

Watershed Forum Proposal
Plumas County Flood Control & Conservation District

1. **Project Name:** Taylorsville Mill Race Farmers' Dam (Spillway) Resurfacing and Renovation (Purpose: Increase Efficiency and Address Long-term Infrastructure Needs for Irrigation, Flood Control, Groundwater Recharge, Fire Suppression and Environmental Objectives)
2. **County:** Plumas
3. **Project Number:**
4. **Project Sponsor:** Taylorsville Mill Race Group – Brian Kingdon, President; Holly Foster, Member
5. **Date:** 08-03-2023
6. **Sponsor's Phone Number:** Brian Kingdon (530) 228-7449; Holly Foster (530) 570-0757
7. **Applicant Capability:** The Taylorsville Mill Race Group members represent decades of successful land and water management, and have successfully overseen the maintenance and improvement of the Farmers' Dam and associated water diversion infrastructure since its establishment. This work has been done in collaboration with Department of Water Resource (DWR) Watermaster personnel. Additional technical expertise is provided by University of California Cooperative Extension personnel (UCCE) and the Ranchers Technical Assistance Program (RTAP). Services of a licensed contractor will be utilized to complete this project.
8. **Sponsor E-mail:** Brian Kingdon bskingdon@gmail.com; Holly Foster holly@robertfosterranch.com

9. Project Location:

Taylorsville Mill Race Farmers' Dam (40° 03' 51 N; 120° 49' 47 W) and associated ditch system.



Project Name: Taylorsville Mill Race Farmers' Dam Resurfacing and Renovation (Purpose: Increase Efficiency and Address Long-term Infrastructure Needs for Irrigation, Flood Control, Fire Suppression and Environmental Concerns)

Project Boundary: Includes dam structure and culverts located at (40° 03' 51 N; 120° 49' 47 W)

Stream Names: Indian Creek

Street Names/Road Numbers: Bounded by Arlington Road, Mill Race Road and Genesee Road – Taylorsville, CA

9a. National Forest: This project is adjacent to the Plumas National Forest

9b. Forest Service District: Mt. Hough Ranger District

9c. Other Lands Involved: The project encompasses work on private parcels where the Taylorsville Mill Race Group has an established easement.

9d. Legal Location: Township, Range and Section. T.26N, R.10E, Section 35

10. Justification, Goals and Objectives:

This project is being initiated to ensure the long-term viability of the Taylorsville Mill Race Farmers' Dam (Indian Creek Decree No. 4185 diversion structure). If not updated to improve current integrity, the loss of this structure would be extremely detrimental to the community of Taylorsville, CA and the downstream landscape of Indian Valley. The purpose of this project will be to resurface the existing dam structure to prevent erosion, support streambank stability, and create increased efficiency; replace existing dam components with more resilient materials to minimize future maintenance needs; replace existing head-gate for more efficient water delivery; and, remove culverts that are no longer relevant to this surface water diversion.

11. Project Description:

The Taylorsville Mill Race irrigation system can trace its beginnings to the founding of the community of Taylorsville by Jobe Taylor. The original main ditch was dug by Chinese labor in the 1850s and provided water to power a grist and a lumber mill operated by Jobe Taylor. Area farmers utilized the "tail water" from the mills to irrigate crops and pastureland. When the mills ceased operation, farmers and ranchers continued to utilize the ditch system and water rights. Now part of the Indian Creek Decree (No. 4185), the Taylorsville Mill Race represents the largest diversion right (No. 54) within the decree and its associated watermaster service area. There are eleven shares or water rights held by landowners that make up the Taylorsville Mill Race Group, irrigating approximately 3,000 acres.

Historically an earthen dam was built prior to the irrigation season that diverted water in Indian Creek for the Taylorsville Mill Race diversion; however, in the 1940s or 1950s (exact year not known), a more permanent cement dam was built that provided for a more reliable system and less disruption and damage to the stream flow and the adjacent banks of Indian Creek. This structure is maintained by the non-profit group of users who are organized under the name of the Taylorsville Mill Race Group, and is commonly referred to as the Farmers' Dam.

The Dam itself is a cement structure spanning 300' between the banks of Indian Creek. The cement structure includes footings (see original blueprints), and is approximately 7' fee high. Additional boards are added during irrigation season (beginning at the earliest date March 15 until approximately October 1) that raise the dam level an additional 18". Per the decree, the water is NEVER completely stopped.

