Carson Water Subconservancy District
Finance Committee

A healthy watershed that meets the water needs of all users

NOTICE OF PUBLIC MEETING

DATE: February 22, 2022
TIME: 8:30 am – 1 pm
LOCATION: CWSD Conference Room /Zoom Meeting
777 E. William Street, Carson City, NV 89701

Virtual attendance will be available via ***Zoom***. To phone in call (669)900-9128 and use Meeting ID: 821 0841 6649 and Passcode: 569708

AGENDA

Please Note: *The CWSD Finance Committee may: 1) take agenda items out of order; 2) combine two or more items for consideration; and/or 3) remove an item from the agenda or delay discussion related to an item at any time. All votes will be conducted by CWSD Finance Committee members. Reasonable efforts will be made to assist and accommodate individuals with limited ability to speak, write, or understand English and/or to those with disabilities who wish to join the meeting. Please contact Catrina Schambra at (775)887-7450 or email: **catrina@cwsd.org** at least two business days in advance so that arrangements can be made.*

1. Call to Order the CWSD Finance Committee
2. Roll Call
3. For Discussion Only: Public Comment - Action may not be taken on any matter brought up under public comment until scheduled on an agenda for action at a later meeting.
4. For Possible Action: Approval of the Finance Committee Meeting Minutes of May 5, 2021
5. For Discussion Only: Review the Tentative General Fund FY 2022-23 Budget and hear presentations for proposed projects; review the Tentative Acquisition/Construction Fund FY 2022-23 Budget; and review the Tentative Floodplain Management Fund FY 2022-23 Budget
6. For Possible Action: Make recommendations for the Tentative General Fund, Acquisition/Construction Fund, and Floodplain Management Fund FY 2022-23 Budgets
7. For Discussion Only: Public Comment - Action may not be taken on any matter brought up under public comment until scheduled on an agenda for action at a later meeting.
8. For Possible Action: Adjournment

Supporting material for this meeting may be requested from Catrina Schambra at 775-887-7450 (catrina@cwsd.org) and is available on the CWSD website at

In accordance with NRS 241.020, this notice and agenda has been posted at the following locations:

Dayton Utilities Complex
34 Lakes Blvd
Dayton, NV

Lyon County Administrative Building
27 S. Main St.
Yerington, NV

Carson City Hall
201 N. Carson St.
Carson City, NV

Alpine County Administrative Building -
99 Water St.
Markleeville, CA

Minden Inn Office Complex
1594 Esmeralda Avenue
Minden, NV

Churchill County Administrative Complex
155 N Taylor St.
Fallon, NV

Carson Water Subconservancy District Office
777 E. William St., #110A
Carson City, NV

CWSD website:
https://www.cwsd.org
State public meetings website:
http://notice.nv.gov

AFFIDAVIT OF POSTING

The undersigned affirms that on or before 9:00 am on February 15, 2022 he/she posted a copy of the *Notice of Public Meeting and Agenda* for the February 22, 2022, regular meeting of the Carson Water Subconservancy District Finance Committee, in accordance with NRS 241.020; said agenda was posted at the following location:

_____

_____
SIGNATURE

Name: _____

Title: _____

Date & Time of Posting: _____

Time Schedule

CWSD FINANCE COMMITTEE
February 22, 2022
Approximate Time Schedule

8:30 am **Budget Overview**

8:40 am **Proposed COLA Adjustment for FY 22-23**

8:50 am **Income Sources (CWSD staff)**

9 am **Administrative budget for FY 2022-23 (CWSD staff)**

9:15 am **Multi-Year, On-going Projects, or Grant (CWSD staff)**

a) 7114 -00 Professional Outside Services
b) 7117 & 7118 Lost and Mud Lake Expenses
c) 7120-00 Integrated Watershed Projects
    (i)7120-07 Watershed Tour
d) 7120-41 & 42 Watershed Coordination Program (Grant)
e) 7404-00 Noxious Weeds Control
f) 7406-00 208 Water Quality Plan
g) 7440-00 FEMA Floodplain Mapping Program MAS # 11 (Grant)
h) 7441-00 FEMA Floodplain Mapping Program MAS # 12 (Grant)
i) 7442-00 FEMA Floodplain Mapping Program MAS # 13 (Pending Grant)
j) State Park – Aquatic Trail (Grant)
k) NDEM/ USBR WaterSmart – (Pending Grant)
l) 7600-09Alpine County- CASGEM & Mesa Study (Grant)
m) 7610-10 Regional Pipeline Payment to Douglas County
n) 7620-11 Regional Pipeline Payment to Carson City
o) 7500-00 USGS Stream Gage
p) 7508-00 USGS Do. Co. WQ & GW Monitoring
q) 7524-00 USGS Water Level & Quality – Churchill County
r) 7526-00 USGS Eagle/Dayton/Churchill Basins
s) 7529-00 USGS Regional Water Resource Study 2022-2024

9:45 - 10 am **BREAK**

10 am **Carson River Projects**

(1) Carson Valley Conservation District Projects
(2) Dayton Valley Conservation District River Project
(3) Lahontan Conservation District
(4) River Wranglers - Carson River Workdays
(5) Alpine Watershed Group Watershed Programs

10:50 am **New Projects**

(6) The Nature Conservancy (River Fork Ranch)
(7) Carson City Pollinator Gardens
(8) Churchill County Dixie Valley Study

11:20 am **Acquisition/Construction Budget for FY 2022-23**

Floodplain Management Budget for FY 2022-23

11:30 am **Review Budgets and Make Recommendations to the Board**

Agenda Item #4

Minutes of last Finance Committee Meeting

DRAFT

CARSON WATER SUBCONSERVANCY DISTRICT
FINANCE COMMITTEE

DRAFT Meeting Minutes
May 5, 2021, 10am

Committee Members Present:
David Griffith, Alpine County
Jack Jacobs, Douglas County
Ernie Schank, Churchill County
Lisa Schuette, Carson City
Mike Workman, Lyon County

Staff Present:
Edwin James, General Manager
Catrina Schambra, Secretary to the Board

Others Present:
Patrick King, CWSD Legal Counsel
Darcy Phillips, River Wranglers

This meeting of the CWSD Finance Committee was held via Zoom and was called to order at 10am by Committee Member Schank. Roll call was taken and a quorum of the Finance Committee members were present.

Item #3 - Public comment: None

Item #4 - For Possible Action: Approve Finance Committee Meeting Minutes of Mar. 1, 2021

> *Director Jacobs made a motion to approve the minutes of the Finance Committee meeting of March 1, 2021. The motion was seconded by Committee Member Griffith and approved unanimously.*

Item #5 - For Possible Action: Review funding additional projects for FY 2021-22

Mr. James explained that an additional $40,000 is available in the FY 21-22 Budget that can go to funding additional projects. Based on comments he received by Board members he suggested the following allocations:

- $25,000 to Acquisition/Construction Fund (for BOR grant match)
- $10,000 to River Wranglers for increased educational programs
- $5,000 towards Ash Canyon Trail maintenance project

Director Schank comments that he thinks the RW project is a great idea. He has spoken to his wife about it, who is a retired teacher, and she agrees.

Committee Member Griffith opposes considering granting more funding without putting it out to all who requested funds originally. He fully supports River Wranglers and their educational projects – and does not oppose the project per se but thinks it is unfair to other groups to not allow them to request these funds.

Mr. James agrees that Committee Member Griffith is right that this is unusual, but the issue is the time restraint. Any leftover funds usually get rolled over into preliminary planning for next year or capital projects. We have never done this before, and this is only being brought forward because of the requests from Board members at the April Board meeting. Because CWSD must finalize the FY 2021-22 Budget at the May Board meeting, Mr. James is looking for direction from the committee.

There is discussion regarding the proposal from River Wranglers (RW) led by Director Jacobs. He asked if the proposal by RW will be simply a study or will there be action in this project. Darcy Phillips (RW Executive Director) stated that developing the curriculum is straight forward. What will take most of the time is coordinating this with teachers and schools. Ernie suggests that the curriculum gained from the Watershed Wednesdays Forum could be used and with one teacher at each school as a contact, it should not cost very much or take very long to get started quickly. He is very excited about this idea and thinks it could develop into a nationwide educational model! Director Jacobs supports the idea. He says the focus is on the children, but it will have a community impact. Director Schank believes this is a natural progression on the Watershed Wednesdays outreach. This is just building on that idea.

