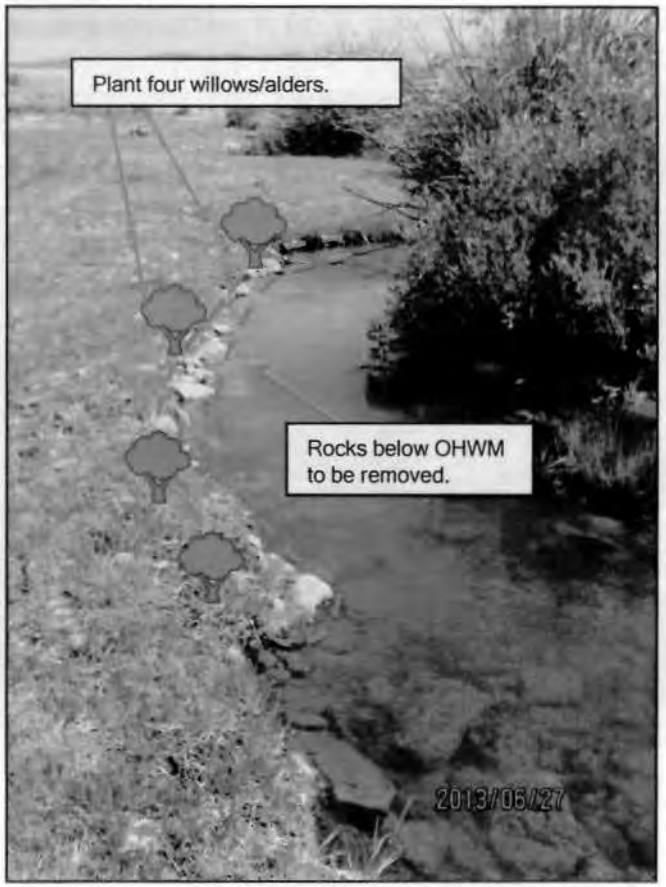


Figure E-4. Bank stabilization at BS-2. Material to be removed.

Appendix E
Work Plans for Bank Stabilization Sites and Old Fills

Figure E-5. bank stabilization at BS-2W. Rocks to remain since banks are wetland.

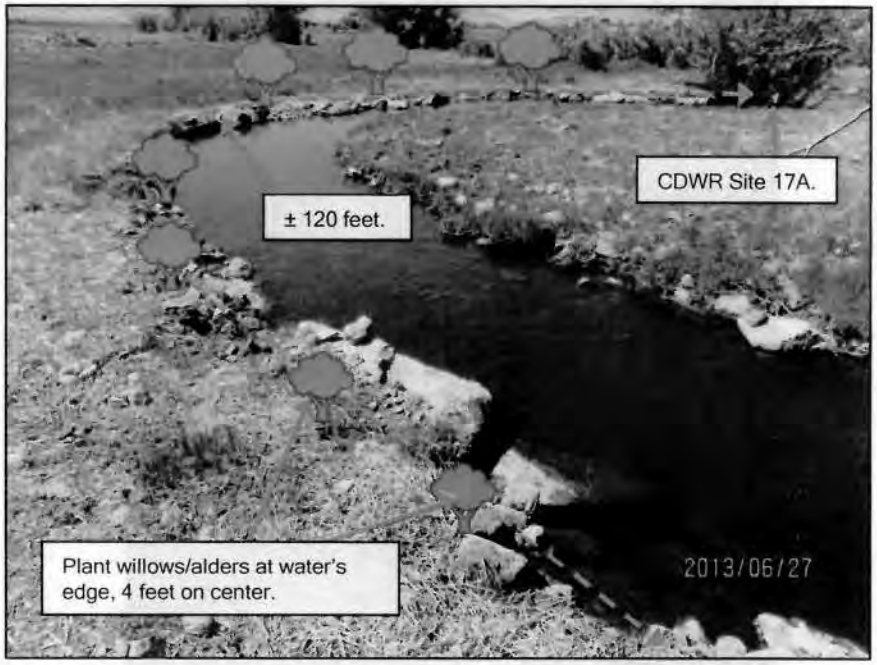


Figure E-6. Bank stabilization at BS-3. Rocks to remain since they protect the outside bend.