The seasonal installation does not create a permanent blockage to fish migration. According to the Indian Creek Decree, the diversion provides 1 cfs for town utilization and up to 36 cfs for agricultural irrigation. These diversions are part of the Indian Creek Watermaster Service area, and additional monitoring is conducted via a gauge to assure sufficient downstream flow for the California State Water Project.

In 1986, the Taylorsville Mill Race Group undertook the work of resurfacing the face of the dam to repair damage and ensure its continued viability. This project was completed by members of the group with significant amounts of in-kind labor and donated expertise and equipment, but still cost the participants \$34,400 (Holly Foster interview with Charlie Neer, C. Neer Construction Co., May 30, 2015). The Mill Race Group has identified the need to resurface the dam again in the near future (within the next 10 years); however, due to additional requirements for permitting and engineering, the project is being budgeted at an estimated \$513,070 to complete.

Additional Background

In addition to supporting the irrigation on approximately nine family-owned livestock and hay operations in Indian Valley, the Taylorsville Mill Race and Farmers' Dam represents an important historical structure within the valley. The associated ditch system provides for a source of conjunctive water management for ranching and farming operations that utilize both ground and surface water. The ditch system provides important wildlife habitat, as well as flood control for the valley during periods of excessive precipitation. The Mill Race and its associated water supply also serves as important component to wildland fire suppression for the Indian Valley area and its residents, which was demonstrated during the 2021 Dixie Fire. The Dam will support a more resilient system to help the community with flood protection and agricultural economy for projected future extreme climate events.

Taylorsville Mill Race Group members have participated in the Irrigated Lands Regulatory Program since 2008. In February 2022, the irrigators of the entire Feather River Watershed were granted an exemption from this regulatory program by the Regional Water Board in recognition of water quality supported by landowner efforts in water monitoring and reporting, as well as runoff management. The Taylorsville Mill Race and its associated structures are an important component to continue this effort and to manage surface water responsibly in Indian Valley for the benefit of the watershed and community.

12. Coordination of Project with Other Related Projects: This is a stand-alone project, in that it does not rely on any precursor projects on adjacent lands to be completed. However, the successful renovation of the Taylorsville Mill Race Farmers' Dam will have subsequent beneficial impacts on the ability to mitigate flood and fire risks for the Taylorville community and area. The Plumas County Local Hazard Mitigation Plan 2020 also include Dam integrity for Property Protection, Structural Projects and Natural Resource Protection. The Dam improvements will also provide beneficial impacts on increased surface water right irrigation efficiency.

13. How Does Proposed Project Meet Purposes of Monterey Settlement?

Ensuring the long-term integrity of Taylorsville Mill Race Farmers Dam meets the four purposes of the Monterey settlement:

1. Improve water retention for baseflow in streams

Stream flow in Indian Creek is partly managed via the Dam, and must be in compliance with the Indian Creek Decree ensuring that stream flows are maintained. This project will improve the efficiency of the diversion infrastructure creating several long-term benefits for water conservation.

2. Improve water quality and streambank protection

The dam helps regulate water flows, and as a result promotes streambank protection. Additionally, water quality testing by the Central Valley Regional Water Board and affiliates have found water quality objectives do not appear impacted by irrigated lands according to research findings in the Upper Feather River Watershed, including Indian Valley (CVRWQCB, 2023).

There has been significant research conducted by the University of California, Davis (UCD) that indicates that irrigated pastures in the Upper Feather River watershed are of low to no risk to beneficial water uses (K.W. Tate et al., 2022; various reports). These research findings are associated with permanent vegetative soil cover and low agronomic inputs. Specifically, the permanent perennial forage species and moderate grazing intensities that occur within Indian

Valley and among the landowners involved in the Taylorsville Mill Race Group protect the soil surface from erosion and create substantial filtration capacity for sediments and nutrients.

3. Improve upland vegetation management

The dam structure and its improvement create a loss avoidance of upland vegetation. By maintaining summer seasonal irrigation water, the pastures, vegetated ditches, riparian area and adjacent wetlands in Indian Valley will be maintained for years to come. Specifically, there are dozens of estimated miles of vegetated ditches with valuable riparian habitat essential to wildlife and bird diversity in Indian Valley, along with 3,000 acres of irrigated pasture that are supported by this diversion structure.