Director Workman has a few reservations and suggests we call it a Pilot Program for the first year. He fully supports River Wranglers programs in general and thinks this project has great potential. Director Schank agrees the Pilot Program designation is a good idea. Director Schuette 100% supports the RW project. An educational component is a key to the future of the watershed, and she thinks this will be an exceptional program! As a former teacher she sees the target age group is 6th & 7th Grade students but sees value in a short unit geared to 2nd Graders as an opportunity to plant the proper seed of watershed education.

Mr. James reminded the committee that there is $40,000 available to allocate. He confessed his bias is to grow the capital funds and his suggestions are based on that. Director Schuette had asked about the possibility of funding trails projects since none were approved so far. Director Schank had requested the possibility of further educational outreach funding resulting from Watershed Wednesdays and growing on that success.

Director Schank asked how he had arrived at the Ash Canyon Trail Project out of the 3 that were presented. Mr. James explained that it was the only project that included water quality in proposal. There was discussion on how trail projects align with our mission. Should that be our focus? Director Workman wonders why these types of projects are not more suited for city funding and their responsibility. Committee Member Griffith states trails do not really affect water quality and CWSD should stick to their wheelhouse for funding projects. Director Jacobs agrees, we should discuss what best affects our mission in all trail's requests. Mr. James says that informational signs and the Aquatic Trail are grant funded projects. We can be promoting these types of projects by finding grants to fund them.

Director Schuette appreciates the candor of this committee and agrees our Mission Statement needs to be our guide in our projects. She believes signage ties into our educational outreach. Mr. James states the purpose of the CRC (Caron River Coalition) is to coordinate with other groups. A lot of our watershed projects come from the CRC and we look for grant funding to do these projects (i.e. the Aquatic Trail project).

> *Director Jacobs made a motion to adjust the FY 21-22 Final Budget to add $10,000 funding for the River Wranglers "School/Student Interconnectedness in the Carson River Watershed" Project and $30,000 going to the Acquisition/Construction Fund. This will be the single recommended adjustment to the FY 21-22 Budget as presented in Item #6. The motion was seconded by Director Workman and approved 4/1/0 with Committee Member Griffith opposed.*

Item #6 - For Possible Action: Approval of the General Fund, Acquisition/Construction Fund, and Floodplain Management Fund FY 2021-22 *DRAFT* Final Budgets

Director Schank asked Mr. James if there were as other considerations to be reviewed in the Final FY 21-22 Budget to be recommended to the Board for approval at the May 19, 2021 meeting. Mr. James explained that the changes approved in Item 5 will be the only changes recommended to the Board for approval. He noted that FEMA MAS 12 funds have not been included as they have not been awarded yet. The funds will be added to the budget when received. FEMA MAS grant expenses are 100% covered by the grant so it does not affect our net budget.

No action taken.

Item #6 - Public comment: None

The meeting adjourned at 10:36am.

Respectfully submitted,
Catrina Schambra
Secretary to the Board

Agenda Item #5

CARSON WATER SUBCONSERVANCY DISTRICT

TO: FINANCE COMMITTEE MEMBERS

FROM: EDWIN D. JAMES

DATE: February 22, 2022

SUBJECT: Agenda Item #5 For Possible Action - Review the Tentative General Fund FY 2022-23 Budget and hear presentations for proposed projects; review the Tentative Acquisition/Construction Fund FY 2022-23 Budget; and review the Tentative Floodplain Management Fund FY 2022-23 Budget

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DISCUSSION:

Attached are the Tentative FY 22-23 budgets for the General Fund, Acquisition/Construction Fund, Floodplain Management Fund, and the proposed funding requests.

Each of the tentative budgets is divided into three columns. The left column shows the proposed budget for FY 2022-23, the center column shows the adopted budget for FY 2021-22, and the right column shows the projected actual income and expenses for FY 2021-22. For the General Fund Tentative Budget, the numbers in blue are grant funds. The draft budget includes transferring $100,000 to the Acquisition/Construction Fund and $16,800 to the Floodplain Management Fund. Past Board direction was at least $75,000 would be transferred from the General Fund to the Acquisition/Construction Fund, and funding from Storey County would go into the Floodplain Management fund.