Appendix E
Work Plans for Bank Stabilization Sites and Old Fills

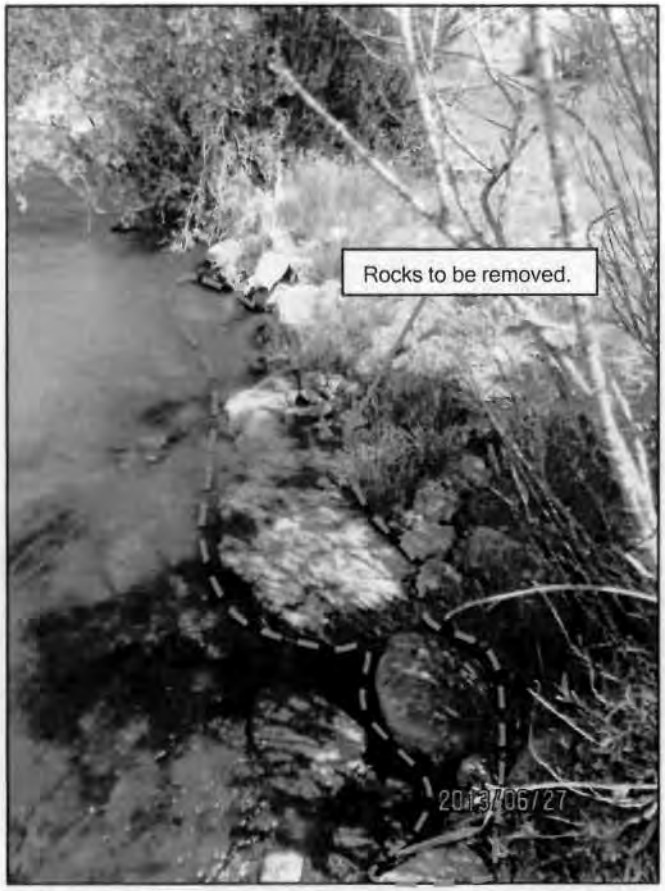


Figure E-7. Rocks below OHWM to be removed at BS-5..

Figure E-8. Work at BS-4. Rocks to be removed.

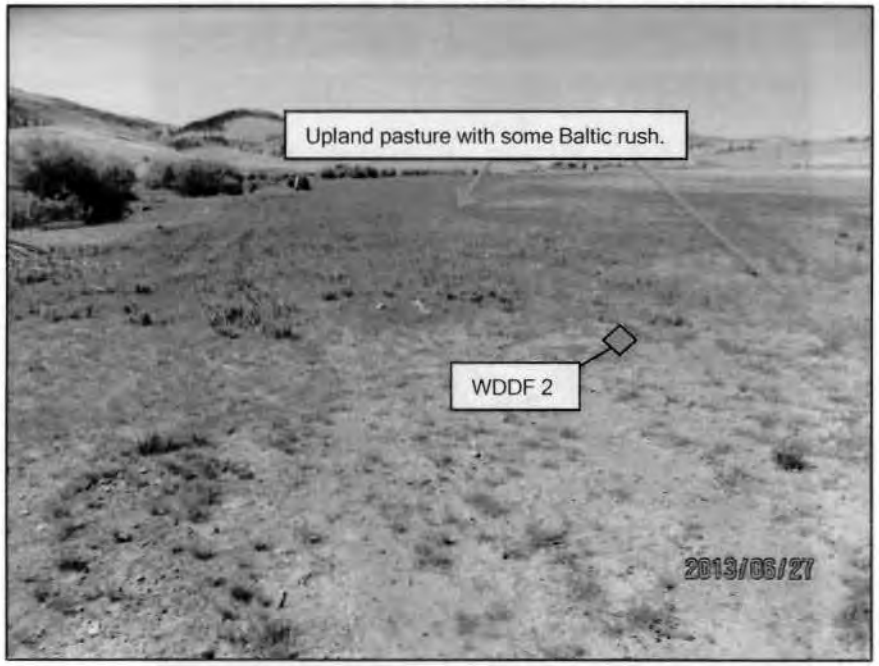


Figure E-9. Pasture to south of area with ranch road and concrete abutments.

