



IN REPLY REFER TO:

United States Department of the Interior

BUREAU OF RECLAMATION
Lower Colorado Regional Office
P.O. Box 61470
Boulder City, NV 89006-1470

**AMENDMENT NUMBER 1
to the
RECORD OF DECISION
for the
COACHELLA CANAL LINING PROJECT
RIVERSIDE AND IMPERIAL COUNTIES, CALIFORNIA**

I. Introduction

This document is Amendment Number 1 (Amendment) to the Bureau of Reclamation's (Reclamation) Record of Decision (ROD) regarding the Preferred Alternative for implementing the Coachella Canal Lining Project (Project). The ROD signed by the Regional Director on March 27, 2002, approved the Conventional Lining Alternative as the agency Preferred Alternative for implementing the Project. This Amendment identifies a change in the Preferred Alternative from the Conventional Lining Alternative to a refined Parallel Canal Alternative for implementing the Project. A Parallel Canal Alternative was analyzed in the Final Environmental Impact Statement/Environmental Impact Report (FEIS/EIR) filed and noticed in the Federal Register on April 27, 2001 (FES01-15).

Subsequent to signing the ROD, Reclamation, Coachella Valley Water District (CVWD) and the California partners (CP) have been working with the design/construction management contractor (DCMC) charged with implementing the Preferred Alternative for the Project. A number of critical issues have been identified during their evaluation that affect the implementation of the original Preferred Alternative and render it unacceptable. These issues are as follows:

- 1) Field examination of the concrete condition of siphons and related control structures (all have been in service for over 60 years) determined that they exhibited considerable deterioration which affects their long-term reliability and integrity and should be replaced to allow long-term performance and reliability of continuous water delivery with a new lined canal;
- 2) The sheet-pile separation option would be too costly, would not be constructible in long reaches where there are coarse fan gravels and bedrock which precludes driving the sheet-pile, and would restrict full delivery of water orders to CVWD during the life of construction;

- 3) The pump-around pipeline option would require a considerable amount of earthwork, blading, and brushing over variable topography within and outside of the right-of-way (ROW) in order to provide a relatively level lay-down area for the pipeline alignment between siphons. The estimated area of ground disturbance for these activities is 275 acres within and outside of the ROW;
- 4) The pump-around pipeline and facilities must remain in service 24 hours a day, 7 days a week for 2½ years. There is an unacceptable risk for water delivery outage and damage to Project facilities and potentially significant third-party damages (crops, roads, etc.) due to pump-around pipeline failure, pump breakdown, unanticipated desert storms resulting in flash floods, and construction related accidents; and
- 5) For each of the 26 existing siphons, there would be a water delivery outage of up to five (5) days for isolation between reaches and reconnection during construction.

In addition, the DCMC compared the overall costs, as related to construction complexity, duration, and potential ground disturbance between the current Preferred Alternative and a refined Parallel Canal Alternative. Taking all factors into account, the DCMC strongly recommended changing the Preferred Alternative to a refined Parallel Canal Alternative. After full review of the DCMC analysis and recommendation, Reclamation, CVWD, and the CP fully concurred that the new Preferred Alternative for implementing the Project would be the refined Parallel Canal Alternative.

This Amendment also identifies changes related to the signing of the Quantification Settlement Agreement (QSA) and related agreements between the four southern California QSA water agencies; CVWD, Imperial Irrigation District, The Metropolitan Water District of Southern California (MWD), and San Diego County Water Authority (SDCWA). The QSA was developed in an effort to reduce California's consumptive use of Colorado River water. The QSA establishes a framework of water conservation measures and water transfers among the participating agencies for up to 75 years. Pursuant to the QSA, the SDCWA assumed MWD's responsibilities and financial obligations for this Project and elected to receive the conserved water from this Project. The revised Allocation Agreement, executed concurrently with the QSA, memorialized this agreement and assigned MWD's rights to water conserved by the Project to SDCWA.

Reclamation's decision to amend the ROD is consistent with the Council on Environmental Quality's Regulations (40 Code of Federal Regulations § 1500-1508) for Implementing the National Environmental Policy Act of 1969, as amended (NEPA), Department of Interior Policies, and Reclamation's NEPA Handbook. No Supplemental EIS is required.