Attached is a pie chart that shows the percentage of expenses in the General Fund by categories of Administration, Projects, Studies, Programs, Projects Funded by Grants, Programs Funded by Grants, and Studies Funded by Grants.

The projected income from Ad Valorem taxes is staff's best guess. The actual projected tax figures from the State will not be available until March 25.

STAFF RECOMMENDATION:

Provide direction to staff to submit balanced budgets for FY 2022-23 Tentative General Fund, Tentative Acquisition/Construction Fund, and Tentative Floodplain Management Fund to CWSD March Board meeting.

CARSON WATER SUBCONSERVANCY DISTRICT
Tentative General Fund

	Proposed Tentative Budget	Approved Final Budget	Projected Actual			
	Jul '22 - Jun '23	Jul '21 - Jun '22	Jul '21 - Jun '22	Notes		
Income						
5007-00 · Storey County Ad Valorem	16,734.64	0.00	16,091.00	based on 4.0 %		
5008-00 . Alpine County	11,880.03	10,897.74	11,423.11	error in the budget		
5009-00 · Churchill County Ad Valorem	233,980.94	224,981.67	224,981.67	based on 4.0 %		
5010-00 · Lyon County Ad Valorem	208,252.11	200,242.41	200,242.41	based on 4.0 %		
5011-00 · Douglas County Ad Valorem	677,029.27	650,989.68	650,989.68	based on 4.0 %		
5012-00 · Carson City Ad Valorem	494,493.16	477,771.17	477,771.17	based on 4.0 %		
5022-00 · Mud Lake Water Lease	58,000.00	55,500.00	55,000.00			
5023-00 · Lost Lake Water Lease	0.00	0.00	0.00			
5031-00 · Interest Income - St Pool Reg	1,619.04	2,025.41	0.00	0.25%		
5050-13 · Watershed Coord Grant IV 19-22	8,175.00	86,925.00	91,231.00	Grant	Fed 2021-22	Fed 2022-23
5050-13 · Watershed Coord Grant V 2022	70,166.00	0.00	49,554.00	Grant	886,829.00	792,730.00
5050-07 ·CRC Donation	0.00	0.00	0.00			
Aquatic Trail Grant	50,460.00	85,000.00	6,950.00	Grant		
NDEM - USBR WaterSmart Grant	0.00	0.00	0.00	Grant		
5058-04 ·208 Water Quality AG	30,050.00	0.00	9,950.00	Grant		
5060-00 · Misc. Income / Watershed Tour	0.00	6,000.00	0.00			
5082-00 · CASGEM	800.00	400.00	1,600.00	Grant		
5083-00 · Alpine Co Mesa GW Study	800.00	300.00	1,600.00	Grant		
6005-00 · FEMA - MAS # 10	0.00	85,486.00	141,325.00	Grant		
6006-00 · FEMA - MAS # 11	72,494.00	417,395.00	445,915.00	Grant		
FEMA MAS 12	569,560.00	0.00	141,904.00	Grant		
FEMA MAS 13	0.00	0.00	0.00	Grant		
Total Income	2,487,759.55	2,303,914.08	2,510,437.04			
Expense						
ADMINISTRATIVE EXPENSES:				Notes		
7015-00 · Salaries & Wages	503,756.00	422,280.00	452,780.00			
7020-00 · Employee Benefits	185,607.00	179,170.00	172,000.00			
7021-00 · Workers Comp Ins.	1,100.00	2,300.00	970.00			
7101-00 · Director's Fees	18,000.00	16,000.00	14,000.00			
7102-00 · Insurance	5,400.00	5,100.00	5,106.00			
7103-00 · Office Supplies	3,200.00	2,000.00	3,200.00			
7104-00 · Postage	1,500.00	1,250.00	1,400.00			
7105-00 · Rent	39,300.00	38,885.00	38,880.00			
7106-00 · Telephone	10,000.00	6,400.00	7,000.00			
7107-00 · Travel-transport/meals/lodging	16,000.00	16,000.00	14,000.00			
7108-00 · Dues & Publications	1,200.00	1,400.00	1,200.00			
7109-00 · Miscellaneous Expense	1,000.00	1,000.00	1,000.00			
7110-00 · Seminars & Education	1,700.00	1,500.00	1,200.00			
7111-00 · Office Equipment	3,000.00	3,000.00	3,000.00			
7112-00 · Bank Charges	50.00	50.00	50.00			
7115-00 · Accounting	16,800.00	16,800.00	14,100.00			
7116-00 · Legal	30,000.00	32,000.00	24,000.00			
Subtotal-Administrative Expenses	837,613.00	745,135.00	753,886.00			

