



NORTH COAST RESOURCE PARTNERSHIP 2018/19 IRWM Project Application

The North Coast Resource Partnership (NCRP) 2018/19 Project Application Instructions and additional information can be found at the NCRP 2018/19 Project Solicitation webpage (<https://northcoastresourcepartnership.org/proposition-1-irwm-round-1-implementation-funding-solicitation/>). Please fill out grey text boxes and select all the check boxes that apply to the project. Application responses should be clear, brief and succinct.

Project Applications will be accepted until 5:00 pm, March 8, 2019 March 15, 2019. It is important to save the application file with a distinct file name that references the project name. When the application is complete, please email to kgledhill@westcoastwatershed.com

If you have questions, need additional information or proposal development assistance please contact:

- Katherine Gledhill at kgledhill@westcoastwatershed.com or 707.795.1235
- Tribal Projects: Sherri Norris, NCRP Tribal Coordinator at sherri@cieaweb.org or 510.848.2043

Project Name: Upper Grist Creek Watershed Restoration Plan

A. ORGANIZATION INFORMATION

1. Organization Name: Round Valley County Water District

2. Contact Name/Title

Name: Lee Marder

Title: Manager-Treasurer/Secretary

Email: rvcwdmanager@gmail.com

Phone Number (include area code): (707) 468-3839

3. Organization Address (City, County, State, Zip Code):

PO Box 535 Covelo, CA 95428

4. Organization Type

☒ Public agency

- ☐ Non-profit organization
- ☐ Public utility
- ☐ Federally recognized Indian Tribe
- ☐ California State Indian Tribe listed on the Native American Heritage Commission's California Tribal Consultation List
- ☐ Mutual water company
- ☐ Other:

5. Authorized Representative (if different from the contact name)

Name: Same

Title:

Email:

Phone Number (include area code):

6. Has the organization implemented similar projects in the past? ☒ yes ☐ no

Briefly describe these previous projects.

Gravel removal projects, ongoing with new project permit apps/fees paid. DWR funded creek restoration, bank stabilization, planting, fencing projects. Groundwater Management planning, ongoing well monitoring for CASGEM.

7. List all projects the organization is submitting to the North Coast Resource Partnership for the 2018/19 Project Solicitation in order of priority.

Only this one.

8. Organization Information Notes:

Round Valley County Water District (RVCWD), established by the State in 1953; is a County funded, Local Agency Water District that operates as a Storm Water and Flood Control District. RVCWD does not supply water to District Members. RVCWD operates with a current Board of 4 Members that holds monthly public meetings.

B. ELIGIBILITY

1. North Coast Resource Partnership and North Coast IRWM Objectives

GOAL 1: INTRAREGIONAL COOPERATION & ADAPTIVE MANAGEMENT

☒ Objective 1 - Respect local autonomy and local knowledge in Plan and project development and implementation

☒ Objective 2 - Provide an ongoing framework for inclusive, efficient intraregional cooperation and effective, accountable NCIRWMP project implementation

☒ Objective 3 - Integrate Traditional Ecological Knowledge in collaboration with Tribes to incorporate these practices into North Coast Projects and Plans

GOAL 2: ECONOMIC VITALITY

☒ Objective 4 - Ensure that economically disadvantaged communities are supported and that project implementation enhances the economic vitality of disadvantaged communities by improving built and natural infrastructure systems and promoting adequate housing

☒ Objective 5 - Conserve and improve the economic benefits of North Coast Region working landscapes and natural areas

GOAL 3: ECOSYSTEM CONSERVATION AND ENHANCEMENT

☒ Objective 6 – Conserve, enhance, and restore watersheds and aquatic ecosystems, including functions, habitats, and elements that support biological diversity

☒ Objective 7 - Enhance salmonid populations by conserving, enhancing, and restoring required habitats and watershed processes

GOAL 4: BENEFICIAL USES OF WATER

☒ Objective 8 - Ensure water supply reliability and quality for municipal, domestic, agricultural, Tribal, and recreational uses while minimizing impacts to sensitive resources

☒ Objective 9 - Improve drinking water quality and water related infrastructure to protect public health, with a focus on economically disadvantaged communities

☒ Objective 10 - Protect groundwater resources from over-drafting and contamination

GOAL 5: CLIMATE ADAPTATION & ENERGY INDEPENDENCE

☒ Objective 11 - Address climate change effects, impacts, vulnerabilities, and strategies for local and regional sectors to improve air and water quality and promote public health

☐ Objective 12 - Promote local energy independence, water/ energy use efficiency, GHG emission reduction, and jobs creation

GOAL 6: PUBLIC SAFETY

☒ Objective 13 - Improve flood protection and reduce flood risk in support of public safety

2. Does the project have a minimum 15-year useful life?

☒ yes ☐ no

If no, explain how it is consistent with Government Code 16727.

3. Other Eligibility Requirements and Documentation

CALIFORNIA GROUNDWATER MANAGEMENT SUSTAINABILITY COMPLIANCE

a) Does the project that directly affect groundwater levels or quality?

☒ yes ☐ no

b) If Yes, will the organization be able to provide compliance documentation outlined in the instructions, to include in the NCRP Regional Project Application should the project be selected as a Priority Project?

☒ yes ☐ no

CASGEM COMPLIANCE

a) Does the project overlie a medium or high groundwater basin as prioritized by DWR?

☐ yes ☒ no

b) If Yes, list the groundwater basin and CASGEM priority:

c) If Yes, please specify the name of the organization that is the designated monitoring entity:

d) If there is no monitoring entity, please indicate whether the project is wholly located in an economically disadvantaged community.

☐ yes ☐ no

URBAN WATER MANAGEMENT PLAN

- a) Is the organization required to file an Urban Water Management Plan (UWMP)?
☐ yes ☒ no
- b) If Yes, list the date the UWMP was approved by DWR:
- c) Is the UWMP in compliance with AB 1420 requirements?
☒ yes ☐ no
- d) Does the urban water supplier meet the water meter requirements of CWC 525?
☐ yes ☐ no
- c) If Yes, will the organization be able to provide compliance documentation outlined in the instructions, to include in the NCRP Regional Project Application should the project be selected as a Priority Project?
☐ yes ☐ no

AGRICULTURAL WATER MANAGEMENT PLAN

- a) Is the organization – or any organization that will receive funding from the project – required to file an Agricultural Water Management Plan (AWMP)?
☐ yes ☒ no
- b) If Yes, list date the AWMP was approved by DWR:
- c) Does the agricultural water supplier(s) meet the requirements in CWC Part 2.55 Division 6?
☐ yes ☐ no

SURFACE WATER DIVERSION REPORTS

- a) Is the organization required to file surface water diversion reports per the requirements in CWC Part 5.1 Division 2?
☐ yes ☒ no
- d) If Yes, will the organization be able to provide SWRCB verification documentation outlined in the instructions, to include in the NCRP Regional Project Application should the project be selected as a Priority Project?
☐ yes ☐ no