Reclamation hereby amends the ROD as follows:

Section II. Decision

Paragraph 1 is Amended to Read as Follows:

Reclamation has selected the Parallel Canal Alternative in a refined form as the agency's Preferred Alternative for implementing the Project. The refined Parallel Canal Alternative was found to be the most reasonable and feasible alternative as it best meets the purpose of and need for the action. The refined Parallel Canal Alternative would be constructed on the west and downhill side of the present canal beginning at siphon 7 and continuing through to siphon 32, and all old siphons would be replaced. A description of the refined Parallel Canal Alternative is provided in Section IV.

Section III. Background

The Coachella Canal

Paragraph 1, Sentence 4 is Amended to Read as Follows:

The focus of the proposed Project includes: the unlined canal reaches between siphons 7 and 14, and 15 and 32, the experimentally lined reach between siphons 14 and 15, and all areas of replaced siphons. The Project length would be about 35.1 miles.

Paragraph 2, Sentence 2 is Amended to Read as Follows:

After completion of the Project, seepage through the lined portions would continue to occur at a rate of about 1,500 acre feet per year (af/yr) along the 35.1-mile section.

Section IV. Alternatives Considered

Paragraph 3, Conventional Lining (Preferred Alternative): Heading and Sentence 1 are Amended to Read as Follows:

Conventional Lining Alternative: Under this alternative, the existing canal would be lined using conventional construction methods while diverting water around or through each section, and between siphons, permitting work to take place under dry conditions.

Paragraph 5, Parallel Canal Alternative is Amended to Read as Follows:

Parallel Canal Alternative (Preferred Alternative): Construction of the refined Parallel Canal will be confined within the down slope or west side of the canal ROW with no cross-country reaches. Center line from existing canal to the refined Parallel Canal will vary between 95 to 110 feet within the existing down slope or west side of the canal ROW which will allow for a central and west berm operations and maintenance road. Associated construction activities will be limited to the down slope or west side of the canal ROW area, outside toe of

uphill embankment and already disturbed siphon areas except for identified contractor use areas directly adjoining the ROW. Three contractor use areas have been identified for areas adjoining the ROW and three are proposed on disturbed private property near the Project. A total of twenty-five (25) new siphons will be constructed directly down slope from the old siphon locations within already disturbed areas. Siphon Number 27 will not be replaced but bypassed with the refined Parallel Canal embankment also within the ROW. A total of six (6) new replacement check/control structures will be reconstructed upstream of new siphons 11, 14, 18, 23, 28, and 31 within the parallel canal prism.

The experimentally lined portion of the existing canal between siphons 14 and 15, with formed-in-place large animal escape ridges in the concrete lining, will be replaced with the new refined Parallel Canal within the already graded and disturbed ROW. The escape ridges have propagated significant, uncontrolled cracking and joint separation in the concrete lining. This condition threatens the integrity of the underlying water restrictive PVC lining membrane due to tears and cuts from concrete movement. Its long term functionality as a positive water barrier to restrict leakage is considered to be less than successful and would be very costly to fix or replace in the future. For this reason, formed-in-place large animal escape ridges will not be a part of the refined Parallel Canal design. However, a number of other mitigative options are being evaluated, which include but are not limited to: off canal wildlife guzzlers, wells with watering stations, fencing, and glue-on escape ridges.

The length of the refined Parallel Canal Alternative to be constructed will be about 35.1 miles, which includes the replaced 1.4 mile reach between siphons 14 and 15 and replaced siphons. The construction length of the original Parallel Canal Alternative was 32.5 miles without the siphon 14 to 15 reach. The extra length of the refined Parallel Canal is due to: the added length between siphons 14 and 15, replaced siphons, staying within the ROW, and not going cross-country, which has reduced overall acreage impacts.

Canal dimensions and side slopes of the refined Parallel Canal Alternative are essentially unchanged. Total direct construction disturbance for the original Parallel Canal Alternative was calculated at 873 acres, of which 460 acres were for cross-country reaches outside of the ROW or Reclamation lands. By keeping the refined Parallel Canal Alternative within the ROW and adjoining Reclamation lands the calculated area of direct disturbance is 275 acres. Approximately 5.6 million cubic yards of earth would be excavated for the refined Parallel Canal Alternative. This is about 4.3 million cubic yards less than the original Parallel Canal Alternative. This reduction in total excavated material and haul distances will permit a shorter construction period that will reduce air quality impacts for total PM-10 and NOx emissions.