CARSON WATER SUBCONSERVANCY DISTRICT
General Fund

Multi Year, Studies, and Grants	Proposed Tentative Budget	Revised Final Budget	Projected Actual	
PROJECTS:	Jul '22 - Jun '23	Jul '21 - Jun '22	Jul '21 - Jun '22	Notes
7114-00 · Professional Outside Services	30,000.00	30,000.00	28,000.00	
7117-00. Lost Lakes Expenses	14,700.00	14,000.00	14,000.00	
7118-00 · Mud Lake O & M	1,400.00	1,250.00	1,250.00	
7120-00 · Integrated Watershed Plan	0.00		0.00	
7120-07 · Watershed Tour	7,000.00	6,000.00	0.00	
7120-33 Watershed Coord Grant IV 19-21	8,175.00	28,800.00	31,884.00	Grant
7120-33 Watershed Coord Match IV 19-21	0.00	16,608.00	210.98	Grant
7120-41 Watershed Coord Grant V 2022	16,765.00	0.00	11,550.00	Grant
7120-42 Watershed Coord Match V 2022	1,312.00	0.00	1,000.00	Grant
7404-00 · Noxious Weeds Control	75,000.00	75,000.00	75,000.00	
7406-00 · 208 Planning - AG Runoff	26,533.00	0.00	8,150.00	Grant
7433-10 · State Park Aquatic Trail	22,660.00	80,000.00	0.00	Grant
7439-00 · FEMA MAS #10	0.00	68,905.00	123,934.00	Grant
7440-00 · FEMA MAS #11	38,525.00	384,995.00	424,980.00	Grant
7441-00 · FEMA MAS #12	526,350.00	0.00	106,726.00	Grant
7442-00 · FEMA MAS #13	0.00	0.00	0.00	Grant
7500-00 · USGS Stream Gage Contracts	81,089.00	77,022.00	77,022.00	
7508-03 · USGS Do. Co. & Lyon Co GW Collection	17,580.00	16,800.00	16,800.00	
7524-01 · USGS GW level & WQ Churchill Co.	4,921.33	5,930.00	3,133.17	
7526-01 · USGS Middle Carson Groundwater	15,250.00	$ 15,250.0	$ 15,250.0	
7529-01 · USGS Water Resources 2022-2024	44,375.00	$ -	0.00	
NDEM - USBR WaterSmart Grant	0.00	$ -	0.00	Grant
7610-10 · Douglas Co Regional Pipeline	125,000.00	125,000.00	125,000.00	
7620-11 . Regional Pipeline Payment to CC	125,000.00	125,000.00	125,000.00	
Subtotal Multi Year & On-going Projects	1,181,635.33	1,070,560.00	1,188,890.15	

Counties and River Projects				Notes
7215-00 . Sierra NV Journeys - Family Night	0.00	3,279.00	3,279.00	
7332-00 · Carson River Work Days	0.00	36,000.00	30,000.00	
7337-00 · Carson River Restoration			0.00	
7337-25 · CVCD Bioengineering 2021-22	0.00	75,000.00	75,000.00	
7337-26 · CVCD West Fork Bank Stab 2021-22	0.00	100,000.00	100,000.00	
7337-34 · DVCD Bank Stab & Dayton Bridge	0.00	100,000.00	100,000.00	
7337-04 · LCD Clearing & Sand Bar Removal	0.00	25,000.00	25,000.00	
7600-05 · Alpine Co. Watershed Group.	0.00	25,000.00	25,000.00	
7600-09 · CASGEM	5.00	5.00	5.00	
7600-10 · Mesa GW Measurement Project	2.00	2.00	2.00	
7640-20 . Lahontan Valley WTR Level 2021-2024	14,500.00	14,500.00	14,500.00	
7640-18 . Dixie Valley WTR LvL measurement	0.00	23,000.00	23,000.00	
7640-19 TCID Carson Diversion Dam Gate	0.00	50,000.00	50,000.00	
Subtotal Carson River Projects	14,507.00	451,786.00	445,786.00	