STORM WATER MANAGEMENT PLAN

- a) Is the project a stormwater and/or dry weather runoff capture project?
☐ yes ☒ no
- b) If yes, does the project benefit a Disadvantaged Community with a population of 20,000 or less?
☐ yes ☐ no
- e) If No, will the organization be able to provide documentation that the project is included in a Stormwater Resource Plan that has been incorporated into the North Coast IRWM Plan, should the project be selected as a Priority Project?
☐ yes ☐ no

C. GENERAL PROJECT INFORMATION

1. Project Name: Upper Grist Creek Watershed Restoration Plan

2. Eligible Project Type under 2018/19 IRWM Grant Solicitation

- ☐ Water reuse and recycling for non-potable reuse and direct and indirect potable reuse
- ☐ Water-use efficiency and water conservation
- ☒ Local and regional surface and underground water storage, including groundwater aquifer cleanup or recharge projects
- ☐ Regional water conveyance facilities that improve integration of separate water systems
- ☐ Watershed protection, restoration, and management projects, including projects that reduce the risk of wildfire or improve water supply reliability
- ☐ Stormwater resource management projects to reduce, manage, treat, or capture rainwater or stormwater
- ☒ Stormwater resource management projects that provide multiple benefits such as water quality, water supply, flood control, or open space
- ☐ Decision support tools that evaluate the benefits and costs of multi-benefit stormwater projects
- ☐ Stormwater resource management projects to implement a stormwater resource plan
- ☐ Conjunctive use of surface and groundwater storage facilities
- ☒ Decision support tools to model regional water management strategies to account for climate change and other changes in regional demand and supply projections
- ☐ Improvement of water quality, including drinking water treatment and distribution, groundwater and aquifer remediation, matching water quality to water use, wastewater treatment, water pollution prevention, and management of urban and agricultural runoff
- ☐ Regional projects or programs as defined by the IRWM Planning Act (Water Code §10537)
- ☐ Other:

3. Project Abstract

The RVCWD as well as the land owners are financially unable to fund the required hydrologic studies and remediation needed to contain Upper Grist Creek within its channel and prevent flooding on Highway 162. 2000' of levee built to contain Grist has broken down and requires reengineering to allow channel restoration and overflows which are a major source of aquifer recharge. Cattle fencing, gravel removal planting, and irrigation are needed to restore damaged riparian and salmonid habitats.

4. Project Description

The Project will engineer, permit and install 200' of CMI Industries AlumiGuard channel retaining wall to restore a critical section of Upper Grist Creek, to prevent Highway flooding, restore pooling habitat, and to allow flood plain recharge of the Covelo-Round Valley Aquifer.

5. Specific Project Goals/Objectives

Goal 1: Prevent flooding of Highway 162, entrance to Covelo, in extreme storm events.

Goal 1 Objective: To repair a portion of the Upper Grist Creek levee

Goal 1 Objective: To develop a comprehensive engineered study and plan

Goal 1 Objective: To gain all necessary permits

Goal 1 Objective: To gain financing to implement levee repairs.

Goal 2: To protect a primary recharge area of the Covelo-Round Valley Aquifer (CASGEM: low priority)

Goal 2 Objective: To engineer the levee to allow overflow and by-pass channels to percolate into traditional watercourses

Goal 2 Objective: To ensure adequate groundwater levels. Round Valley residents rely on private wells.

Goal 2 Objective: To prevent ranch land flooding east of Upper Grist Creek

Goal 2 Objective:

Goal 3: To restore the aquatic and floral ecosystem of Upper Grist Creek
Goal 3 Objective: To reduce gravel buildups, restore pooling and bio diversity
Goal 3 Objective: To replant the riparian banks, install cattle fencing and irrigation
Goal 3 Objective:

Additional Goals & Objectives (List)

6. Describe how the project addresses the North Coast Resource Partnership and North Coast IRWM Plan Goals and Objectives selected.

Water Supply: Upper Grist gravel beds are 400-600' deep. Maintaining recharge and preventing flooding have been a District concern for 2 decades.

Ecosystem function: Cattle destroyed vegetation. The over-extended old levee channeled gravel buildups covering pools.

Economic vitality: Flooding has reduced grazing land. Residents depend on groundwater recharge.

Highway 162 is the main access to Covelo (flooding has been a regular event).

Climate Adaption: Extreme rain events have increased bank erosion and flooding outside of the watercourse and recharge area.

7. Describe the need for the project.

The strongest public voice at this time concerns the recurrent flooding of Highway 162 due to the saturation of fields in between Upper Grist Creek and the highway.

The District has (partially) financed gravel removal projects on Upper Grist and small levee repairs for years. The District was concerned with a gravel quarry project proposed for Upper Grist and became involved in the planning in order to protect the recharge value of the area. The project did not go forward.

8. List the impaired water bodies (303d listing) that the project benefits:

Grist Creek flows to Mill Creek which leaves Round Valley to enter the Middle Fork of the Eel River.

9. Will this project mitigate an existing or potential Cease and Desist Order or other regulatory compliance enforcement action? ☐ yes ☒ no

If so, please describe?

10. Describe the population served by this project.

Round Valley is a disadvantaged community consisting of approximately 1700 people of which approximately half are members of the Round Valley Indian Tribes. Part of the Tribal Land overlaps RVCWD boundaries.

11. Does the project provide direct water-related benefits to a project area comprised of Disadvantaged Communities or Economically Distressed Communities?

- ☒ Entirely
- ☐ Partially
- ☐ No

List the Disadvantaged Community(s) (DAC)

Round Valley Indian Tribes

12. Does the project provide direct water-related benefits to a project area comprised of Severely Disadvantaged Communities (SDAC)?

- ☐ Entirely
- ☒ Partially
- ☐ No

List the Severely Disadvantaged Community(s)

13. Does the project provide direct water-related benefits to a Tribe or Tribes?

- ☐ Entirely
- ☒ Partially
- ☐ No

List the Tribal Community(s)

If yes, please provide evidence of support from each Tribe listed as receiving these benefits.

14. If the project provides benefits to a DAC, EDA or Tribe, explain the water-related need of the DAC, EDA or Tribe and how the project will address the described need.

The Round Valley Indian Tribe does have 4 small public water systems, dependent on the Covelo-Round Valley Aquifer, in their Tribal Housing areas. However, all other Tribal Members and residents depend on the Covelo-Round Valley Aquifer.

15. Does the project address and/or adapt to the effects of climate change? Does the project address the climate change vulnerabilities in the North Coast region? ☒ yes ☐ no

If yes, please explain.

Increased intense rain flows have caused the Upper Grist Creek to lose large areas of its levee within the past 4-5 years.

16. Describe how the project contributes to regional water self-reliance.

Project implementation will assure a primary recharge zone of the Covelo-Round Valley Aquifer is protected and functional for future generations.

17. Describe how the project benefits salmonids, other endangered/threatened species and sensitive habitats.

Project engineering and implementation will restore traditional surfacing and pooling, bank stabilization and shading, and exclusionary fencing will prevent cattle from entering the riparian zone.