4. Improve groundwater retention and storage in major aquifers.

The improvement of the Taylorsville Farmers' Dam is important for groundwater recharge. The irrigation of pasture grows both livestock forage essential for the local economy, and supports groundwater objectives by recharging the aquifer. Furthermore, the Dam plays an essential role in mitigating losses to groundwater retention. The dam provides surface water irrigation to over 3,000 acres of irrigated pasture. Without reliable surface water, land would revert to annual forage (losing wildlife habitat, economic value, and creating fire hazards) and/or irrigators would have to shift to alternative water sources, i.e. groundwater, to maintain productivity on the irrigated lands that characterize Indian Valley.

14. Project Type: Construction project with a finite beginning and end date

15. Measure of Project Accomplishments/Expected Outcomes:

Successful completion of this project will include the following benchmarks:

1. Obtainment of project funding (in progress)
2. Solicit engineering and construction bids using a standardized RFP proposals.
3. Finalization of engineering review and construction/repair plans if funding is successfully acquired (First Quarter 2024)
4. Obtainment of necessary permitting and construction easement access from adjacent private landowners (2024)
5. Project implementation/construction (early fall 2024 to align with lowest stream flow)
6. Ongoing monitoring of structural integrity (done in conjunction with required water diversion reporting)
7. Complete a final report documenting completion of project (First Quarter 2025)

16. Estimated Start Date: 02-01-2024

17. Estimated Completion Date: 04-01-2024

18. Proposed Methods of Accomplishment: Complete necessary permitting, construction and improvements.

19. Anticipated Project Costs*:

Permitting Costs**	To ensure full compliance, it is proposed that this project will do an initial study with a consultant to review permitting implications.	\$ 40,000
Engineering and Construction	A preliminary engineer's estimate was obtained - (MacNeil Construction Lic # 895676)	\$ 306,428
Aluminum Boards	More efficient installation, reduce human/wildlife conflict (to deter beaver damage), fire-proof	\$ 30,000
Inflation	~25% - Material and labor inflation factor	\$ 75,000
Clear Water Diversion During Construction	Allow continuous stream flow during project construction	\$ 15,000
Administration and Oversight (10%)	Legal counsel, financial reporting/audit, etc.	\$46,642
Estimated Total Cost:		\$513,070

*Project managers will make every effort to find cost-effective means to complete the project.

** We anticipate the project will be approved with CEQA Notice of Exemption (NOE). However, we will work with a consultant and have budgeted for full CEQA consultation if needed.

20. Other Sources of Funding:

In-kind technical expertise from U.C. Cooperative Extension

In-kind labor and project management from Taylorsville Mill Race members

21. Monitoring Plan

1. The successful completion of this project will allow for the ongoing use of the Taylorsville Mill Race irrigation system. Project monitoring will be achieved by complying with the conditions of the Indian Creek Decree that are monitored as part of the Indian Creek Watermaster Service Area. This ensures that all requirements for stream flow are met.
2. Compliance with applicable permitting requirements as determined by the project study will be part of project completion monitoring.

22. Failure to Comply with terms of the Agreement

This project needs to be pursued to insure the long-term viability of the Taylorsville Mill Race Group irrigation system within Indian Valley. The financial stability of approximately nine commercial cattle grazing operations depend on the integrity of this system, as well as more than 3,000 acres of irrigated pasture and wetlands.

23. Details of the Landowner Agreement

The Taylorsville Mill Race Group has an existing easement to access and maintain, including any necessary improvements, the Dam structure. Appropriate notifications will be made to neighboring landowners pending the initiation of this project to comply with legal requirements.