CARSON WATER SUBCONSERVANCY DISTRICT
General Fund

New Projects

	Proposed to the Fin Committee	Notes
7337-26 · CVCD West Fork Bank Stab 2021-22	$ 210,000	
7640-18 . Dixie Valley WTR LvL measurement	$ 23,000	
7332-00 · Carson River Work Days	$ 26,000	
7337-34 · DVCD Bank Stab & Dayton Bridge	$ 118,000	
7337-04 · LCD Clearing & Sand Bar Removal	$ 27,000	
7600-05 · Alpine Co. Watershed Group.	$ 25,000	
Carson City Pollinator Gardens	$ 7,200	
TNC Riparian Reveg & bank Stabilization	$ 25,142	

Total Expenses for New Projects		461,342.00	0.00	0.00
Total Expenditures		2,495,097.33	2,267,481.00	2,388,562.15
Net Ordinary Income		-7,337.78	36,433.08	121,874.89
Other Income/ Other Income				
	Beginning Equity	*647,616.89*	*578,688.35*	646,833.00 *
	Transfer from Acqu/Const. Fd to Gen Fd.	*0.00*	*0.00*	0.00
		647,616.89	*578,688.35*	*646,833.00*
Total Other In	Other Expenses			
	8008-00 · Preliminary Planning	400,000.00	400,000.00	0.00
	Transfer from Gen. Fd. to Floodplain Fd.	16,800.00	0.00	16,091.00
	Transfer from Gen. Fd. to Acqu./Const. Fd.	100,000.00	105,000.00	105,000.00
Total Other Expenses		516,800.00	505,000.00	121,091.00
Net Other Income		130,816.89	73,688.35	525,742.00
ENDING BALANCE		123,479.11	110,121.43	647,616.89

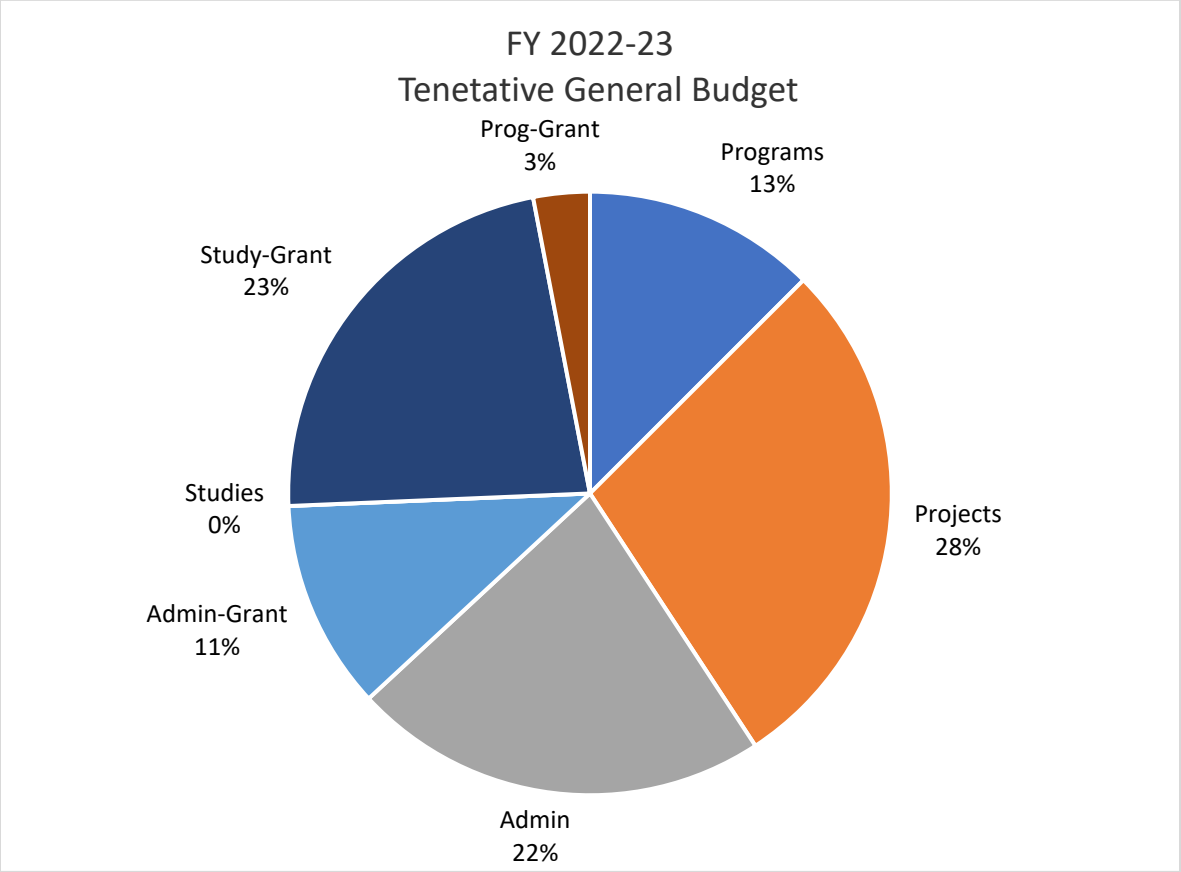
* Based on the 2020-21 Audit
4 percent $ 115,803.89