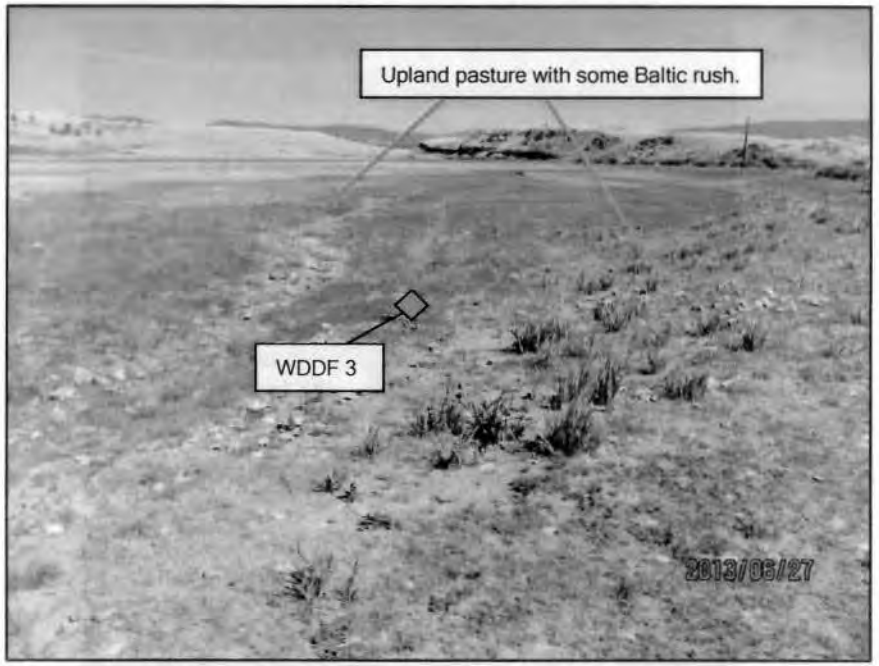


Figure E-10. Pasture to north or area with ranch road and concrete abutments.

Appendix F:
Work Plans for Feeder Ditch

Appendix F
Work Plans for Feeder Ditch

Figure F-1 Work plan for Feeder Ditch.

Figure F-2. Work plan for Feeder Ditch.