Attachments

Illustration 1. Images of Existing Structure

Illustration 2. Original Dam Structure Blueprint

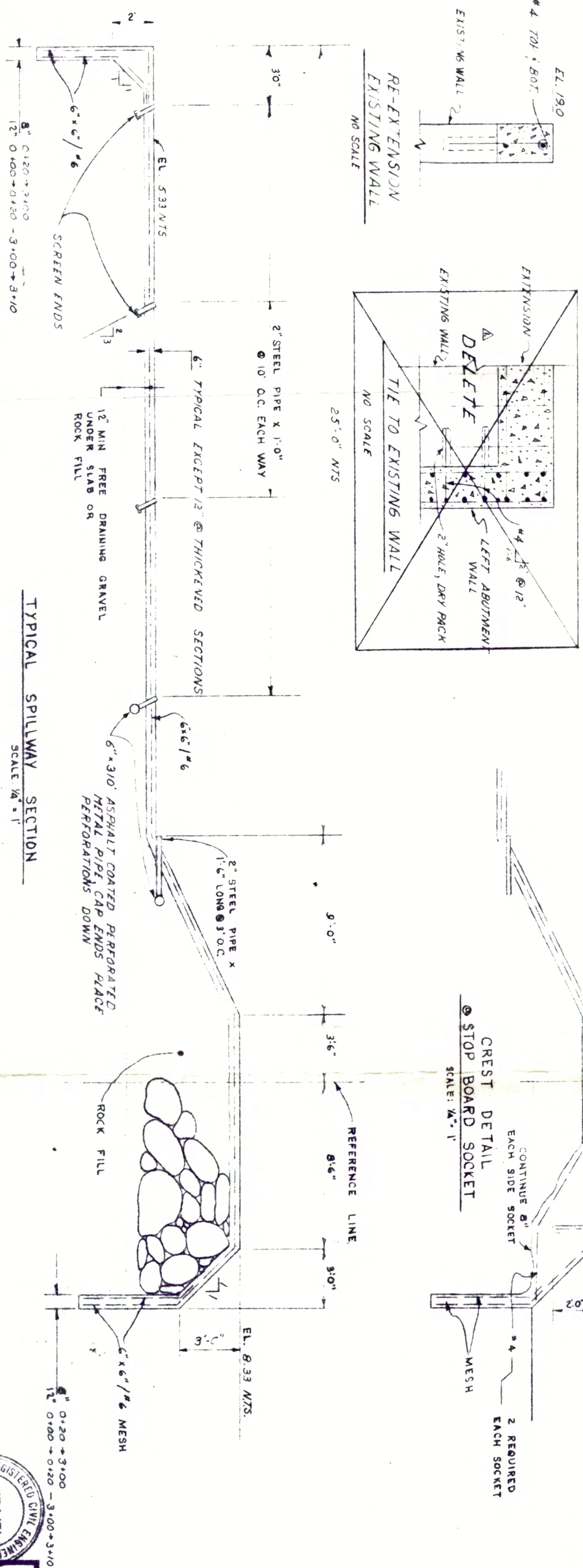
