



SOUTH FEATHER WATER & POWER AGENCY

TO: Board of Directors

FROM: Michael Glaze, General Manager
Alex Brown, Regulatory Compliance Manager

DATE: April 21, 2010

RE: Structural Stability Analysis – Slate Creek Diversion Dam
4/27/10 Board of Directors Meeting

Under the Federal Energy Regulatory Commission's (FERC) dam safety program, annual dam safety operations inspections of the dams of SFWPA, including Slate Creek Diversion Dam (SCDD), are performed. These inspections result in recommendations to improve the understanding of factors that might affect performance of the dams. Based on the 2009 dam safety and operations inspections, FERC recommended that the structural stability of SCDD be evaluated for loading appropriate to the current sediment accumulation against the dam.

SCDD is operated by SFWPA to divert water from the Slate Creek watershed (Yuba River basin) to Sly Creek Reservoir (Feather River basin) for hydropower generation purposes. Much of SCDD impoundment is filled with cobble, gravel, sand, and silt. The high rate of sedimentation is related to past hydraulic mining in the upstream source area. Delivery of material from upstream hydraulic mine sites and aggraded channel reaches to the SCDD impoundment was exacerbated in the 1950's by the breaching of the St. Louis Debris Dam, located approximately one mile upstream of SCDD on Forest Service-owned land. Sediment pass-through events have been attempted in 2002, 2003, 2004, 2005, and just recently as discussed in Kathy Zancanella's staff report, earlier on this agenda. Most of these events were unsuccessful at moving any significant amount of sediment due to hydraulic conditions at the dam. The build-up of sediment and the upstream face places a potentially higher-than-desirable structural load on SCDD.

A Request for Proposal (RFP, copy attached) was delivered to several firms that routinely perform structural analysis of dams. Work tasks include determination of original structural loading capacity of SCDD, field investigations, structural stability analysis, and the preparation of a report of findings for review by SFWPA and to be filed with FERC.

The two firms responding are both well-qualified to provide the requested analysis: Mead & Hunt Inc., and Kleinschmidt Associates. Because both firms responded appropriately to the RFP and have offices nationwide with more than adequate expertise and resources, the recommendation is that the proposal from Mead & Hunt be accepted, given that it contained the lower estimated project cost of \$49,900. Kleinschmidt's estimate was \$82,500.

Recommended action:

"I move authorization for the General Manager to execute a standard consulting services agreement with Mead & Hunt Inc. to provide structural stability analysis services for Slate Creek Diversion Dam, in conformance with the project RFP."

REQUEST FOR PROPOSALS
FOR THE PROVISION OF
STRUCTURAL STABILITY ANALYSIS SERVICES
FOR
SOUTH FEATHER WATER AND POWER AGENCY'S
SLATE CREEK DIVERSION DAM



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1 SECTION 1 – INTRODUCTION

1.1 Project Summary

South Feather Water and Power Agency (SFWPA or Agency) is seeking structural stability analysis of Slate Creek Diversion Dam (SCDD), a reinforced concrete arch dam subject sediment and gravel loading. SCDD is associated with components of the South Feather Power Project (FERC No. 2088).

1.2 Objectives

Under the Federal Energy Regulatory Commission's (FERC) dam safety program, annual dam safety operations inspections of the dams of SFWPA, including SCDD, are performed. These inspections result in recommendations to improve the understanding of factors that might affect performance of the dams. Based on the 2009 dam safety and operations inspections the FERC recommended that the structural stability of SCDD be evaluated for loading appropriate to the current sedimentation.

The Agency seeks a consultant who has the knowledge and experience to complete the recommended investigation and analysis, and who will complete the work by March 15th, 2011.

1.3 Background

The SCDD is operated by SFWPA to divert water from the Slate Creek Watershed (Yuba River Basin) to Sly Creek Reservoir (Feather River Basin) for hydropower production purposes. Much of SCDD impoundment is filled with cobble, gravel, sand, and silt. The high rate of sedimentation is related to past hydraulic mining in the upstream source area. Delivery of material from upstream hydraulic mine site and aggraded channel reaches to the SCDD impoundment was exacerbated in the 1950's by the breaching of the St. Louis Debris Dam, located approximately one mile upstream of SCDD on United States-owned land administered by the United States Forest Service. Sediment pass-through events have been attempted in 2002, 2003, 2004 and 2005. Most of these events were unsuccessful at moving any significant amount of sediment due to hydraulic conditions at the dam. The build-up of sediment and the upstream face places a potentially higher than desirable structural load on the SCDD.



SECTION 2 – SCOPE OF SERVICES

2.1 General

The requested services include completing the determination of current sedimentary loading on SCDD and associated structural stability analysis and reporting, as outlined in Section 2.2.

2.2 Work Tasks

The work tasks listed below are estimates of the tasks that will comprise the total scope of work. No inference is intended that the Consultant's services are to be limited to these tasks if other tasks are required to complete the Project. Respondents are encouraged to submit their best thinking relative to work scope and specific tasks as required to provide SFWPA the best end product.