Appendix F
Work Plans for Feeder Ditch

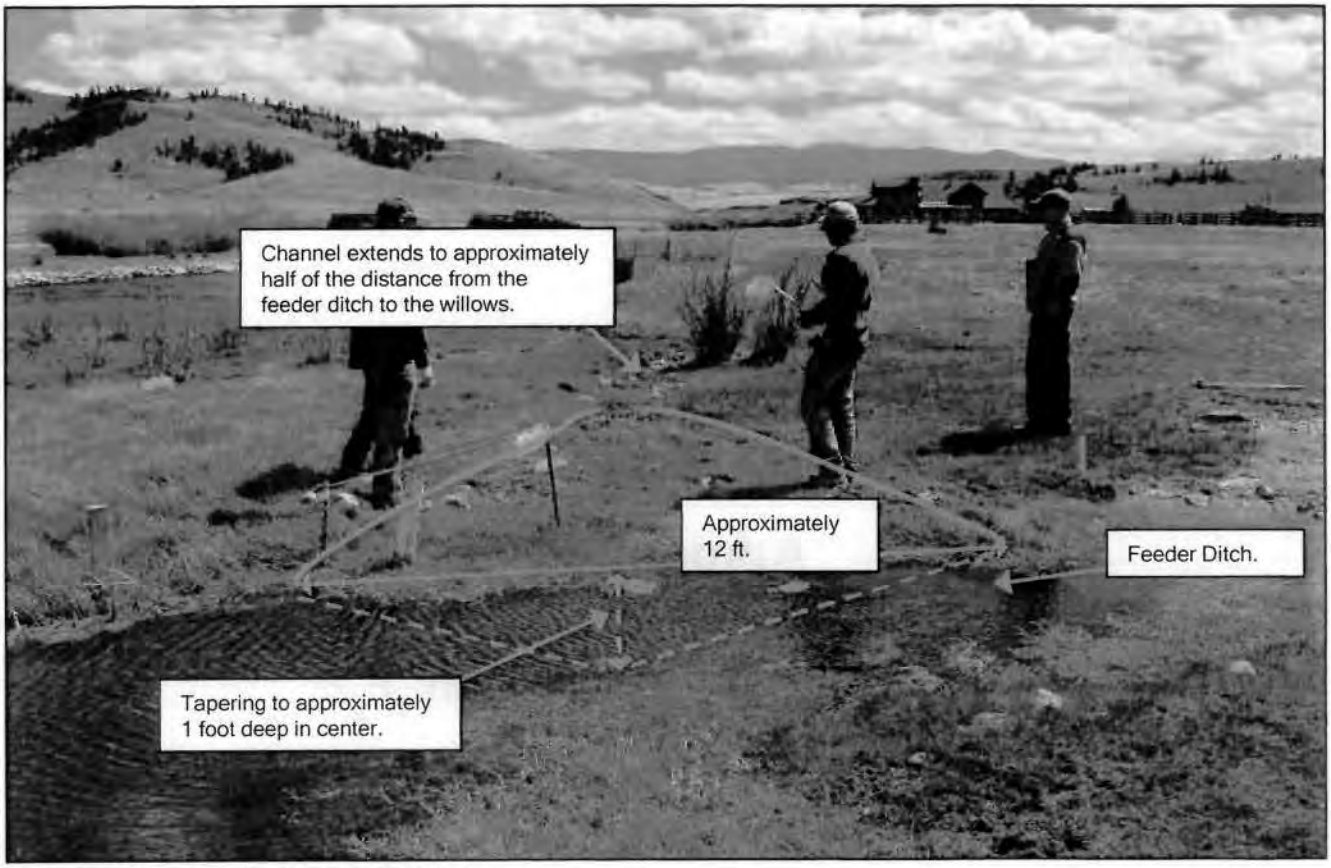


Figure F-3. Work plan for Feeder Ditch.