A majority of the excavated material would be used for canal embankments, siphon protection, and other similar uses. Excavated material in excess of that needed for these and related purposes, would be deposited in: the operating canal, specific reaches where coarse fan gravel and bedrock is prevalent, on the uphill berm and road, stockpiled for placement in the vacated canal, or spread on other disturbed Project areas.

Section V. Basis for Decision

Paragraph 1, Sentences 1 and 2 are Amended to Read as Follows:

The decision to proceed with the project by implementing the refined Parallel Canal Alternative (Preferred Alternative) is based on an immediate need to conserve canal seepage. Conservation of water, wherever and whenever feasible, is one of several strategies proposed to assist the State of California in meeting the objectives of the QSA, and to provide conserved water to meet the Interim Surplus Guidelines, Benchmark Quantities of conserved water (for years 2006, 2009, and 2012) which will permit California to use surplus water, if available.

Paragraph 2, Sentence 2, Number 3 is Amended to Read as Follows:

(3) 21,500 af/yr to SDCWA for consumptive use and to assist California in meeting the other objectives of the QSA.

Section VIII. Status of Cultural Resources Consultation Pursuant to Section 106 of the National Historic Preservation Act

Paragraph 1, Sentence 1 is Amended to Read as Follows:

On March 15, 2002, Reclamation executed a Programmatic Agreement (PA) with the California State Historic Preservation Officer (SHPO) pursuant to 36 CFR 800.14(b) implementing Section 106 of the National Historic Preservation Act (NHPA).

Add New Paragraph 2 to Section as Follows:

On January 14, 2004, Reclamation executed a "First Amendment" to the PA which amended Stipulation I. B. **DESCRIPTION AND SCOPE OF THE UNDERTAKING** to identify construction of the refined Parallel Canal and associated activities as the new Undertaking. Stipulation XII. A. **FUNDING** was also amended to identify SDCWA involvement in funding agreements.

Section IX. Status of Consultation On Special Status Species Pursuant to Section 7 (a)(2) of the Endangered Species Act

Add New Paragraph 4 to Section as Follows:

By Memorandum dated March 30, 2004, Reclamation notified the Fish and Wildlife Service of a change of Preferred Alternative for the Coachella Canal Lining Project. Reclamation provided information and rationale for changing the Preferred Alternative from the Conventional Lining Alternative to the refined Parallel Canal Alternative. Direct disturbance for the refined Parallel Canal Alternative is the same as that for the Conventional Lining Alternative, and 69 percent less than the original Parallel Canal Alternative. Thus, the directly impacted acreage due to selection of a refined Parallel Canal Alternative as the new Preferred Alternative is not a significant change from that of the Conventional Lining Alternative previously consulted

on. Indirect impacts from the Project remain unchanged regardless of which lining alternative is selected. Reclamation determined that selection of the refined Parallel Canal Alternative as the new Preferred Alternative for the Project is within the lining project footprint, does not result in any new significant environmental effects, nor does it increase the severity of previously identified effects. Therefore, there would be no change in the findings of effect for the species previously consulted on.

Section X. Implementing The Decision

Project-Related Commitments

Paragraph 2 is Amended to Read as Follows:

Initially MWD was signatory to some of the Agreements associated with the Project. Pursuant to the signing of the QSA and revised Allocation Agreement, SDCWA assumed MWD's responsibilities and financial obligations for this Project. SDCWA will now be responsible for the agreement with CVWD and Reclamation for construction of the Project. Pursuant to the above agreements, CVWD would be responsible for planning, designing, and constructing the 35.1-mile Project. The Agreement among Reclamation, CVWD, and SDCWA for construction would grant Reclamation and SDCWA review and approval of CVWD design, and an opportunity to monitor Project construction. MWD will assist the parties as needed and as appropriate to facilitate a smooth and orderly transfer of MWD's role in this Project to SDCWA.

Environmental Commitments

Add New Paragraphs 9 and 10 to Section as Follows:

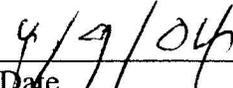
Reclamation prepared an Environmental Commitment Plan (ECP) for the Project dated March 4, 2003, for the Conventional Lining Alternative, the original Preferred Alternative. The ECP is a compilation of all environmental commitments for the Project. Reclamation has determined that selection of the refined Parallel Canal Alternative as the new Preferred Alternative for the Project is within the lining project footprint, does not result in any new significant environmental effects, nor does it increase the severity of previously identified effects. Indirect impacts remain the same regardless of which lining alternative is selected. Thus, the environmental commitments contained within the ECP are applicable to the new Preferred Alternative. The ECP will be amended to reflect selection of the new Preferred Alternative and any added, modified, or superceded environmental commitments.