18. Describe local and/or political support for this project.

The RVCWD has supported landowners along Upper Grist Creek for decades with exclusionary fencing grants, gravel removal, and bank improvement projects. Public Meetings are posted and held in Round Valley monthly.

19. List all collaborating partners and agencies and nature of collaboration.

The owners of the Upper Grist properties: Decater, Lashinski, and Berrien.

20. Is this project part or a phase of a larger project? ☒ yes ☐ no

Are there similar efforts being made by other groups? ☐ yes ☒ no
If so, please describe?

- 21. Describe the kind of notification, outreach and collaboration that has been done with the County(ies) and/or Tribes within the proposed project impact area, including the source and receiving watersheds, if applicable.**

The District has recently sent requests for aid, concerning the flooding issue, to CALTRANS, and the DWR. There have been site visits and communications with both departments. The area is not under jurisdiction of the Round Valley Indian Tribes.

- 22. Describe how the project provides a benefit that meets at least one of the Statewide Priorities as defined in the 2018 IRWM Grant Program Guidelines and Tribal priorities as defined by the NCRP?**

This is a Climate Adaption Concern. It also concerns repairing ecosystem functionality, which on Upper Grist, includes groundwater, riparian and rancher concerns.

- 23. Project Information Notes:**

Maps, recent site visit description from the DWR attached

D. PROJECT LOCATION

- 1. Describe the location of the project**

Geographical Information

39.7704, -123.2639, located on the south border between 7.5 Quad Covelo E and Covelo W

- 2. Site Address (if relevant):**

74500 Covelo Road, Covelo CA.

- 3. Does the applicant have legal access rights, easements, or other access capabilities to the property to implement the project?**

☒ Yes If yes, please describe

☐ No If No, please provide a clear and concise narrative with a schedule, to obtain necessary access.

☐ NA If NA, please describe why physical access to a property is not needed.

The District is currently working with the owners on the project.

- 4. Project Location Notes:**

E. PROJECT TASKS, BUDGET AND SCHEDULE

- 1. Projected Project Start Date: 7/1/20**

Anticipated Project End Date: 10/30/20

2. Will CEQA be completed within 6 months of Final Award?

☐ Yes

State Clearinghouse Number:

☐ NA, Project is exempt from CEQA

☐ NA, Not a Project under CEQA

☒ NA, Project benefits entirely to DAC, EDA or Tribe, or is a Tribal local sponsor. [Projects providing a water-related benefit entirely to DACs, EDAs, or Tribes, or projects implemented by Tribes are exempt from this requirement].

☐ No

3. Please complete the CEQA Information Table below

Indicate which CEQA steps are currently complete and for those that are not complete, provide the estimated date for completion.

CEQA STEP	COMPLETE? (y/n)	ESTIMATED DATE TO COMPLETE
Initial Study	n	
Notice & invitation to consult sent to Tribes per AB52	n	
Notice of Preparation	n	
Draft EIR/MND/ND	n	
Public Review	y	
Final EIR/MND/ND	n	
Adoption of Final EIR/MND/ND	n	
Notice of Determination	n	
N/A - not a CEQA Project	y	

If additional explanation or justification of the timeline is needed or why the project does not require CEQA, please describe.

4. Will all permits necessary to begin construction be acquired within 6 months of Final Award?

☐ Yes

☒ NA, Project benefits entirely to DAC, EDA, Tribe, or is a Tribal local sponsor

☐ No

5. PERMIT ACQUISITION PLAN

Type of Permit	Permitting Agency	Date Acquired or Anticipated
Lake and Streambed Alteration	California Fish and Wildlife	7/1/20

For permits not acquired: describe actions taken to date and issues that may delay acquisition of permit.

Current issues are acquiring the required Certified Engineering Plans for the Levee, and more accurate project implementation estimates.

6. Describe the financial need for the project.

The District funds are approximately \$16,000, year. The owners have limited funds available.

7. Is the project budget scalable? ☒ yes ☐ no

Describe how a scaled budget would impact the overall project.

The project could be scaled 50% to acquire the necessary plans and permits, and install 100' of the proposed 200' of levee.

8. Describe the basis for the costs used to derive the project budget according to each budget category.

Phase 1 costs are based on standard engineering firm costs for 40-80 hours work.

Phase 2: levee repairs, based on standard material, machinery and labor costs for 2-3 months work

Gravel removal, based on permit fees, machinery and labor costs

Fencing costs based on standard fencing and labor costs

Planting and Irrigation based on materials (irrigation, plant stock) and labor

9. Provide a narrative on cost considerations including alternative project costs.

The project has 3 main parts: the levee, fencing and plantings, and gravel removal. The project could be reduced to only the levee repair. The original levee was over 2000', this project proposes rebuilding 200'. Exclusionary cattle fencing, planting, and irrigation could be held over for other grant opportunities at a later time.

10. List the sources of non-state matching funds, amounts and indicate their status.

Currently, the RVCWD has approximately \$10-20,000 that could be dedicated to the project. The land owners will contribute their labor to aid in back-fill of the levee, gravel removal, and installation of fencing.

11. List the sources and amount of state matching funds.

12. Cost Share Waiver Requested (DAC or EDA)? ☒ yes ☐ no

Cost Share Waiver Justification: Describe what percentage of the proposed project area encompasses a DAC/EDA, how the community meets the definition of a DAC/EDA, and the water-related need of the DAC/EDA that the project addresses. In order to receive a cost share waiver, the applicant must demonstrate that the project will provide benefits that address a water-related need of a DAC/EDA.

100% of Round Valley encompasses a DAC/EDA community

13. Major Tasks, Schedule and Budget for NCRP 2018 IRWM Project Solicitation

Please complete MS Excel table available at <https://northcoastresourcepartnership.org/proposition-1-irwm-round-1-implementation-funding-solicitation/>; see instructions for submitting the required excel document with the application materials.

14. Project Tasks, Budget and Schedule Notes:

F. PROJECT BENEFITS & JUSTIFICATION

1. Does the proposed project provide physical benefits to multiple IRWM regions or funding area(s)?

☐ yes ☒ no

If Yes, provide a description of the impacts to the various regions.

2. Provide a narrative for project justification. Include any other information that supports the justification for this project, including how the project can achieve the claimed level of benefits. List any studies, plans, designs or engineering reports completed for the project. *Please see the instructions for more information about submitting these documents with the final application.*

This project requires a highly competent contractor. Wylatti Industries, located in Round Valley, has the equipment, expertise, and local knowledge, and is aware of the project. The owner, Brian Hurt, has installed similar levees for CALTRANS on 10 Mile Creek, and other areas as well and has been in consultation with the RVCWD Manager on the project application.

3. Does the project address a contaminant listed in AB 1249 (nitrate, arsenic, perchlorate, or hexavalent chromium)? ☐ yes ☒ no

If yes, provide a description of how the project helps address the contamination.