Appendix G:
Plan for New Outlet for
Horseshoe Pond No. 2

Appendix G
Plan for New Outlet for Horseshoe Pond No. 2

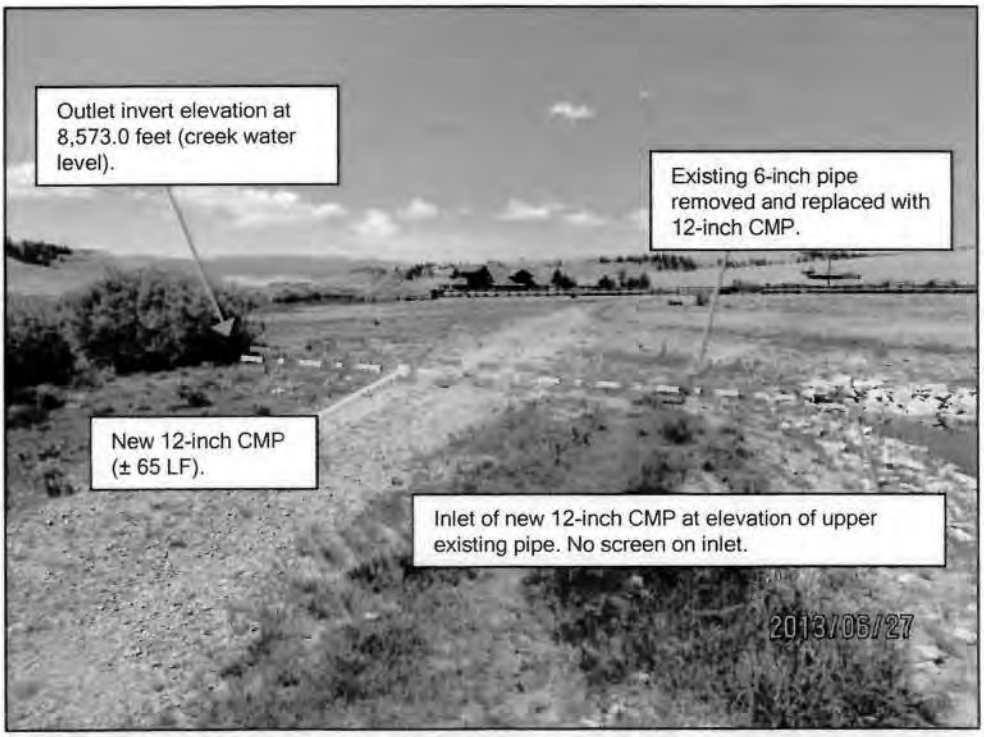


Figure G-1. Plan for Horseshoe Pond No. 2 outlet.

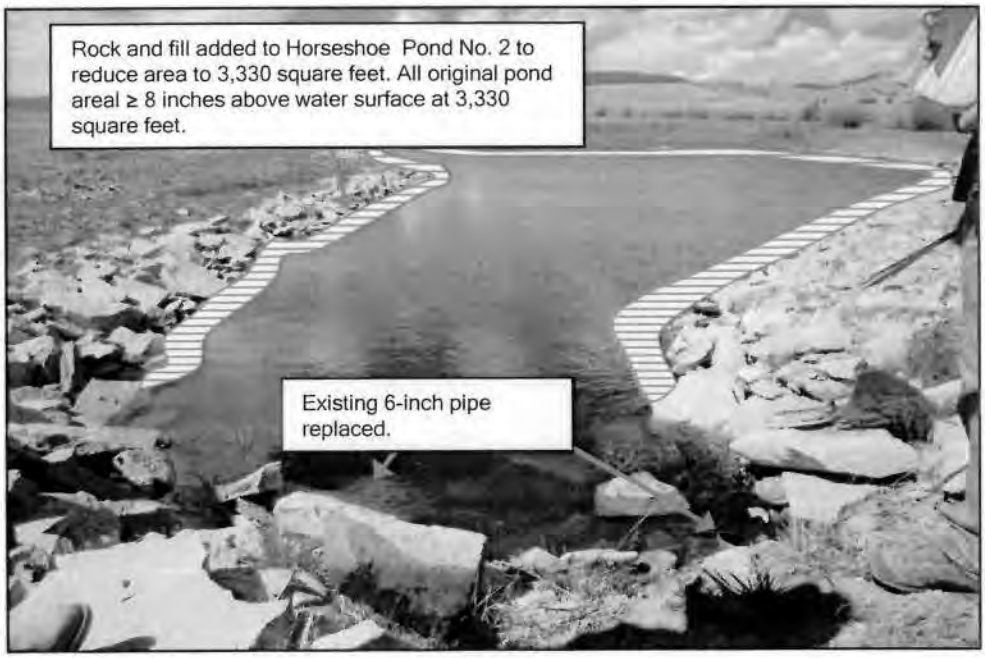


Figure G-2. Plan for Horseshoe Pond No. 2.