Reclamation and/or CVWD shall obtain all necessary environmental permits prior to the issuance of a Notice To Proceed for construction. CVWD is responsible for planning, designing, and constructing the Project and will comply with all applicable Federal, state, and local regulations related to the environment.

II. Signatures

Approved By:


Robert W. Johnson, Regional Director
Lower Colorado Region


Date

III. Attachments

1. First Amendment to the Programmatic Agreement for the Coachella Canal Lining Project, Imperial and Riverside Counties, California (LC-CA-02-02 P) and transmittal letters.
2. Letter from Reclamation dated March 30, 2004, notifying the Fish and Wildlife Service of a change of Preferred Alternative for the Coachella Canal Lining Project, California (File No. FWS-RIV-71-939.3).



United States Department of the Interior

BUREAU OF RECLAMATION

Lower Colorado Regional Office

P.O. Box 61470

Boulder City, NV 89006-1470

JAN 13 2004

IN REPLY REFER TO:

LC-2631

ENV-3.00

CERTIFIED – RETURN RECEIPT REQUESTED

Dr. Knox Mellon
California State Historic Preservation Office
Attention: Mr. Hans Kreutzberg
P.O. Box 942896
Sacramento, CA 94296-0001

Subject: First Amendment to the Programmatic Agreement for the Coachella Canal Lining Project, Imperial and Riverside Counties, California (LC-CA-02-02 P)

Dear Dr. Mellon:

Enclosed for your signature are three copies of the "First Amendment to the Programmatic Agreement Among the United States Department of the Interior Bureau of Reclamation, the California State Historic Preservation Officer, and the Coachella Valley Water District Regarding the Construction of the Coachella Canal Lining Project Pursuant to Title II of Public Law 100-675." Ms. Lauren Perry, Reclamation Archaeologist, discussed this amendment through email with Mr. Hans Kreutzberg of your office. The amendment was signed by officials from Reclamation and the Coachella Valley Water District. Please sign all three copies, keep one for your files, and mail the other two signed copies back to Reclamation at the above address. Reclamation will file a copy of the amendment with the Advisory Council for Historic Preservation.

If you have any questions concerning this submission, please contact Ms. Perry by telephone at 702-293-8619, or by email at lperry@lc.usbr.gov.

Sincerely,

Deanna J. Miller, Director
Resources Management Office

Enclosures – 3

2001

Daily

WBR:LPerry:gf:01/09/04:293-8619

(Ust/COMM2000/COM2600/Laurie Perry:&CC Amendment to SHPO.doc)

**OFFICE OF HISTORIC PRESERVATION
DEPARTMENT OF PARKS AND RECREATION**



P.O. BOX 942896
SACRAMENTO, CA 94296-0001
(916) 653-6624 Fax: (916) 653-9824
calshpo@ohp.parks.ca.gov
www.ohp.parks.ca.gov

January 16, 2004

Reply: BUR 010521A

Deanna Miller, Director
Resources Management Office
Lower Colorado Regional Office
Bureau of Reclamation
P.O. Box 61470
Boulder City, Nevada 89006-1470
Atten: Ms. L. Perry

Re: "First Amendment to the Programmatic Agreement for the Coachella Canal Lining Project"

Dear Ms. Miller:

I have signed three copies of the subject document. In accordance with your request, two of these copies are enclosed for further processing by BUR.

If you have any questions about this matter, please contact Hans Kreutzberg of my staff.

Sincerely,

Dr. Knox Mellon
State Historic Preservation Officer

Enclosures (2)

MR OFFICIAL OFFICE COPY		
RECEIVED 1-23-04		
REPLY DATE		
DATE	INITIALS	CODE
1/27	DM	2000
1/28	DM	2620
		2600
CLASSIFICATION		
PROJECT		
CONTROL NO.		
FOLDER I.D.		
KEYWORD		



United States Department of the Interior

BUREAU OF RECLAMATION

Lower Colorado Regional Office

P.O. Box 61470

Boulder City, NV 89006-1470

FEB 14 2004

IN REPLY REFER TO:

LC-2631
ENV-3.00

CERTIFIED – RETURN RECEIPT REQUESTED

Mr. Don Klima, Director
Advisory Council on Historic Preservation
Western Office of Review
12136 Bayaud Avenue
Lakewood, CO 80228

