



# STAFF REPORT

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**Meeting Type:** Board of Directors  
**Title:** Spillway Modifications Alternatives Selection and Design  
**From:** Alex Anaya, Director of Engineering  
**Through:** Ben Horenstein, General Manager  
**Meeting Date:** July 2, 2024

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**TYPE OF ACTION:**      X      Action                              Information                              Review and Refer

**RECOMMENDATION:** Authorize the General Manager to finalize and execute a professional services agreement with Black and Veatch in the amount of \$1,944,669 with a staff requested contingency of \$300,000, for a total not to exceed amount of \$2,244,669, for the Spillway Modifications Alternatives Selection and Design Project

**SUMMARY:** The Spillway Modifications Alternatives Selection and Design Project includes work to analyze/design spillway modification alternatives at Seeger (Nicasio), Soulajule, Peters (Kent), and Alpine dams. Based on their subject matter expertise, familiarity with the District's system, and attention to detail, District staff recommends the District select Black and Veatch to proceed with the Spillway Modifications Alternatives Selection and Design.

**DISCUSSION:** This item was previously presented at the Operations Committee on June 21, 2024. At the April 30, 2024 Board of Directors Meeting, in order to expeditiously explore the Nicasio spillway raise and analyze three other spillways, the Board directed staff to spin-off the Spillway Modifications projects that were identified through the ongoing Local Storage project work into a separate, focused effort.

While individual spillway modifications cannot satisfy the ultimate goal of providing substantial additional local storage on their own, modifications to the District's spillways could provide additional storage and could likely be constructed relatively quickly. It is estimated that the addition of permanent gates on the Nicasio spillway may provide upwards of 3,000 acre-feet of additional storage, at a very reasonable cost, making this project quite attractive relative to other water supply enhancement alternatives.

The Spillway Modifications Alternatives Selection and Design contract will evaluate alternatives for spillway modifications at four of the District's dams: Alpine, Peters (Kent), Seeger (Nicasio), and Soulajule. In particular, Nicasio dam is different from the other three dams in this category because

potential spillway gates were considered in the original design of the dam and spillway. As such, this contract also includes engineering design services for the selected spillway modification alternative at Seeger Dam.

Other ongoing District work will feed in to the spillway modifications alternatives analysis. Staff is in the early stages of a Spillway Capacity Assessment which will provide the underlying hydrologic and hydraulic modeling results needed as a baseline of information to support the alternatives analysis of the potential spillway modifications. Additionally, since 2017, District staff has been progressing on spillway condition assessments, in accordance with the Division of Safety of Dams (DSOD) directives, at Peters (Kent), Seeger (Nicasio), and Soulajule spillways. These assessments will also provide useful information for any spillway modifications proposed at these sites.

The District is proposing to contract with Black and Veatch, with a project team that has over 40 years of experience in the design and construction of major water supply projects with a focus on dam spillways and outlet works. The scope of work includes (i) hydrologic and hydraulic analyses that builds upon work performed as part of the Spillway Capacity Assessment, (ii) alternatives analysis and project optimization of spillway modifications at the four dams, (iii) spillway modification design at Seeger (Nicasio) dam, (iv) DSOD coordination, and (v) grant funding support.

The proposal submitted by Black and Veatch provides a comprehensive approach based on their subject matter expertise, attention to detail, familiarity with the District’s system and recent work on the Spillway Capacity Assessment. District staff recommends the District select Black and Veatch to proceed with the Spillway Modifications Alternatives Selection and Design.

**Budget:**

Professional Services Agreement: \$1,944,669

Contingency (15%): \$300,000

Total Budget: \$2,244,669

Budget Category: A1A05

The alternatives analysis and design is scheduled to be completed in December 2025.

**ENVIRONMENTAL REVIEW:** Not Applicable, as this work will be preliminary to any project approval and associated environmental review and analysis.

**FISCAL IMPACT:** The Spillway Modifications Alternatives Selection and Design is funded in the Fiscal Year 2024/2025 Adopted Capital Budget and is in the five year Capital Improvement Plan. As shown in the table below, the total cost for the agreement with Black and Veatch is \$1,944,669 with a staff requested contingency of \$300,000 for a total not to exceed amount of \$2,244,669.

<b>Task Description</b>	<b>Budget</b>
<b>Task 0</b> – Project Management and Coordination: This task includes project management activities including day-to-day administration, progress meetings, and technical reviews throughout the duration of the contract.	\$246,962
<b>Task 1</b> – Data Gathering: This task includes collection and review of hydrologic data, DSOD inspection reports, and hydraulic structures drawings. This task also includes a visit to DSOD’s office to review relevant records and a site visit to the four dam sites.	\$79,151

<b>Task 2</b> – Hydrologic and Hydraulic Analyses: This task will utilize the hydrologic and hydraulic modeling being performed as part of the Spillway Capacity Assessment to inform the evaluation of the spillway modification alternatives. The analysis will be conducted for up to two proposed spillway modification alternatives for each of the four dams. There will be an evaluation of the upstream and downstream impacts as well as a yield study.	\$212,660
<b>Task 3</b> – Alternatives Analyses & Project Prioritization: This task includes an assessment and recommendation of a spillway modification alternative for each of the four spillways and a relative ranking of SoulaJule, Kent, and Alpine to allow the District to prioritize and potentially schedule those future improvements.	\$507,962
<b>Task 4</b> – Spillway Modification Design – Seeger (Nicasio) Dam: This task includes engineering design services for modifications to the spillway at Seeger Dam suitable for bidding and construction. This includes 50%, 90%, and 100% design documents.	\$725,355
<b>Task 5 (OPTIONAL)</b> – Spillway Modification Design – SoulaJule, Kent, & Alpine: This task engineering design services for modifications to the spillways at SoulaJule, Kent, and Alpine dams suitable for bidding and construction. This includes 50%, 90%, and 100% design documents for each project site.	\$0
<b>Task 6</b> – DSOD Coordination: This task includes communication and coordination with DSOD throughout the Project.	\$111,277
<b>Task 7</b> – Grant Funding Support: This task includes support for grant identification and application package development.	\$61,302
<b>Professional Services Agreement Total</b>	<b>\$1,944,669</b>
<b>Contingency (15%)</b>	<b>\$300,000</b>
<b>Total Authorized Amount</b>	<b>\$2,244,669</b>

Staff is requesting the Board authorize the General Manager to execute a professional services agreement with Black and Veatch in the amount of \$1,944,669 with a staff requested contingency amount of \$300,000, for a total not to exceed of \$2,244,669, for the Spillway Modifications Alternatives Selection and Design Project.

**ATTACHMENT(S):** None.

DEPARTMENT OR DIVISION	DIVISION MANAGER	APPROVED
Engineering	 Alex Anaya Engineering Director	 Ben Horenstein General Manager