- 2.2.1 Conduct a review of original design and construction documents to determine original structural loading capacity of SCDD.
- 2.2.2 Complete field investigations of the sedimentation, behind upstream face of dam, associated with loading, as needed to perform structural stability analysis.
- 2.2.3 Conduct structural stability analysis of dam based on given loading conditions found in work task 2.2.2 using a standard and well accepted methodology, and utilizing available computer software as needed.
- 2.2.4 Prepare preliminary report of findings for review by SFWPA.
- 2.2.5 Prepare final report of findings for review by FERC with changes based on SFWPA review.
- 2.2.6 Respond to comments and/or additional requests for information by the FERC.

SECTION 3 – CONTENTS OF PROPOSAL

3.1 General

Firms or individuals that are interested in providing professional services for the tasks described above are to submit a proposal that should contain, at a minimum, sufficient information for an objective evaluation of the criteria described in Section 5.1. Respondents will describe their qualifications in terms of experience and performance on similar projects within the past five years. In addition to other information the applicant may want to include, the response to this RFP shall include the following information:

- 3.1.1 Identification of the Project Leader. Please be specific about training and professional experience. A resume and references should be provided.

- 3.1.2 A description of the proposed work plan and schedule for completing the tasks identified in Section 2.2.
- 3.1.3 A description of methodology used to collect and analyze sedimentation, hydrologic, geotechnical or other pertinent data to complete the tasks identified in Section 2.2.2.
- 3.1.4 A description of methodology used to analyze structural stability, including associated computer software packages to complete the tasks identified in Section 2.2.3.
- 3.1.5 A schedule of billing rates and an estimated not-to-exceed cost of the investigations, excluding subsequent analyses of the dams that may result from Task 2.2.5.
- 3.1.6 Contact information, including mailing address, telephone number, and the individual with whom to communicate if further information is needed.
- 3.1.7 Exceptions, if any, to the Non-Disclosure Agreement and/or standard form Consulting Services Agreement, attached per Section 6 below.

SECTION 4 – PROPOSAL SUBMITTAL REQUIREMENTS

4.1 Responses

Responses shall be mailed or hand delivered to:
South Feather Water and Power Agency
2310 Oro-Quincy Highway
Oroville, CA 95966

4.2 Deadline

Two (2) copies of the response must be received (mailed or hand delivered) no later than 4:00 pm on Thursday, April 26, 2010 to be eligible for consideration. The documents shall be sealed in an envelope or box and clearly marked "Response to Request for Proposals for the Structural Stability Analysis of Slate Creek Diversion Dam."

SECTION 5 – PROPOSAL CLARIFICATION, SELECTION AND RIGHTS

5.1 Selection Criteria

Responses will be evaluated in terms of qualifications, experience, proposed work plan, cost estimate and billing rates.

5.2 Selection Procedure

A review of responses will be made by SFWPA's Power Division Manager and Regulatory Compliance Manager. Recommendations will be forwarded to the General Manager for approval to negotiate a

contract. If an agreement cannot be negotiated that is acceptable, the Power Division Manager will commence negotiations with the next best-qualified respondent, and so on.

The negotiated contract will be submitted to the Board of Directors for approval.

5.3 No Reimbursement

SFWPA will not reimburse the respondents to this request for any costs involved with the preparation and submission of proposals, or for preparation for or travel to facilities prior to award of contract.

5.4 Reserved Rights

This Request for Proposals does not obligate SFWPA to contract for any services expressed or implied.

SFWPA reserves the right to:

- 5.4.1 Request any firm submitting a proposal to clarify its proposal;
- 5.4.2 Modify or alter any of the requirements herein (In the event of such modification, all respondents will be given an equal opportunity to modify their proposals in the specific areas impacted);
- 5.4.3 Reject any or all proposals, waive immaterial irregularities in any proposal and reissue this or a modified RFP; and,
- 5.4.4 Negotiate a contract with the selected firm.

6.0 ADDITIONAL INFORMATION

To arrange a visit to the project locations, please contact Kathy Zancanella, Power Division Manager, at (530) 534-1221, ext. 202 or via email at Kzancanella@southfeather.com. Please note that Slate Creek Diversion Dam may not be accessible for a visit prior to the submittal of a response if snow accumulation results in a road closure. The selected consultant may access the dam after award of contract via an Agency-operated snow-traversing vehicle.

Because the drawings and technical documents related to the dams and appurtenant facilities are considered Critical Energy Infrastructure Information, the selected consultant must sign a Non-Disclosure Agreement prior to receipt of this information. The Non-Disclosure Agreement is attached to this Request for Proposals.

A standard form Consulting Services Agreement is also attached to this Request for Proposals. Any exceptions or proposed changes to the Consulting Services Agreement and/or the Non-Disclosure Agreement must be disclosed with the submittal of the response.