Subject: Amendment to the Programmatic Agreement for the Construction of the
Coachella Canal Lining Project, Riverside and Imperial Counties, California
(LC-CA-02-02)

Dear Mr. Klima:

Enclosed for your records is a copy of the final signed First Amendment to the Programmatic Agreement between the Bureau of Reclamation (Reclamation), the California State Historic Preservation Officer, and the Coachella Valley Water District regarding the construction of the Coachella Canal Lining Project pursuant to Title II of Public Law 100-675. A copy of the original Programmatic Agreement was filed with your office on May 13, 2002. The Advisory Council declined to participate in the Programmatic Agreement in a letter to Reclamation, dated October 22, 2001.

If you have any questions regarding this document, please direct them to Reclamation Archaeologist, Ms. Lauren Perry, at 702-293-8619.

Sincerely,

Deanna J. Miller, Director
Resources Management Office

Enclosure

2001
Daily

WBR:L Perry:sdm:2/2/04:293-8619

(Usr\COMM2000\COM2600\Laurie Perry:&1st Amendment of PA to Council.doc)



Preserving America's Heritage

March 1, 2004

Deanne J. Miller
Bureau of Reclamation
P.O. Box 61470
Boulder City, NV 89006-1470

REF: *Coachella Canal Lining Project, Amendment to the Programmatic Agreement.*

The ACHP received from you an Agreement for the referenced project. In accordance with Section 800.6(b)(1) of the ACHP's regulations, "Protection of Historic Properties" (36 CFR Part 800), the ACHP acknowledges receipt of the Agreement, along with the supporting project documentation, executed by the BOR and the California Historic Preservation Officer.

The filing of this Agreement completes the requirements of Section 106 of the National Historic Preservation Act and the ACHP's regulations. Please provide copies of the signed Agreement to all consulting parties for their records.

If we can be of any additional assistance, please contact me (303) 969-5110, or by eMail at nkochan@achp.gov.

Sincerely,

Nancy Kochan

Nancy Kochan
Office Administrator/Technician
Western Office of Federal
Agency Programs

MR OFFICIAL OFFICE COPY		
RECEIVED 3/8/04		
REPLY DATE		
DATE	INITIALS	CODE
3/9	DK	2000
3/10	JK	2600
3/10/04	JK	2630
		2631
CLASSIFICATION		
PROJECT		
CONTROL NO.		
FOLDER I.D.		
KEYWORD		

ADVISORY COUNCIL ON HISTORIC PRESERVATION

12136 West Bayaud Avenue, Suite 330 • Lakewood, Colorado 80228
Phone: 303-969-5110 • Fax: 303-969-5115 • achp@achp.gov • www.achp.gov

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**FIRST AMENDMENT
TO THE
PROGRAMMATIC AGREEMENT
AMONG
THE UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION,
THE CALIFORNIA STATE HISTORIC PRESERVATION OFFICER,
AND THE COACHELLA VALLEY WATER DISTRICT**

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REGARDING

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**THE CONSTRUCTION OF
THE COACHELLA CANAL LINING PROJECT
PURSUANT TO TITLE II OF PUBLIC LAW 100-675**

16 WHEREAS, the United States Department of Interior Bureau of Reclamation
17 (Reclamation), the California State Historic Preservation Officer (SHPO), and the
18 Coachella Valley Water District (CVWD), executed a Programmatic Agreement
19 (Underlying PA), effective March 15, 2002, and filed with the Advisory Council on
20 Historic Preservation (ACHP) on May 13, 2002, regarding the Coachella Canal Lining
21 Project (Undertaking); and

22
23 WHEREAS, subsequent to execution of the Underlying PA, Reclamation and CVWD
24 have determined that owing to modifications in the design of the Undertaking and the
25 addition of a funding source, certain stipulations of the Underlying PA should be
26 amended to reflect said changes, and have consulted with the SHPO to amend the
27 Underlying PA in accordance with Stipulation XV. thereof;

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29 NOW, THEREFORE, Reclamation, CVWD, and the SHPO agree that the Underlying PA
30 shall be amended as follows:

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STIPULATIONS

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**A. STIPULATION I. B. OF THE UNDERLYING PA IS AMENDED TO READ
AS FOLLOWS:**