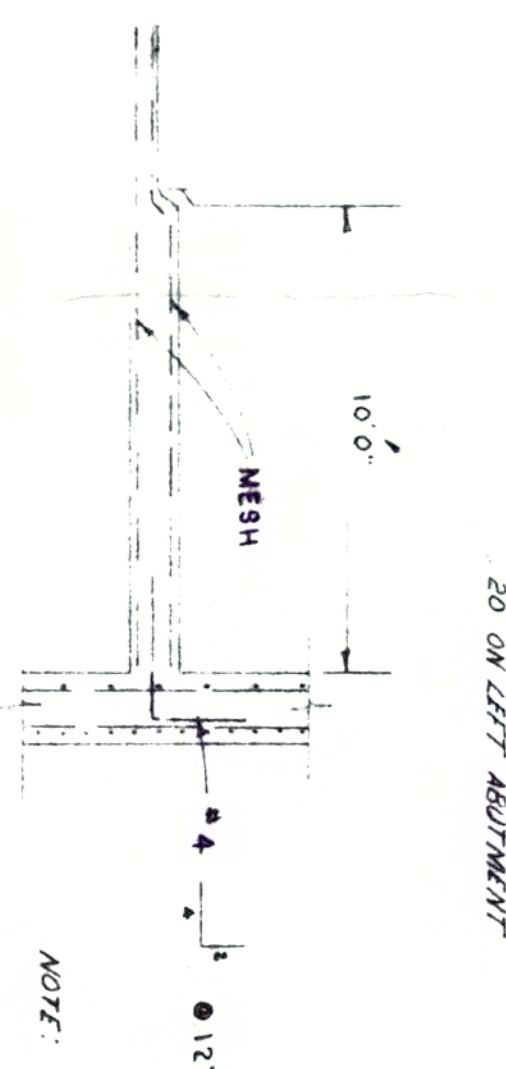
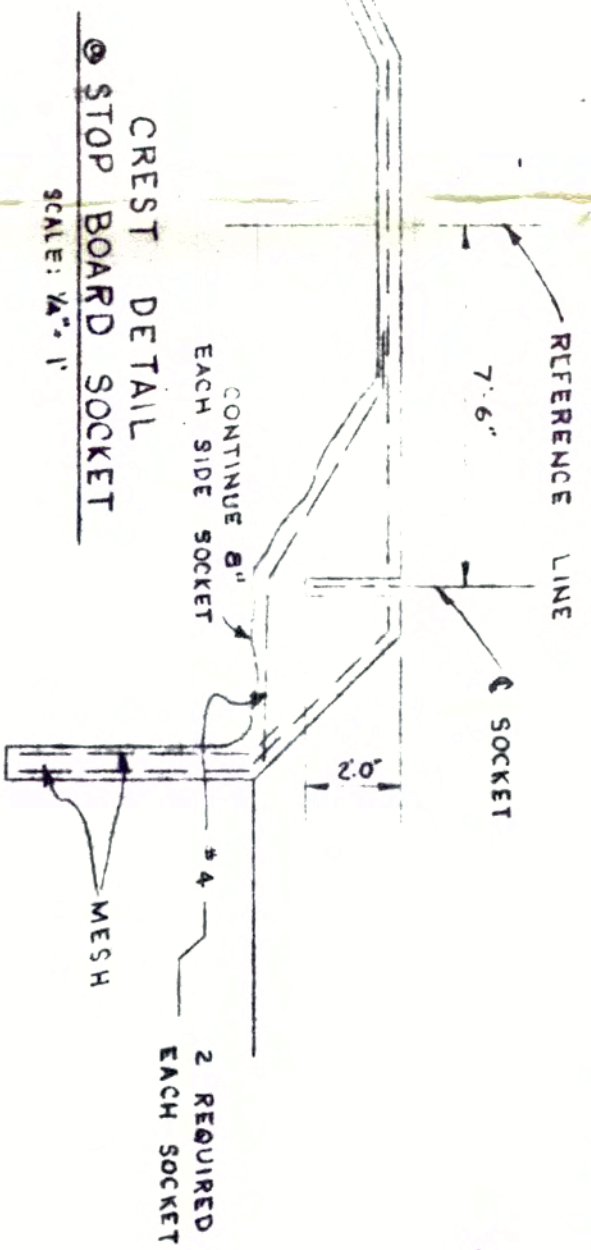
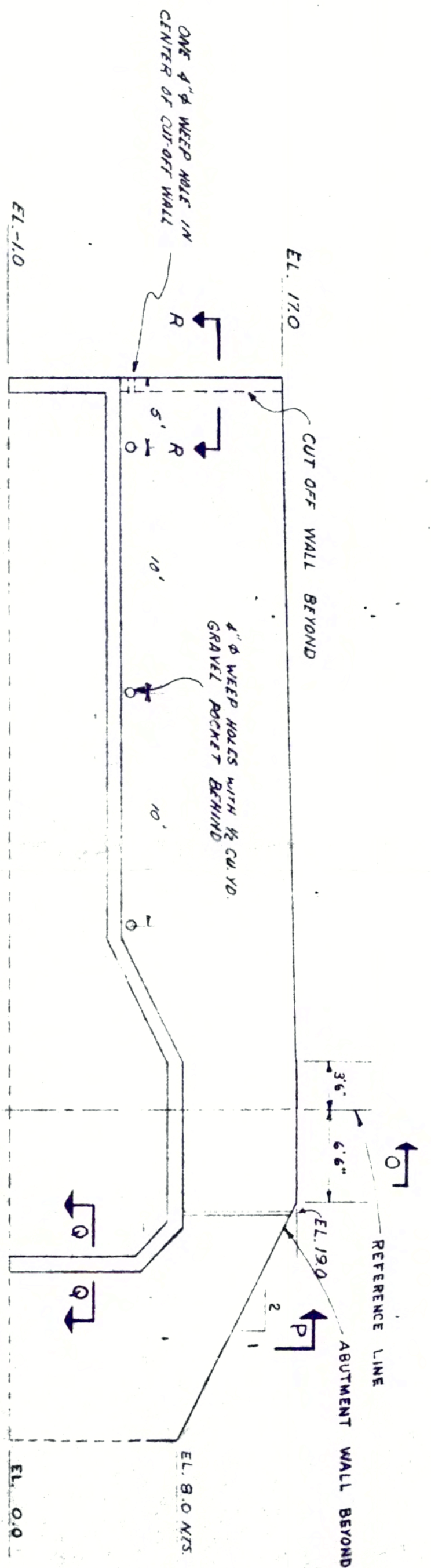
Attachment 3. Letter of Support

