

# Staff Report

**TO:** Board of Directors

**FROM:** Keane Sommers, P.E., Hydroelectric Manager  
Lacy Cannon, Assistant Engineer

**DATE:** July 28, 2021

**SUBJECT:** Texas Creek Flume Spillway Footing Foundation Protection  
(FATR #2525)

---

---

## ***HYDROELECTRIC DEPARTMENT***

### **RECOMMENDATION:**

Award a construction contract with Glissman Excavation in the amount of \$168,821.00, approve the associated budget amendment, and authorize the General Manager to execute the appropriate documents.

### **BACKGROUND:**

The Texas Creek Flume is a 65-foot-long reinforced concrete structure bridging the head of a steep ravine between Tunnel No. 5 (upstream) and the Texas Creek Tunnel (downstream). The downslope flume wall has a 2.5-foot-tall by 45-foot-wide opening at the top which serves as a side-spillway to release excess water. It is located on the Bowman-Spaulding Conduit as part of the Yuba-Bear Hydroelectric Project. This project is under the jurisdiction of the Federal Energy Regulatory Commission (FERC) and subject to their regulatory requirements, review, and approval.

During a regular inspection of the waterway in 2020, it was discovered that the bedrock under the shotcrete covering adjacent to the footing foundation had been eroded, likely due to water spilling from the flume. The column supporting the flume and its footing appears to be stable, but the bedrock directly below the footing foundation is heavily jointed and subject to further erosion if it is not protected from future erosion.

The Texas Creek Flume Spillway Footing Foundation Protection Project (Project) consists of a staged approach to protect the footing foundation bedrock and to protect the downstream slope from erosion as described below.

Stage 1 – Footing Foundation Bedrock Protection

Protect the heavily jointed bedrock by securing it in place with a 4-inch-thick shotcrete application over welded wire fabric anchored into the existing voids. Subdrain strips will be installed under the shotcrete in Stage 1.

Stage 2 – Ground Apron Protection against Erosion

Protect the downstream area from further erosion from the spilling water by constructing a reinforced, 6-inch-thick shotcrete slab with grouted anchors into the bedrock. Subdrain strips will be installed under the shotcrete in Stage 2.

The Request for Quotes was sent out to 17 general contractors on June 11, 2021. Four of the general contractors participated in the mandatory job walk on July 13, 2021. The District received quotes from 4 contractors on July 20, 2021. The submitted quotes are shown below.

<b>Contractor</b>	<b>Quote</b>
Glissman Excavation	\$168,821
Hansen Brothers	\$188,703
Syblon Reid	\$293,000
Sierra Mountain Construction	\$460,000

Staff recommends awarding a construction contract in the amount of \$168,821.00 to Glissman Excavation.

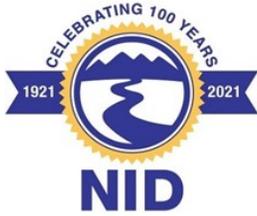
**BUDGETARY IMPACT:**

This work was not included in the 2021 budget, as it was discovered after the budget had been approved. Staff believes it is important to construct these repairs this year, prior to the next rainy season and recommends transferring \$185,000.00, which includes the contract amount plus a 10% contingency, from the Dutch Flat #2 Powerhouse Fire Suppression System Upgrade Project (FATR #2240) to cover the cost of this project. A total of \$250,000 was included in the 2021 budget for the Dutch Flat #2 Fire Suppression System Upgrade Project. The remaining project funds will be used to design the project this year and funding for construction will be budgeted in 2022.

KSS  
LJC

Attachments: (2)

- Budget Amendment Form
- Powerpoint Presentation for the July 28, 2021 Board Meeting



## NEVADA IRRIGATION DISTRICT BUDGET AMENDMENT FORM

Budget  
Amendment #

BA 2021 - 180

Date: 7/20/2021  
 To: Jennifer Hanson, General Manager  
 From: Department Manager(s) KEANE SOMMERS

Initial DS  
KS

**Budget Increase: Accounts being increased. Enter positive number.**

Department	Object / Account	Amount Increase
50112 Hydro Administration	52920 Program: Powerhouse Impr	(185,000)
50112 Hydro Administration	52923 Program: Upper Division Wtrwy	185,000

**Budget Decrease: Accounts being decreased. Enter negative number.**

Department	Object / Account	Amount (Decrease)

**Reserve Impact: Increase = Positive, Decrease = Negative.**

Division Funding	Funding Account	Increase/(Decrease)