4. Does the project provide safe, clean, affordable, and accessible water adequate for human consumption, cooking, and sanitary purposes consistent with AB 685? ☒ yes ☐ no

If Yes, please describe.

5. Does the project employ new or innovative technologies or practices, including decision support tools that support the integration of multiple jurisdictions, including, but not limited to, water supply, flood control, land use, and sanitation? ☒ yes ☐ no

If Yes, please describe.

As mentioned, the project addresses a flooding issue and water supply through conservation of a primary recharge zone in Round Valley.

6. For each of the Potential Benefits that the project claims complete the following table to describe an estimate of the benefits expected to result from the proposed project. [See the NCRP Project Application Instructions, Potential Project Benefits Worksheet and background information to help

complete the table. The NCRP Project Application, Attachment B includes additional guidance, source materials and examples from North Coast projects.]

PROJECT BENEFITS TABLE

Potential Benefits Description	Physical Amt of Benefit	Physical Units	Est. Economic Value per year	Economic Units
Water Supply				
Recharge Value to the Aquifer				
Habitat for migrating coho, steelhead				
Water Quality				
Maintain and conserve the deep gravel bed within the recharge zone				
Other Ecosystem Service Benefits				
To restore the eco-system functionality of Upper Grist Creek				
Increase pooling and shade				
Reduce gravel loads				
Improve bank stabilization				
Other Benefits				
Reduce flooding potential on CA162, the main access to Covelo town.				

7. Project Justification & Technical Basis Notes:

Major Tasks, Schedule and Budget for North Coast Resource Partnership 2018/19 IRWM Project Solicitation

Project Name: Upper Grist Creek Watershed Restoration Plan
 Organization Name: Round Valley County Water District

Task #	Major Tasks	Task Description	Major Deliverables	Current Stage of Completion	IRWM Task Budget	Non-State Match	Total Task Budget	Start Date	Completion Date
A	Category (a): Direct Project Administration								
1	Administration	In cooperation with the County of Mendocino sign a sub-grantee agreement for work to be completed on this project. Develop invoices with support documentation. Provide audited financial statements and other deliverables as required.	Invoices, audited financial statements and other deliverables as required	0%	\$800.00	\$800.00	\$800.00	5/1/20	10/15/20
2	Monitoring Plan	Develop Monitoring Plan to include goals and measurable objectives	Final Monitoring Plan	0%	\$400.00	\$400.00	\$400.00	4/15/20	4/30/20
3	Labor Compliance Program	Execute service agreement with Labor Compliance Program company	Submission of Labor Compliance Program	0%	\$0.00	\$0.00	\$0.00		
4	Reporting	Develop monthly reports describing work completed, challenges, and strategies for reaching remaining project objectives. Develop Final Report	Quarterly and Final Reports	0%	\$400.00	\$400.00	\$400.00	5/15/20	10/30/20
B	Category (b): Land Purchase/Easement								
1	Not Applicable			0%	\$0.00	\$0.00	\$0.00		
C	Category (c): Planning/Design/Engineering/Environmental Documentation								
1	Final Design /Plans	Complete tasks necessary to administer construction contract. Keep daily records of construction activities, inspection, and progress. Conduct project construction photo-monitoring.							
2	Environmental Documentation: CEQA *	Not required, Economically Disadvantaged Community		0%	\$0.00	\$0.00	\$0.00		
3	Permit Development *: [PLEASE COMPLETE]	Fish and Wildlife: Lake and Streambed Alteration Agreement	Standard Agreement for project costs \$25K-\$100K	0%	\$2,241.00	\$0.00	\$2,241.00	5/1/20	5/15/20
4	Permit Development *: [PLEASE COMPLETE]	Fish and Wildlife: Lake and Streambed Alteration Agreement	Gravel Removal Permit for 1000 + yards		\$5,313.00		\$5,313.00	5/1/20	5/15/20
5	Permit Development *: [PLEASE COMPLETE]	Project Manager Labor	Submission of Applications, Documentation, Planning, Design	0%	\$1,200.00	\$0.00	\$1,200.00	5/1/20	5/15/20
6				0%	\$0.00	\$0.00	\$0.00		
7				0%	\$0.00	\$0.00	\$0.00		
8				0%	\$0.00	\$0.00	\$0.00		
D	Category (d): Construction/Implementation								
1	Construction/Implementation Contracting	Obtain 3 competitive bids from qualified construction crews and machine operators: Installation Labor for the Levee only	This is an estimate on machinery, time, labor over 8 weeks of construction time	0%	\$30,000.00	\$5,000.00	\$35,000.00	7/15/20	9/30/20
2	Mobilization and Site Preparation	Order AlumiGuard aluminum sheet piling (CMI Engineering), deliver to site	14' x 6" sheets x 200' @\$118/sheet = \$23,600 + shipping+tax=\$	0%	\$28,831.00	\$0.00	\$28,831.00	6/1/20	7/1/20
3	Project Construction/Implementation: [PLEASE COMPLETE]	Order Anchoring Materials, deliver to site	Consisting of all thread rods, redwood 4x8 horizontal wales	0%	\$11,000.00	\$0.00	\$11,000.00	6/1/20	7/1/20
4	Engineered Drawings/Plans	Obtain Engineered Drawings and Construction Plans to install the Levee		0%	\$15,000.00	\$0.00	\$15,000.00		
5	Exclusionary Fencing	Order fencing materials, deliver to site	300' fencing, stakes, misc.	0%	\$3,000.00	\$0.00	\$3,000.00	9/1/20	9/15/20
6	Hire Crew to install fencing	Obtain 3 competitive bids from fence installers	40 hours labor @ \$25/hour x 2 laborers	0%	\$2,000.00	\$2,000.00	\$2,000.00	9/15/20	9/20/20
7	RVCWD Project Supervisor	On-Site Project Supervisor	80 hours @ \$50/hour 2 months	0%	\$4,000.00	\$0.00	\$4,000.00	7/15/20	10/30/20
8	Project Close Out, Inspection & Demobilization	Inspect project components and establish that work is complete. Verify that all project components have been installed and are functioning as specified will be conducted as part of construction inspection and project closeout. Conduct project completion photo monitoring. Prepare record drawings.	As-Built and Record Drawings; Project completion site photos	0%	\$400.00	\$400.00	\$400.00	9/15/20	10/30/20

Project Name: Upper Grist Creek Watershed Restoration Plan
 Organization Name: Round Valley County Water District