Illustration 1. Taylorsville Farmers' Dam – Indian Creek (Plumas County)



Illustration 2. Taylorsville Farmers' Dam Screw Gate (proposed for replacement to increase efficiency)





VIEW 99
SCALE 1/4" = 1'

NOTE: 1. REINFORCING MESH TO BE TAPPED AT MINIMUM
2. AT SPECIAL THICKENED SECTION/USE MAIN SHEET 1) INSTALL MESH AS SHOWN
3. 6" x 6" REINFORCING MESH UNDER MESH SECTIONS FOR ABUTMENT AND SAME AS SPILLWAY ABOVE FOR RIGHT ABUTMENT
BUT OPPOSITE HAND

NOTE: REVISED BY J.S. SHOWN ON SHEET 99-6

CLAIR A. HILL
& ASSOCIATES
CIVIL ENGINEERS
1525 COURT ST., REDDING, CALIFORNIA
APPROVED: Clair A. Hill

MILLRACE DIVERSION DAM
FOR
MILLRACE DITCH ASSOCIATION
TAYLORSVILLE, CALIFORNIA

SHEET NO. 2

OF 2
DATE: _____
JOB NO. L-72-01
DESIGNED: _____
DRAWN: NJB
CHECKED: JAC

To: Whom it May Concern,

From: Daniel Kearns, Taylorsville Resident

July 31, 2023

Dear Sir or Ma'am,

I am writing to express my opinion that the Mill Race irrigation system of Taylorsville, and the entire ecosystem which it creates, are vital to the safety, wellbeing and prosperity of the community of Taylorsville and residents of Indian Valley.

During the 2021 Dixie Fire Taylorsville was threatened by active fire for a period of nearly 3 months. I served on as a volunteer of the Indian Valley Fire Department during the fire and was present in Taylorsville for the entirety of the ordeal. The presence of a functioning and well-maintained water system with the volume of flow the Mill Race offers is critical to the defense of Taylorsville. The town of Taylorsville has no fire hydrant system in place. The Mill Race enabled us to lay an above-ground "hydrant system" with fire hose which was supplied by water pumped from the Mill Race. This hose system ran the entire perimeter of Taylorsville and down every street, giving fire crews the ability to engage fire anywhere in or around town with the turn of a valve. Fortunately, we did not need to use the system. Our neighboring community of Greenville, however, did need continuous high volume water flow in the hydrant system as the fire hit the south side of town. At that time the water system supplying the hydrants lost pressure due to infrastructure damage from the fire. The result was the devastating loss of Greenville. These facts confirm that the Mill Race and the reliable fire suppression capabilities it offers Taylorsville are beyond value to our community.

The Mill Race also brings joy and beauty to the residents of our community by creating places to swim, fish, and enjoy the lush environment it creates. It flows irrigation water to homes in town without the use of energy consuming pumps or maintenance intensive infrastructure, a nearly lost opportunity for most of our society. This makes the Mill Race a valuable example for future generations that there are more sustainable, less complicated ways of being.

Lastly, the water which flows through the Mill Race to ranches and farms of Indian Valley is vital to our community's way of life. The hay, crops and livestock watered by the Mill Race provide us with food and income. The entire ecosystem which is made possible by the presence of Mill Race water is part of our ability to thrive in This Place.

In conclusion, thank you for your time considering my perspective. The resurfacing of the dam (and any and all other maintenance) are required parts of keeping this crucial water system and the ecosystem it creates alive. Please support our resurfacing of the Mill Race Dam and the operation of this community asset now and forever.

Sincerely,

Dan Kearns