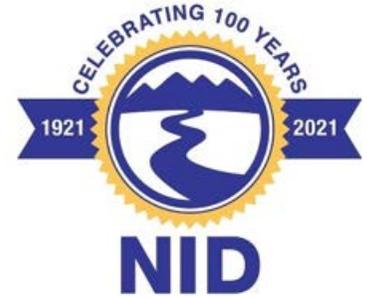
**Explanation: Enter narrative explaining reason for amendment.**

The Texas Creek Flume Repair Project #2525 was not budgeted for 2021. It developed out of a routine facility inspection when the damage was identified. \$185,000 from FATR# 2240, DFPH Fire Suppression System Upgrade Project will be transferred to FATR#2525 TXCRK Flume Repair Project.

**APPROVALS:**

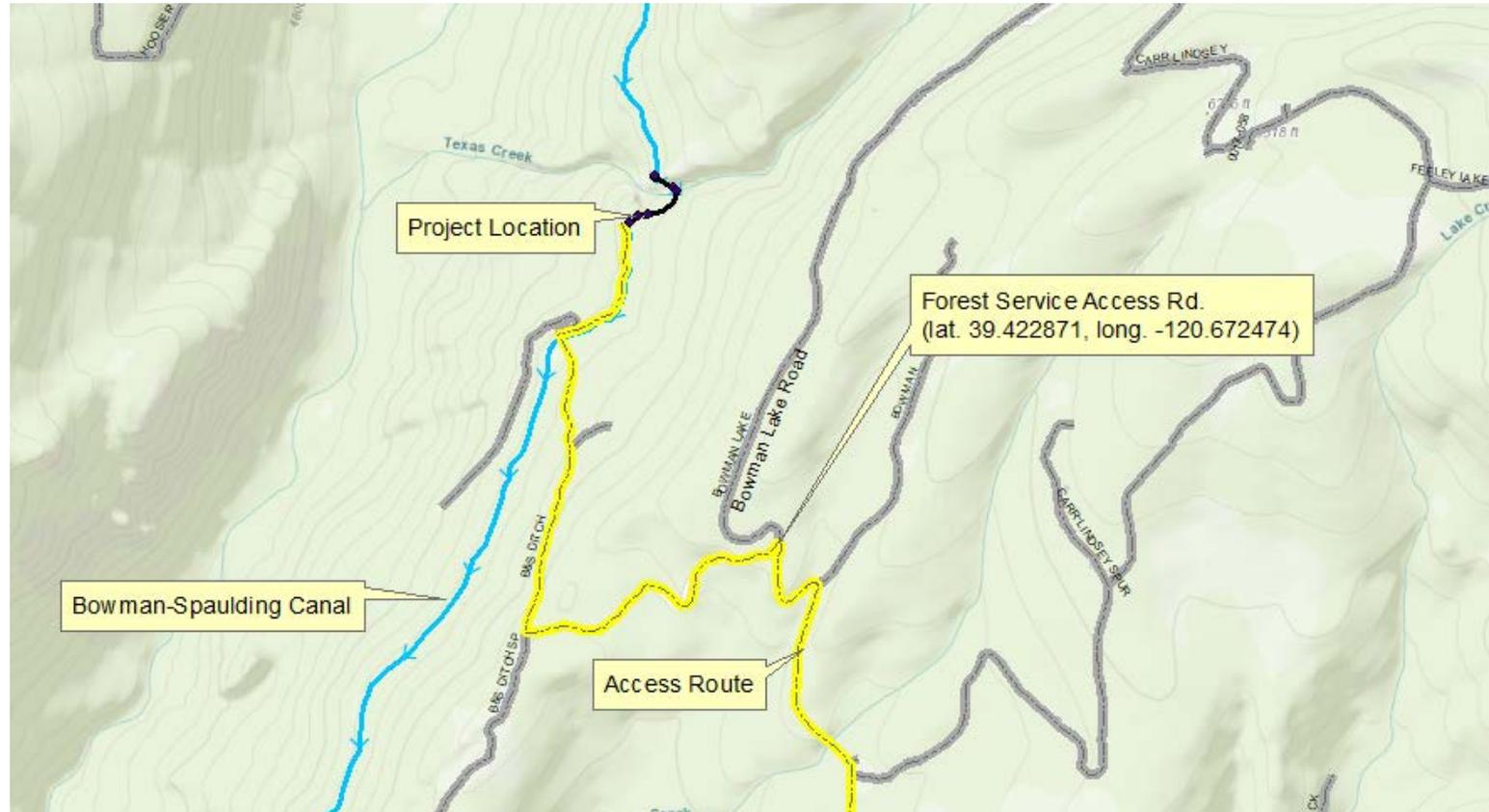
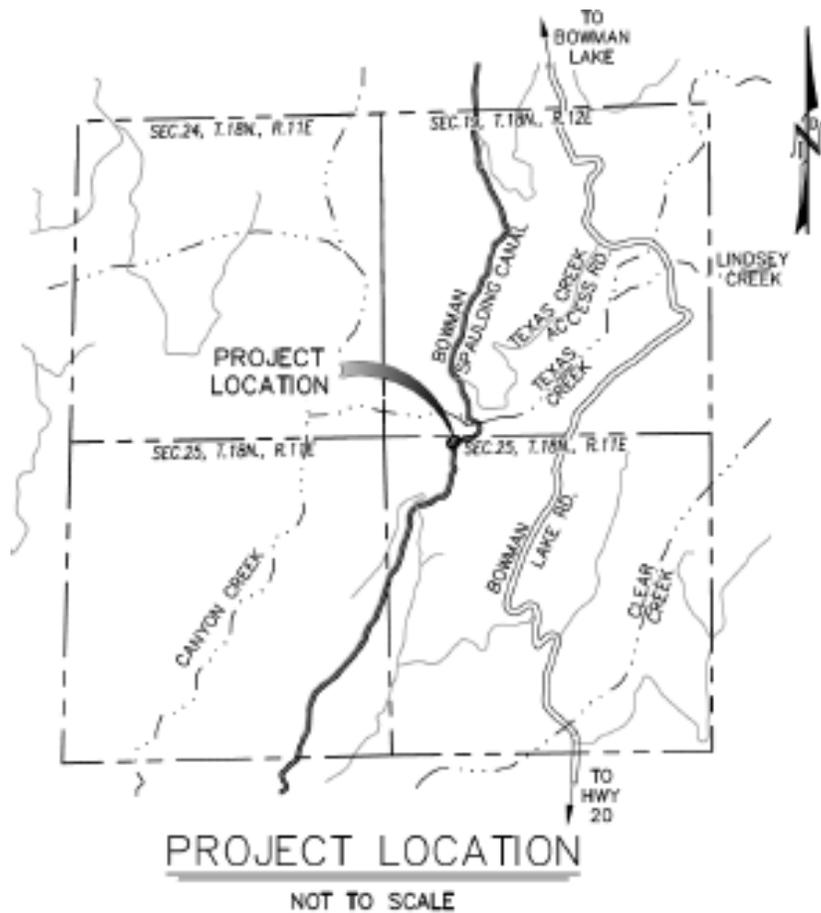
	<u>Date</u>	<u>Signature</u>	<u>AGM/FM Signature</u>	<u>Approved/Denied</u>
Level I:				
Level II:				
Level III:				