Task #	Major Tasks	Task Description	Major Deliverables	Current Stage of Completion	IRWM Task Budget	Non-State Match	Total Task Budget	Start Date	Completion Date
9	Project Performance Monitoring	The performance of the project will be monitored in accordance to the Monitoring Plan using the following measurement tools and methods: [PLEASE COMPLETE]	5 year program to measure gravel buildups, monitor tension wires and barrier angles by the Manager/Supervisor	0%	\$2,000.00	\$2,000.00	\$2,000.00		
10	Construction Administration	Complete tasks necessary to administer construction contract. Keep daily records of construction activities, inspection, and progress. Conduct project construction photo-monitoring.	Construction Management Logs; Completed construction administration tasks documented in monthly progress reports part of the On-Site Project Supervisor position	0%	\$2,000.00	\$2,000.00	\$2,000.00		
Total North Coast Resource Partnership 2018/19 IRWM Grant Request					\$108,585.00	\$13,000.00	\$113,585.00		
Is Requested Budget scalable by 25%? If yes, indicate scaled totals; if no delete budget amount provided.					\$81,438.75	\$9,750.00	\$85,188.75		
Is Requested Budget scalable by 50%? If yes, indicate scaled totals; if no delete budget amount provided.					\$54,292.50	\$6,500.00	\$56,792.50		

Budget Detail for North Coast Resource Partnership 2018/19 IRWM Project Solicitation

Project Name: Upper Grist Creek Watershed Restoration Plan
Organization Name: Round Valley County Water District

Budget Detail

Row (a) Direct Project Administration Costs					
Project Management Type	Personnel by Discipline	Number of Hours	Hourly Wage	% of Cost (if applicable) *	Total Admin Cost
On-Site Project Supervisor	Project Supervisor, RVCWD Manager	80	\$50		\$4,000
Project Close Out	RVCWD Manager	8	\$50	100%	\$400
Performance Monitoring	RVCWD Manager	40	\$50	100%	\$2,000
Construction Administration	RVCWD Manager	40	\$50	100%	\$2,000
Permit Acquisition /Monitoring /Reporting	RVCWD Manager	24	\$50	80%	\$2,000
Total					\$10,400
* What is the percentage based on (including total amounts)?		Available County Funds, RVCWD Budget			
* How was the percentage of cost determined?		Extra hours required of the Manager for Project			

Row (b) Land Purchase/Easement

Row (c) Planning/Design/Engineering & Environmental Documentation					
Personnel (Discipline)	Major Task Name	Number of Hours	Hourly Wage	Total Cost	
Fish and Wildlife	LSAA/Gravel Removal			\$5,313	
Fish and Wildlife	LSAA/Levee		40	\$2,241	
North Coast Resource Partnership	Engineered Plans for the Levee Permit			?	
Total					

Row (d) Construction/Implementation				
Personnel (Discipline)	Work Task and Sub-Task (from Work Task Table)	Number of Hours	Hourly Wage	Total Cost
Contract Machinery/Labor	Install CMI AlumiGuard Levee	120	\$292	\$35,000
Fencing/Labor	Install exclusionary fencing	80	\$25	\$2,000
Gravel Removal	Labor/Machinery Owner Financed	40	\$250	\$10,000
Contract Engineered Drawing/Plans	Levee installation details for permits/installation	50	\$300	\$15,000
Materials and Equipment	Work Task and Sub-Task (from Work Task Table)	Number of Units	Unit Cost	
CMI Industries AlumiGuard Levee material	200' 14'x12" panels, tax and delivery	200	\$144.16	\$28,831
Anchoring Materials, all thread, concrete	Materials to secure levee	20	\$550	\$11,000
300' cattle fencing, posts	Install posts, fencing	300	\$10	\$3,000
Total				

Board of Directors

Denis L. Moore, Chairman

John Marshall

George L. Helmholz

Dane Downing, Vice

Chairman

Manager

Lee Marder

Round Valley County Water District



P.O. Box 535, Covelo, California 95428

707-468-3839

email: rvwdmanager@gmail.com

Upper Grist Creek Levee Restoration Project 2019

CMI PZM-16 AlumiGuard Sheet Piling:



SW Section of Decater Levee to Repair and Extend into Lashinski's Property:



Board of Directors

Denis L. Moore, Chairman

John Marshall

George L. Helmholz

Dane Downing, Vice

Chairman

Manager

Lee Marder



P.O. Box 535, Covelo, California 95428

707-468-3839

email: rvcwdmanager@gmail.com

March 15, 2018

To: Tamie McGowen, Assistant Deputy Director CALTRANS

Cori Reed, Public Information Officer Lake and Mendocino County

From: Lee Marder, Manager Round Valley County Water District (RVCWD)

The Board of Directors at RVCWD have requested I contact you with their concern about flooding across Highway 162, in Covelo, Round Valley.

I am attaching maps and pictures of the eroded and washed out levees on Grist Creek which have allowed runoff to saturate the lower elevation fields and flood Highway 162, the primary access to Covelo Town, during the rain events of 2014 and 2016.

You will note from the maps, that Grist Creek runs east, then turns 90 degrees north. The creek was diverted around fields, in the early 1900's. There is severe erosion of the levee at the diversion, where old cars once buried in the levee and iron posts, are now clearly visible. This critical 443' section, where Grist takes a 90 degree turn to the north, has been eroding at 10-20'/year. North of that, 705' of levee is completely missing. The overflow runs east under and over the field which, geologically, consists of a deep gravel bed, allowing the water to saturate the field (flood zone on the map) and run under and across Highway 162.

RVCWD functions primarily as a Flood Water Control District and has worked on stream restoration and flood control projects for over 60 years. Our County budget is approximately \$15-16,000/year. The District as well as the land owners are financially unable to fund the required hydrologic studies and remediation needed to contain Grist Creek within its channel and prevent the flooding on Highway 162.

From our inspection and study of the site and the Highway section of concern; we are asking that you consider appropriate actions to prevent the flooding across the highway. There are no culverts running west to east under the highway between Grist Creek and Fairbanks Road. The levee requires extensive repair. Adding culverts at the low elevation point in the flood zone under the highway could be a solution.

I did contact Patrick Luzuriaga, Local Assistance Section A, Division of Flood Management, at the Department of Water Resources, who said there was no funding currently available to help with this project. We are very concerned that another strong weather event could flood the highway again and ultimately wash out the Highway. The volume of water that comes down Grist Creek during a 3-4" rain event in 3-4 days is huge, 60-80' wide by 3-5' deep.

Thank you for taking the time to consider how CALTRANS might be able to work toward mitigating what we see as an inevitable crisis for access to Covelo, as well endangerment to drivers.

I am available to assist with your inspections of the site, or for any further information you might need.

Thank you again for your time and consideration.