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I. DESCRIPTION AND SCOPE OF THE UNDERTAKING

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B. A parallel, concrete-lined canal will be constructed along the down slope side of the existing CC with tie-ins at Siphons 7 and 32. New replacement siphons will be constructed in the parallel canal at the same locations as the existing siphons to allow for drainage along existing washes. With the possible exception of sand and gravel quarry operations and material and equipment staging area, construction of the Undertaking, including, but not limited to, construction vehicles and heavy equipment traffic will be restricted to the CC itself and its

1 existing right-of way. This right-of-way varies between 360 and 610 feet in
2 width.
3

4 **B. STIPULATION XII. A. OF THE UNDERLYING PA IS AMENDED TO READ**
5 **AS FOLLOWS:**
6

7 **XII. FUNDING**
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9 **A. CVWD shall bear the expense of identification, evaluation, and treatment of**
10 **all historic properties directly or indirectly affected by the Undertaking, provided**
11 **that such expense is reimbursed to CVWD from MWD, in accordance with the**
12 **June 1, 2001 "Agreement for the Funding Coachella Canal Lining Project", No.**
13 **46400001474 between Metropolitan Water District of Southern California and the**
14 **California Department of Water Resources, and/or from the San Diego County**
15 **Water Authority. Such costs are: preparation of the Class I Literature Review,**
16 **Historic Context and Research Design report; preparation of the Coachella Canal**
17 **historic context; pre-field work planning; preparation of a Treatment Plan(s);**
18 **preparation of an Inadvertent Discovery Plan, if needed; inventory and data**
19 **recovery/treatment; post-field work analysis; research and report preparation;**
20 **report production; and costs associated with the curation of materials and data.**
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22 The signatories to the Underlying PA hereby acknowledge and reaffirm their
23 commitment to perform all duties previously set forth in that Underlying PA, and these
24 duties are incorporated by reference as if fully set forth herein.
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26
27 **EXECUTION OF THIS FIRST AMENDMENT TO THE UNDERLYING PA by**
28 **Reclamation, the SHPO, and the CVWD, its subsequent filing by Reclamation with the**
29 **ACHP, and implementation of its terms, evidences that Reclamation has afforded the**
30 **ACHP an opportunity to comment on the Undertaking and its effects upon historic**
31 **properties, and that Reclamation has taken into account the effects of the Undertaking on**
32 **historic properties.**

1 **SIGNATORY PARTIES:**

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3 U.S. DEPARTMENT OF INTERIOR, BUREAU OF RECLAMATION

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6
7 By: Loni Gray Date: JAN 06 2004

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10 Title: Assistant Regional Director

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14 CALIFORNIA STATE HISTORIC PRESERVATION OFFICER

15
16
17 By: Stephen S. Melrose Date: 1/14/04

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19
20
21 Title: DSHAO

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23
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25 COACHELLA VALLEY WATER DISTRICT

26
27
28 By: John R. Kelly Date: 1/8/04

29
30
31
32 Title: GENERAL MANAGER-CHIEF ENGINEER

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United States Department of the Interior

BUREAU OF RECLAMATION

Lower Colorado Regional Office

P.O. Box 61470

Boulder City, NV 89006-1470

IN REPLY REFER TO:

LC-2600

ENV-7.00

MAR 30 2004

Assistant Field Supervisor
Carlsbad Fish and Wildlife Office
Fish and Wildlife Service, Region 1
Attention: Ms. Carol Roberts
6010 Hidden Valley Road
Carlsbad, CA 92009

Subject: Notification of a Change of Preferred Alternative for the Coachella Canal Lining Project, California (File No. FWS-RIV-71-939.3)

Dear Assistant Field Supervisor:

On March 13, 2002, the Bureau of Reclamation (Reclamation) and the Fish and Wildlife Service (Service) concluded informal section 7 Endangered Species Act (ESA) consultation for the Coachella Canal Lining Project (Project), Riverside and Imperial Counties, California. Reclamation consulted on the Conventional Lining Alternative (Preferred Alternative) which was to line the existing canal in place using conventional construction methods and a pump-around method between siphons for dewatering the canal prism. Dividing the canal with sheet piling to allow work on one side at a time, to facilitate working in dry conditions, is a related option. This Preferred Alternative was approved in Reclamation's Record of Decision (ROD) dated March 27, 2002. This notification identifies a change in the Preferred Alternative from the Conventional Lining Alternative to a refined Parallel Canal Alternative for implementing the Project.