# Texas Creek Flume Spillway Footing Foundation Protection Project (FATR #2525)



Presented to the Board of Directors  
July 28, 2021

# Texas Creek Flume Spillway



Located on the Bowman-Spaulding Conduit between Tunnel No. 5 and the Texas Creek Tunnel

# Texas Creek Flume Spillway and Footing



Flume Spillway



Footing

# Texas Creek Flume Spillway and Footing



Fractured Bedrock under Footing



Bedrock Erosion

# 2-Stage Construction

1. Shotcrete encasement protection of the fractured bedrock foundation under the flume footing
2. Reinforced shotcrete protection of the ground against spilling erosion

# Request for Quote (RFQ)

- RFQ sent to 17 contractors on June 11, 2021
- Four contractors participated in the mandatory job walk on July 13, 2021
- Four quotes were received on July 20, 2021

# Quotes Received (7/20/2021)

<b>Contractor</b>	<b>Amount</b>
Glissman Excavation	\$168,821
Hansen Brothers	\$188,703
Syblon Reid	\$293,000
Sierra Mountain Construction	\$460,000

# Budget Amendment

- Repairs scoped following 2021 budget approval cycle
- Reduce budget available Dutch Flat #2 Fire Suppression System Upgrade
- Allows for design of fire suppression system in 2021 with construction in 2022

# Recommendation

- Approve a contract in the amount of \$168,821 with Glissman Excavation for the construction of foundation protection at the Texas Creek Flume Spillway on the Bowman-Spaulling Conduit
- Approve the associated budget amendment
- Authorize the General Manager to execute the necessary documents

# Questions