Appendix H:
Plan for New Diversion Box for Ditch No. 5

Appendix H
Plan for New Diversion Box for Ditch No. 5

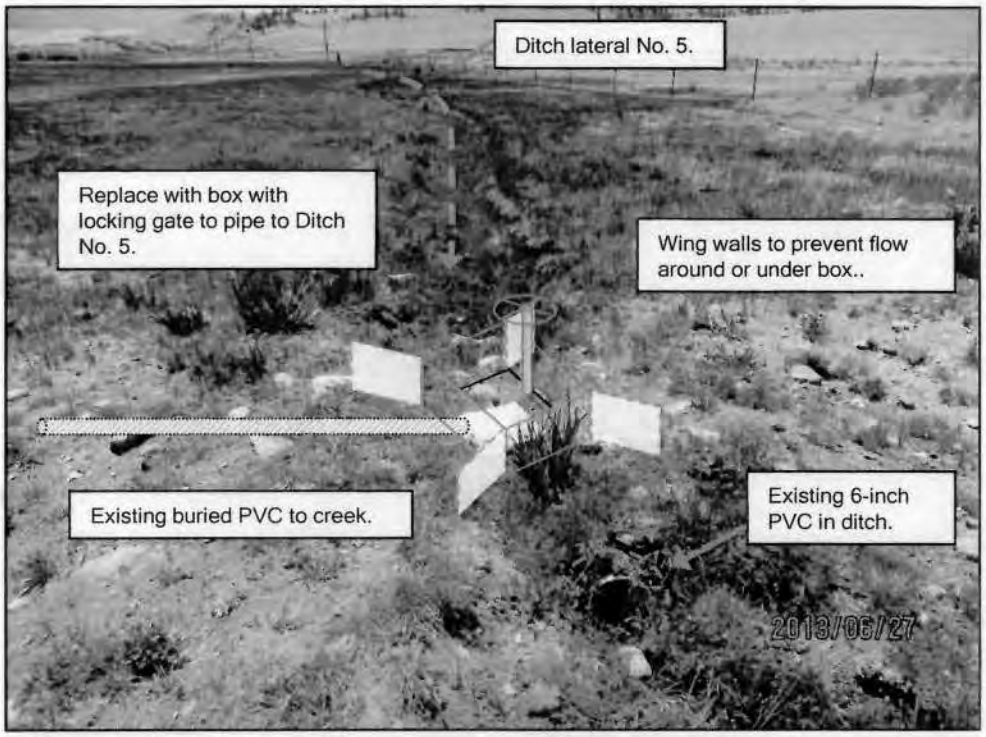


Figure H-1. Plan for new diversion box for Ditch Lateral No. 5 (looking northeast).

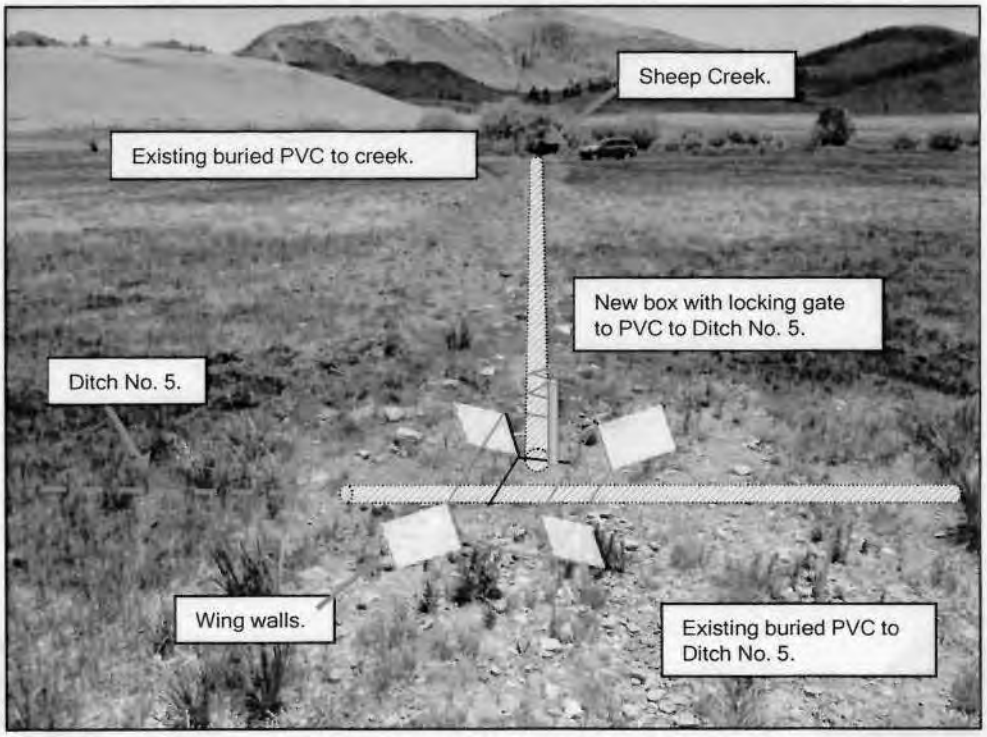


Figure H-2. Plan for new diversion box for Ditch Lateral No. 5 (looking east towards Sheep Creek).

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