Selection of the Refined Parallel Canal Alternative

Reclamation has determined that selection of the refined Parallel Canal Alternative as the new Preferred Alternative for the Project is within the lining project footprint, does not result in any new significant environmental effects, nor does it increase the severity of previously identified effects. Therefore, there would be no change in the findings of effect for the species previously consulted upon, or the environmental commitments agreed to. However, there could be changes to some environmental commitments resulting from the acquisition of high quality mitigation lands or the incorporation of related Reclamation section 7 consultations on the Lower Colorado River (LCR) associated with this Project.

The Biological Opinion (BO) for Interim Surplus Criteria and Secretarial Implementation Agreements (AESO/SE 2-21-00-F-273, January 12, 2001), as an example, covers impacts related

to a change in point of diversion for up to 400,000 acre-feet of California apportionment waters, which includes the conserved water from the two canal lining projects and provides conservation measures for these actions. The original environmental commitments for effects on the LCR from the two canal lining projects would now need to be deleted from their project Environmental Commitment Plan (ECP) as they have been superseded by conservation measures in the above BO. The ECP for this Project will be amended to reflect selection of the new Preferred Alternative and any added, modified, or superseded environmental commitments.

Evaluation of the Existing Preferred Alternative for Constructability

Subsequent to signing the ROD, Reclamation, Coachella Valley Water District (CVWD), and California partners (CP) have been working with the design/construction management consultant (DCMC) charged with implementing the above Preferred Alternative. A number of critical issues have been identified that affect the implementation of this Preferred Alternative. Among the issues that make this alternative unacceptable are the following:

1. Field examination of the concrete condition of siphons and related control structures (all have been in service for over 60 years) determined they exhibited considerable deterioration, which affects their long-term reliability and integrity and should be replaced to allow long-term performance and reliability of continuous water delivery with a new lined canal.
2. The sheet-pile separation option would be too costly, would not be constructible in long reaches where there are coarse fan gravels and bedrock which precludes driving the sheet-pile, and would restrict full delivery of water orders to CVWD during the life of construction.
3. The pump-around pipeline option would require a considerable amount of earthwork, blading, and brushing over variable topography within and outside the right-of-way (ROW) in order to provide a relatively level lay-down area for the pipeline alignment between siphons. The estimated area of ground disturbance for these activities is 275 acres within and outside the ROW.
4. The pump-around pipeline and facilities must remain in service 24 hours a day, seven days a week for two and a half years. There is an unacceptable risk for water delivery outage and damage to Project facilities and potentially significant third-party damages (crops, roads, etc.) due to pump-around pipeline failure, pump breakdown, unanticipated desert storms resulting in flash floods, and construction related accidents.
5. For each of the twenty-six (26) existing siphons, there would be a water delivery outage of up to 5 days for isolation between reaches and reconnection during construction.

The DCMC compared the overall costs, as related to construction complexity, duration, and potential ground disturbance between the Preferred Alternative and a refined Parallel Canal Alternative. Taking all factors into account, the DCMC strongly recommended changing the Preferred Alternative to the refined Parallel Canal Alternative. After full review of the DCMC analysis and the associated recommendations, Reclamation, CVWD, and the CP fully concurred

that the new Preferred Alternative for implementing the Project would be the refined Parallel Canal Alternative.

The Refined Parallel Canal Alternative (New Preferred Alternative)

A Parallel Canal Alternative was analyzed in the Final Environmental Impact Statement/ Environmental Impact Report (FEIS/EIR) for the Project, dated April 2001, and also identified in the ROD. Total direct ground disturbance for the original Parallel Canal Alternative was calculated at 873 acres, and the refined Parallel Canal Alternative at 275 acres. Total acres of direct ground disturbance for the Conventional Lining Alternative (original Preferred Alternative) with the pump-around pipeline and sheet pile option is calculated to be 275 acres. Disturbance for the refined Parallel Canal Alternative would be the same as the original Preferred Alternative. Therefore, the directly impacted acreage due to construction of a refined Parallel Canal Alternative is not a significant change from that of the original Preferred Alternative previously consulted on. Indirect impacts from the Project remain unchanged regardless of which lining alternative is selected. The loss of mature trees within directly impacted acreage is mitigated by Mitigation Measure Number 18 in the enclosed Environmental Commitment Plan (ECP).