Sincerely,

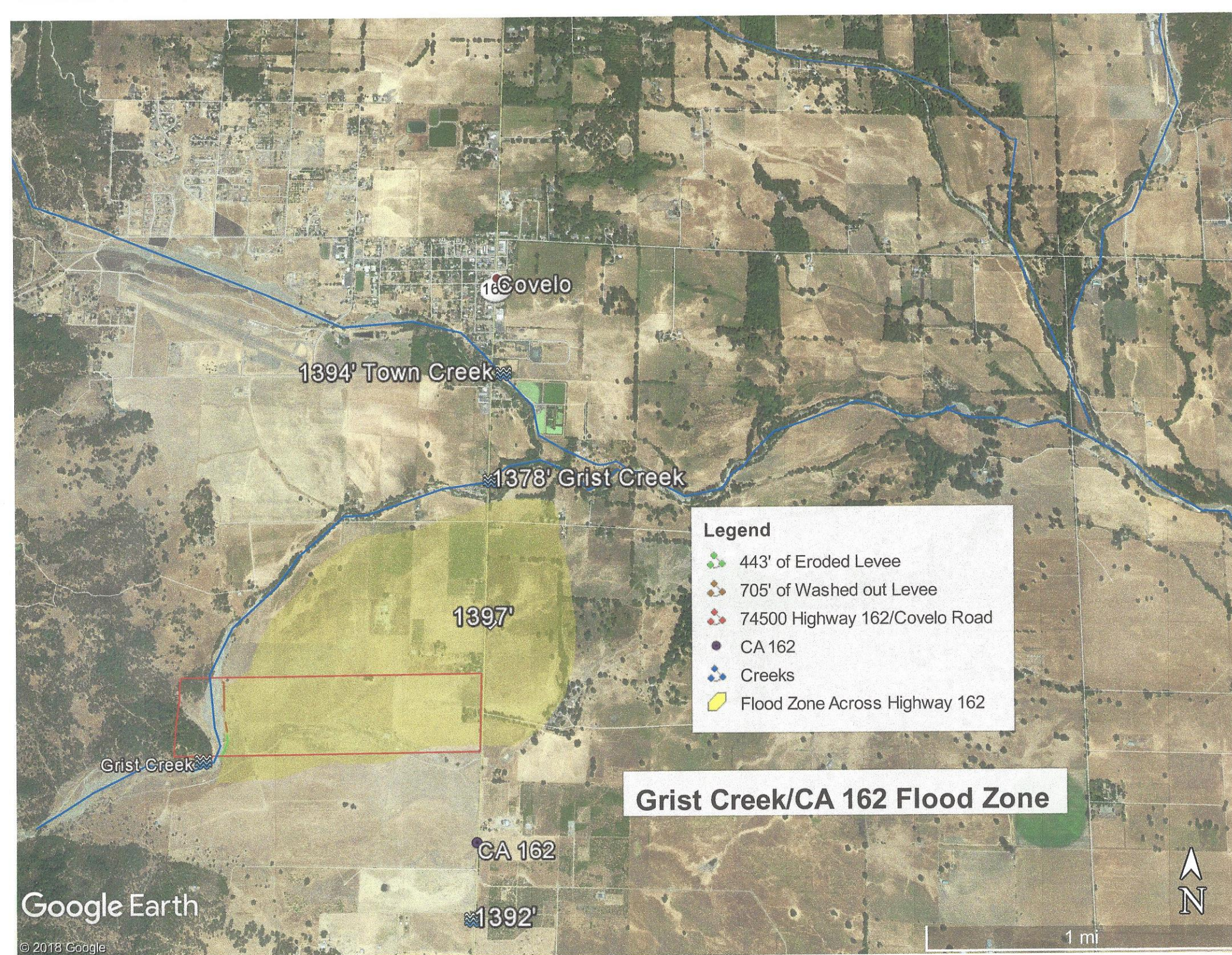
A handwritten signature in black ink, appearing to read "Lee Marder". The signature is fluid and cursive, with a long horizontal stroke at the end.

Lee Marder

District Manager

707.468.3839

rvcwdmanager@gmail.com







Topo of Round Valley Creeks


Legend

- Creeks
- Decater Property
- Eroded Levee
- No Levee

Map features include: Town Creek (1394'), Grist Creek (1378'), Turner Creek (1430'), Mill Creek, Highway 162, Commercial St, and various landmarks like Athletic Field, Rodeo Grounds, and Mobile Home Park.


© 2018 Google

-  Creeks
-  Decater Property
-  Eroded Levee
-  No Levee



Creeks

Decater Property

 Eroded Levee No Levee

Google Earth

© 2018 Google



1m

74500 Covelo Road, Decater Property, Eroded Levee on Grist Creek :



No Levee South Section of Grist Creek:



No Levee North Section of Grist Creek:



Grist Creek Reconnaissance – Draft Report

Date: November 7, 2018

Staff: Randy Beckwith (DWR Riverine Stewardship Program)

Attending: Lee Marder (Round Valley County Water District, Manager), Dane Downing (Covelo Community Services District, RVCWD Board), George Helmholtz (RVCWD Board), John Marshall (RVCWD Board), Randall _____ (landowner)

Background: Grist Creek (Figure 1) is an intermittent stream that emerges from the hills southwest of Covelo and flows from west to east across Round Valley until it merges with Mill Creek about two miles east of town. Town Creek flows through Covelo from the northwest and joins Grist Creek about 1,000 feet east of Highway 162. Both creeks are within NMFS critical habitat for steelhead and were dry at the time of the reconnaissance. Lee said that the water table is very high in the valley, ranging from about 4' to 30' below the ground surface. For CA Department of Water Resources, Urban Streams Restoration Program (USRP) purposes, Covelo is a disadvantaged community, according to