CARSON WATER SUBCONSERVANCY DISTRICT
ACQUISITION/CONSTRUCTION FUND
2022-23 Tentative Budget

ACQUISITION/CONSTRUCTION FUND	Proposed Tenetative Budget	Approved Final Budget	Projected Actual
	Jul '22 - Jun '23	**Jul '21 - Jun '22**	**Jul '21 - Jun '22**
Ordinary Income/Expense			
Income			
5032-01 · Interest Inc - Inv. Pool	2,476.15	2,790.67	1,160.00
Total Income	2,476.15	2,790.67	1,160.00
Expense			
Upstream Storage Evaluation	0.00	0.00	0.00
Right-A-Way Lyon County Utility to Silver Springs	100,000.00	25,000.00	25,000.00
Proposed USBR Regional Watershed Management Plan	0.00	25,000.00	20,805.00
Construction Projects	800,000.00	800,000.00	0.00
Total Expense	900,000.00	850,000.00	45,805.00
Net Ordinary Income	-897,523.86	-847,209.33	-44,645.00
Other Income/Expense			
Other Income			
8000-01 · Beginning Equity	**990,458.00**	**797,333.00**	**930,103.00** *
8001-01 · Transfer In-General Fund	100,000.00	105,000.00	105,000.00
Total Other Income	1,090,458.00	902,333.00	1,035,103.00
* **Based on 2020-21 Audit**			
Ending Equity	**192,934.15**	**55,123.67**	**990,458.00**

CARSON WATER SUBCONSERVANCY DISTRICT
FLOODPLAIN MANAGEMENT FUND
FY 2022-23 Tentative Budget

FLOODPLAIN MANAGEMENT FUND		Proposed Tenetative Budget	Adopted Final Budget	Projected Actual
		Jul '22- Jun '23	Jul '21- Jun '22	Jul '21- Jun '22
Ordinary Income/Expense				
Income				
5032-01 · Interest Inc - Inv. Pool	Based on 0.25%	783.50	1,164.19	440.00
Total Income		783.50	1,164.19	440.00
Expense				
7203-03 Floodplain Planning		300,000.00	300,000.00	0.00
TCID Flood Project		0.00	0.00	35,000.00
Total Expense		300,000.00	300,000.00	35,000.00
Net Ordinary Income		-299,216.50	-298,835.81	-34,560.00
Other Income/Expense				
Other Income				
8000-01 · Beginning Equity *		313,400.00	332,627.00	331,869.00
8001-01 · Transfer In-General Fund		16,800.00	0.00	16,091.00
Total Other Income		330,200.00	332,627.00	347,960.00
*	Based on the 2020-21 Audit			
Ending Equity		30,983.50	33,791.19	313,400.00


FY 2022-23
Tenetative General Budget
Prog-Grant
3%
Programs
13%
Study-Grant
23%
Studies
0%
Projects
28%
Admin-Grant
11%
Admin
22%