The refined Parallel Canal Alternative differs in positive ways from that described in the FEIS/EIR. The positive changes that reduce impacts as well as promote cost efficiency and long term Project reliability are as follows:

1. Construction of the refined Parallel Canal will be confined within the down slope or west side of the canal ROW with no cross-country reaches. Center line from the existing canal to the refined Parallel Canal will vary between 95 to 110 feet within the existing down slope or west side of the canal ROW.
2. Associated construction activities will be limited to the down slope or west side of the canal ROW area, outside toe of the uphill embankment, and already disturbed siphon areas except for identified contractor use areas directly adjoining the ROW.
3. A total of twenty-five (25) new siphons will be constructed directly down slope from the old siphon locations within already disturbed areas. Siphon Number 27 will not be replaced but bypassed with the refined Parallel Canal embankment within the ROW.
4. A total of six (6) new check/control structures will be constructed upstream of new siphons 11, 14, 18, 23, 28 and 31 within the parallel canal prism.
5. The experimentally-lined portion of the existing canal between siphons 14 and 15, with formed-in-place large animal escape ridges in the concrete lining, will be replaced with the new refined Parallel Canal within the already graded and disturbed ROW. The escape ridges have propagated significant, uncontrolled cracking and joint separation in the concrete lining. This condition threatens the integrity of the underlying water restrictive PVC lining membrane due to tears and cuts from concrete movement. Its long term functionality as a positive water barrier to restrict leakage is considered to be less than successful and would be extremely costly to fix or replace in the future. Formed-in-place large animal escape ridges

will not be a part of the refined Parallel Canal design. However, a number of other mitigative options are being evaluated.

6. The total length of refined Parallel Canal construction will be about 35.1 miles, which includes the 1.4 mile reach between siphons 14 and 15, and replaced siphons as compared to 33.2 miles for the original Parallel Canal Lining Alternative. The extra length is due to the above, staying in the ROW, and not going cross-country which has reduced overall acreage impacts.
7. The refined Parallel Canal dimensions are as follows: water depth of 11 feet; bottom width of 16 feet; water width of 49 feet; and side slopes of 1.5 to 1. Only the water width has changed.

Status of Desert Tortoise Surveys for the Project

Reclamation agreed to undertake additional desert tortoise surveys and provide the Service with results of this work. In satisfaction of this commitment, we are pleased to provide the enclosed document, "Baseline Information Summary Report for the Desert Tortoise, Coachella Canal Lining Project," completed on October 20, 2003, which includes Project footprint areas described herein, as well as those identified by the Service for inventory. This survey data, in support of Environmental Commitment Number 22, further confirms Reclamation's finding of "... is not likely to adversely affect ..." for the desert tortoise (*Gopherus agassizii*).

Reclamation agreed to implement exclusionary fencing where canal berms are inadequate to function as a desert tortoise barrier or are not present as a condition of our informal consultation with the Service. Taken together, this survey data, exclusionary fencing, and the other avoidance measures would continue to reduce the likelihood of take of desert tortoise to a discountable level. The exclusionary fencing commitment was inadvertently omitted from the ECP but will be added by amendment.

Reclamation, CVWD, and the CP are implementing a number of mitigation measures prior to construction, so that other measures can be completed concurrent with the Project. Reclamation will continue to coordinate with the Service and other agencies as the Project progresses.

Please contact Mr. James Green, Environmental Compliance Group Manager, at 702-293-8519 if you have any questions.

Sincerely,



Robert W. Johnson
Regional Director

Enclosures - 2

cc: Mr. Steve Robbins, General Manager-Chief Engineer, Coachella Valley Water District,
Attention: Mr. Dan Farris, Project Manager, P.O. Box 1058, Coachella, CA 92236
Ms. Maureen Stapleton, General Manager, San Diego County Water Authority,
Attention: Mr. Dave Fogerson, 4677 Overland Avenue, San Diego, CA 92123-1233
Mr. Dennis Underwood, Executive Assistant to the General Manager, The Metropolitan
Water District of Southern California, Attention: Messrs Tom Ryan and Kirk Dimmitt,
P.O. Box 54153, Los Angeles, CA 90054-0153
Ms. Linda S. Adams, Interim Director, California Department of Water Resources,
1416 9th Street, 11th Floor, Sacramento, CA 95814
Mr. Charles F. Keene, Chief, Water Management Branch, Southern District,
California Department of Water Resources, 770 Fairmont Avenue, Glendale, CA 91203
(w/o encls to ea)

bc: YAO-1000, YAO-1100, YAO-2000, YAO-6030, YAO-7000, YAO-7200
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