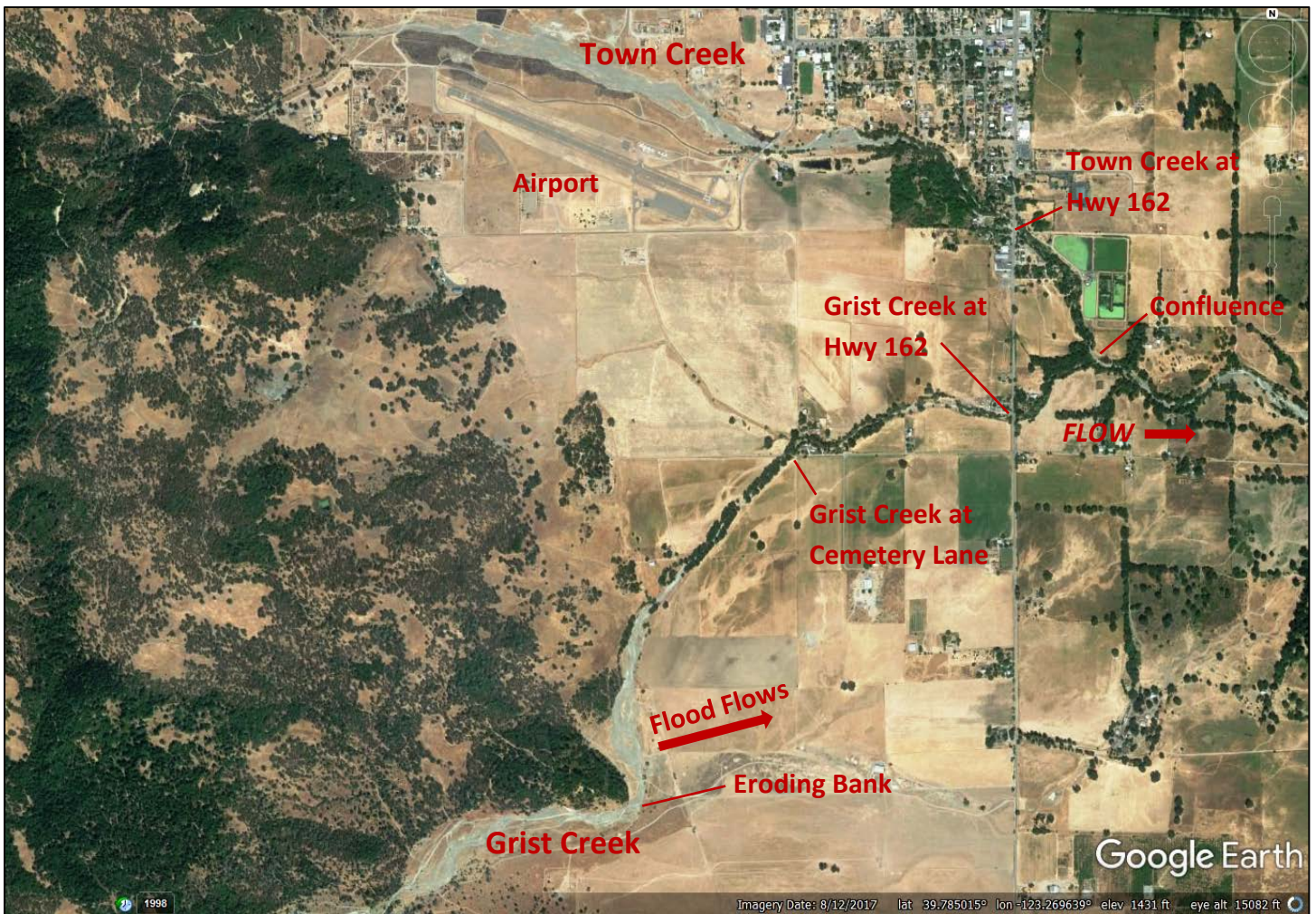


Figure 1: The Covelo Area including Grist and Town Creeks

the DWR DAC Mapping Tool.

The reason for the meeting was to discuss bank erosion issues along Grist Creek and the flooding of Highway 162 during the high rainfall events of 2014 and 2016. During these events, water left the creek (just downstream from the eroding bank on the map) and ran east over the field and across Highway 162, which is the primary access to Covelo.

The RVCWD Board has sent a letter to Caltrans to express their concern about the flooding of Highway 162. Caltrans responded with a letter stating that although they are concerned about flooding of a state highway, inadequate ditch and channel maintenance is the cause of the flooding, and that they cannot perform maintenance on private property. From their letter to Caltrans, "RVCWD functions primarily as a Flood Water Control District and has worked on stream restoration and flood control projects for over 60 years. Our County budget is approximately \$15-16,000/year. The District as well as the land owners are financially unable to fund the required hydrologic studies and remediation needed to contain Grist Creek within its channel and prevent the flooding on Highway 162." Both letters are attached.

Lee Marder also contacted Patrick Luzuriaga of DWR's Flood Management, who stated that they did not have any potential funding to give to a project in Covelo. Thus, Lee contacted the Riverine Stewardship Program to see if we could help.

Meeting and Site Visits: The group met at the RVCWD Office in Covelo at 1:00 PM. I described my background and the DWR Urban Streams Restoration Program. Lee led a discussion of the issues they are having with Grist Creek. At around 2:00, we headed out to the creek. We first went to the bank erosion site (Figures 2 and 3), about 1.5 miles upstream from Highway 162, where the creek makes a 90-degree turn to the north and extensive bank erosion is occurring (39.769638°, -123.263465°). At this location, the creek's path was changed in the early 1900's, diverting it around fields that are now used for grazing (Lee Marder). There is a lot of sediment (cobbles, gravels, sand) moving in the system and a lot of it is depositing in this reach of the creek as the creek exits the hills and out into the valley (Figure 4).

The channel in this location is very dynamic and sediment deposits at the inside bend of the turn (Figures 3 and 4). These deposits are continually moving toward the right bank (outside bend) and constricting the channel. The landowner (Randall) stated that he has observed this happening over time. He also stated that he has seen juvenile steelhead in the creek. The berm that was installed on the outside bend consists of unconsolidated material (looks to be mainly sand and gravels), old automobiles, and metal posts. The cars and posts were used to provide stability to the berm, but are now exposed and potentially causing flow patterns that increase the rate of bank erosion (Figure 5). Erosion of the berm looks to be occurring rapidly, and the next big storm could break through the berm and flood the surrounding land. Lee said that the creek has overflowed the right bank just downstream because there is no berm there ("the levee is missing", according to the Caltrans letter).

We discussed potential solutions, such as improving the berm, allowing more space for the creek, making the turn more gradual, constructing a flood bypass to alleviate pressure, and constructing a sediment detention basin upstream. Randall said that he may be able to get rock from nearby for use in a reconstructed berm. He did not say what the potential cost would be, but perhaps it is something to pursue. One thing we did not discuss is if the current flows and sediment quantity are similar to what has been seen historically. This would be good to find out, as upstream land use changes could be increasing the sediment loads and/or flow magnitude. I have subsequently asked Lee for this information.

The second site visited was Grist Creek at the Cemetery Lane/Wattenberg Road Bridge. Due to fencing, we were unable to get into the channel. The upstream portion of the creek at this site was 25 – 30 feet wide, straight and somewhat confined, with small berms on each bank (Figure 6). The substrate looked to be mainly sand and gravels, with some cobbles, and was fairly uniform and lacking complexity and bedforms as far as I could see in the upstream direction. The upstream channel was lined with oaks and willows, but only one tree wide on each bank and very little smaller vegetation was present. No fencing was present along the upstream banks of the creek and a cow was wandering on the creek bed. There was a fence across the creek under the bridge, which Lee said was supposed to be removed before the creek started flowing.

Downstream of the bridge, the channel was more confined, with higher banks, but had the same substrate and was roughly the same width as the channel upstream (perhaps a little narrower). There was more riparian vegetation downstream, but still a lack of channel complexity (Figure 7).

At the end of this site visit, since most of the group had other obligations to attend to, I asked them to keep thinking of potential components of a multi-benefit project. Dane Downing mentioned that on Town Creek the bank is eroding near some waste water detention ponds downstream of Highway 162.

After the group split up, Lee and I visited the Highway 162 crossings over Grist Creek and Town Creek. Lee said that he was not aware of any flooding of the highway at either of the crossings, and that the highway flooding occurred to the south. At the Grist Creek crossing, the upstream channel looked to be impacted by grazing animals and there was barbed wire across the channel (Figure 8). There also was a lack of riparian vegetation and channel complexity, similar to what was seen upstream at the previous site. The substrate was mainly sand and gravel, and under the bridge there looked to be recent sediment removal, especially in the left bay (Figure 9). Downstream, the channel looked better, much narrower with overhanging vegetation and tree canopy (Figure 10).

At the Town Creek crossing, the channel had vegetated banks both upstream (Figure 11) and downstream. The creek looked in better shape than Grist Creek, but there was still a visible lack of channel complexity, with an almost flat bed composed mainly of gravel. Lee said that there had been recent excavation of material under the bridge (Figure 12). Downstream there was an undercut bank with overgrowing vegetation on the left side of the channel (Figure 13). This was the most natural stretch of channel that I saw all day.

Potential Technical Assistance:

Grist Creek: The creek needs channel complexity, riparian planting, invasive plant removal, livestock fencing, and bank improvements to keep the creek from flowing overland and across Highway 162. Also need to get livestock out of the creek.

Town Creek: Looks better than Grist Creek at the Highway 162 Bridge, but there still is a lot of sediment which creates a lack of channel complexity. Since it runs right through town, Town Creek seems like a good choice to include on a project.

Both Highway 162 bridges seem to be of adequate size to handle flows within the creeks, but the crossings need to be more thoroughly assessed to determine their capacity. The bridges are much wider than the channels upstream and downstream, creating a location for sediment deposition. A lot of sediment moving in the systems creates capacity issues and a lack of complexity in the channels (is this typical for creeks in this type of environment or is there something happening in the watershed which has increased the sediment load?). If it is not typical, what can be done to determine and address the problem?

We would need to reach out to the fisheries agencies to discuss how a restoration project could benefit steelhead.

From Google Earth, the reach of Town Creek near airport may be a good restoration target – no riparian, potential land for restoration and recreation, and on the south side of channel for better shading.

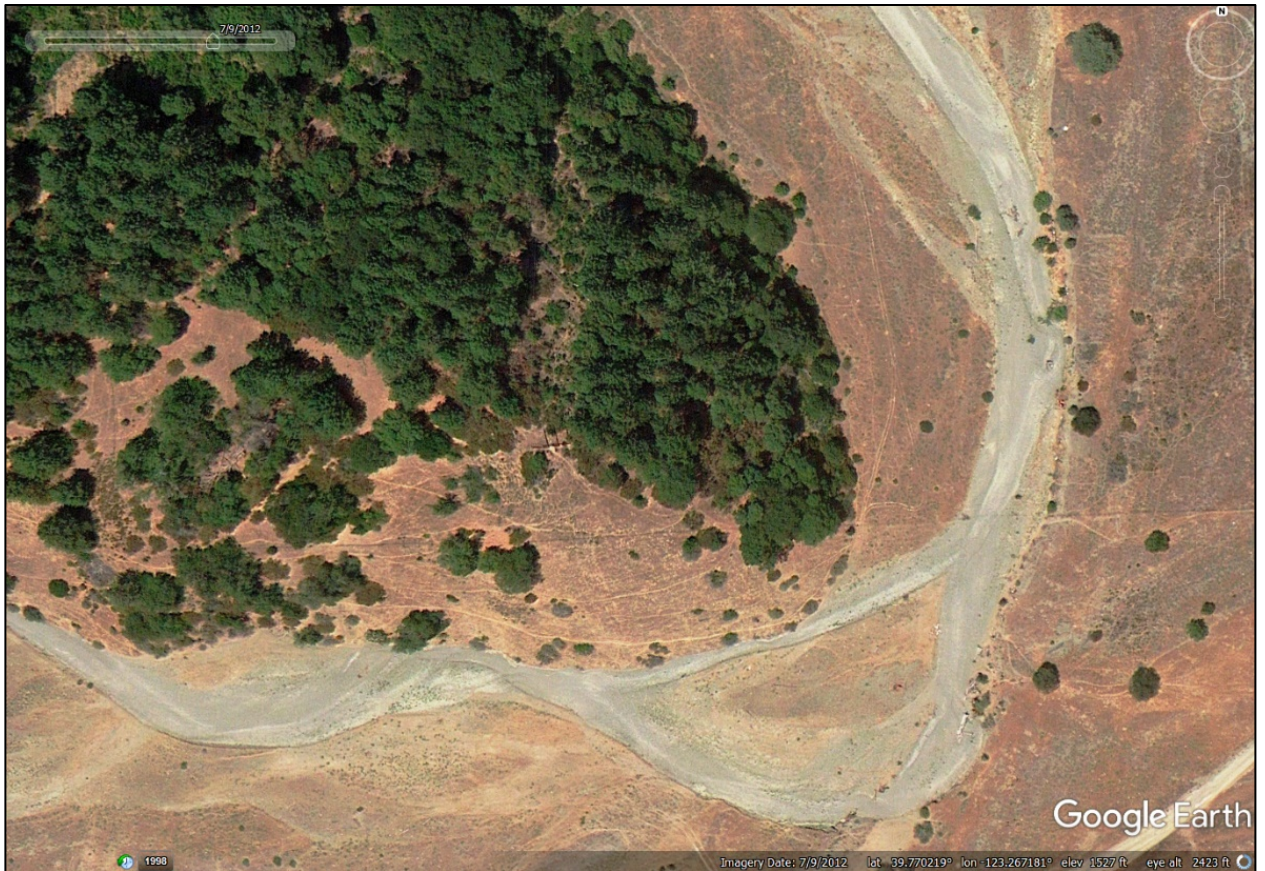


Figure 2: Grist Creek Bank Erosion Site (July 2012)



Figure 3: Grist Creek Bank Erosion Site (August 2017)



Figure 4: Grist Creek Looking Upstream (West)



Figure 5: Grist Creek Bank Erosion



Figure 6: Grist Creek at Cemetery Road (looking upstream)



Figure 7: Grist Creek at Cemetery Road (looking downstream)



Figure 8: Grist Creek at Highway 162 Bridge (looking upstream)



Figure 9: Grist Creek at Highway 162 Bridge (looking downstream)



Figure 10: Grist Creek at Highway 162 Bridge (looking downstream)



Figure 11: Town Creek at Highway 162 Bridge (looking upstream)

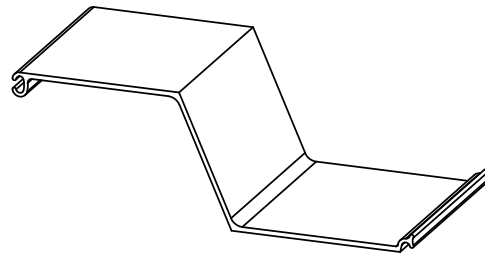


Figure 12: Town Creek at Highway 162 Bridge (looking upstream)



Figure 13: Town Creek at Highway 162 Bridge (looking downstream)

PZM-16



MAX Allowable Moment (M)	5,850 ft-lb/ft	26.02 kN-m/m
Section Modulus (Z)	3.6 in ³ /ft	194 cm ³ /m
Moment of Inertia (I)	7.1 in ⁴ /ft	970 cm ⁴ /m
Thickness (t)	0.140 in, 0.155 in	3.6 mm, 3.9 mm
Section Depth	4.0 in	102 mm
Section Width	12 in	305 mm
Design Modulus of Elasticity (E)	10 x10 ⁶ psi	68,900 Mpa
Material	6061-T6 Marine Grade Aluminum	
Standard Colors	Mill Finish	
Profile/Patented Features	Z Profile	