(1) Carson Valley Conservation District Projects

CARSON WATER SUBCONSERVANCY DISTRICT
REQUEST FOR FUNDING FY 2022-23

APPLICANT: Carson Valley Conservation District

Name

1702 County Rd., Ste. A

Address

Minden	Douglas
City	County
Nevada	89423
State	Zip Code

Richard.wilkinson@nv.nacdnet.net	775-782-3661 ext. 3830
Email	Telephone #

APPLICANT'S AGENT (if different from Applicant):

Richard Wilkinson & Mike Hayes

Name

Address

City	County
State	Zip Code

Mike.hayes@nv.nacdnet.net	775-782-3661 ext. 3820
Email	Telephone #

PROJECT NAME: Genoa River Restoration & Flood Damage Recovery Phase 3

PROJECT LOCATION/ADDRESS:

Multiple Locations North of Genoa

Douglas County, Nevada

PROJECT DESCRIPTION: Briefly describe the project. Provide maps, drawings, photographs or other information. Additional sheets may be attached.

The Carson Valley Conservation District will attempt to restore vertical cutbanks that are approximately 1/4 of a mile long and 12 to15 feet high. This unstable section of river has migrated into local agricultural fields causing impacts to local producers. The overall goal of this project may be to use a combination of traditional rip-rap and bioengineering techniques to stabilize the soil, improve water quality and re-establish desirable vegetation for wildlife. The district considers this project a high priority since this area was severely impacted by recent flooding events in 2017. The district would like to partner with CWSD, CTWCD, NDOW, USFWS, nevada Dream Tag, Douglas County and NDEP to complete these river restoration projects by the spring of 2023. The district already contracted both a fluvial Geomorphologist and Engineer for this area. The Geomorphological Assessement is complete along with Engineered Plans. The section 106 review, endangered species evaluations have already been completed in phase 3 for the proposed project sites.

PROJECT GOALS AND BENEFITS: Briefly describe the project goals and benefits to be realized if the project is implemented, and how it is consistent with the CRASP and/or CRRFMP. Additional sheets may be attached.

- Improve water quality stabilize the entire project reach
- Stabilize eroding banks
- Establish native or desirable vegetation
- Improve wildlife habitat
- Establish meander bends to dissipate hydraulic energy if feasible
- Help protect ranch irrigation infrastructure improve overall function
- Assist local agricultural producers with ability to grow food and fiber
- Keep riverbanks intact minimizing sediment deposition and impacts downstream
- Multi agency input and contribution coordinated effort to improve river conditions

TOTAL ESTIMATED PROJECT COST: $735,000.00

AMOUNT REQUESTED FROM CWSD: $210,000.00

SOURCE OF OTHER FUNDS: List all other sources of funds to be used to match funds requested from CWSD. List the provider of the matching funds and the amount requested from each provider.

Carson Truckee Water Conservancy District	$50,000.00 Pending
Carson Water Subconservancy District	$210,000.00 Pending
Nevada Department of Environmental Protection	$125,000.00 Approved
Douglas County	$100,000.00 Approved
Nevada Department of Water Resources	$150,000.00 Pending
Nevada Dream Tag Fund	$25,000.00 Approved
Nevada Department of Wildlife	$25,000.00 Approved
Carson Valley Landowners Multiple (Cash/In-kind)	$50,000.00 Approved

ESTIMATED DATE PROJECT TO BEGIN: **July 1, 2022**

ESTIMATED TIME TO COMPLETE PROJECT: **June 30, 2023**
(If completion date is greater than a year, please indicate how much funding is needed in each fiscal year.)

PERMIT REQUIREMENTS: If your project requires a permit, license and/or approval from a governmental agency to proceed, please provide the current status of each requirement. If approval has not been requested or is in progress, please provide the estimated date on which approval can be expected. Additional sheets may be attached.

United State Army Corp. of Engineers	Nationwide Permit
Nevada Department of Environmental Protection	Working in Waterways Permit
Nevada Department of Environmental Protection	401 Certification Permit
Nevada Division of State Lands	Right of Entry Permit
State Historic Preservation Office	Archeological Section 106
CVCD Landowner Access	Right of Entry Permits

OTHER INFORMATION: Provide any other information that may be important to the approval of this application.

The district has already obtained all necessary permits from permitting agencies. The district may have to file for an extension on the State Lands Right of Entry Permit and the NDEP Working in Waterways Permit.

SIGNED: *Richard Wilkinson*

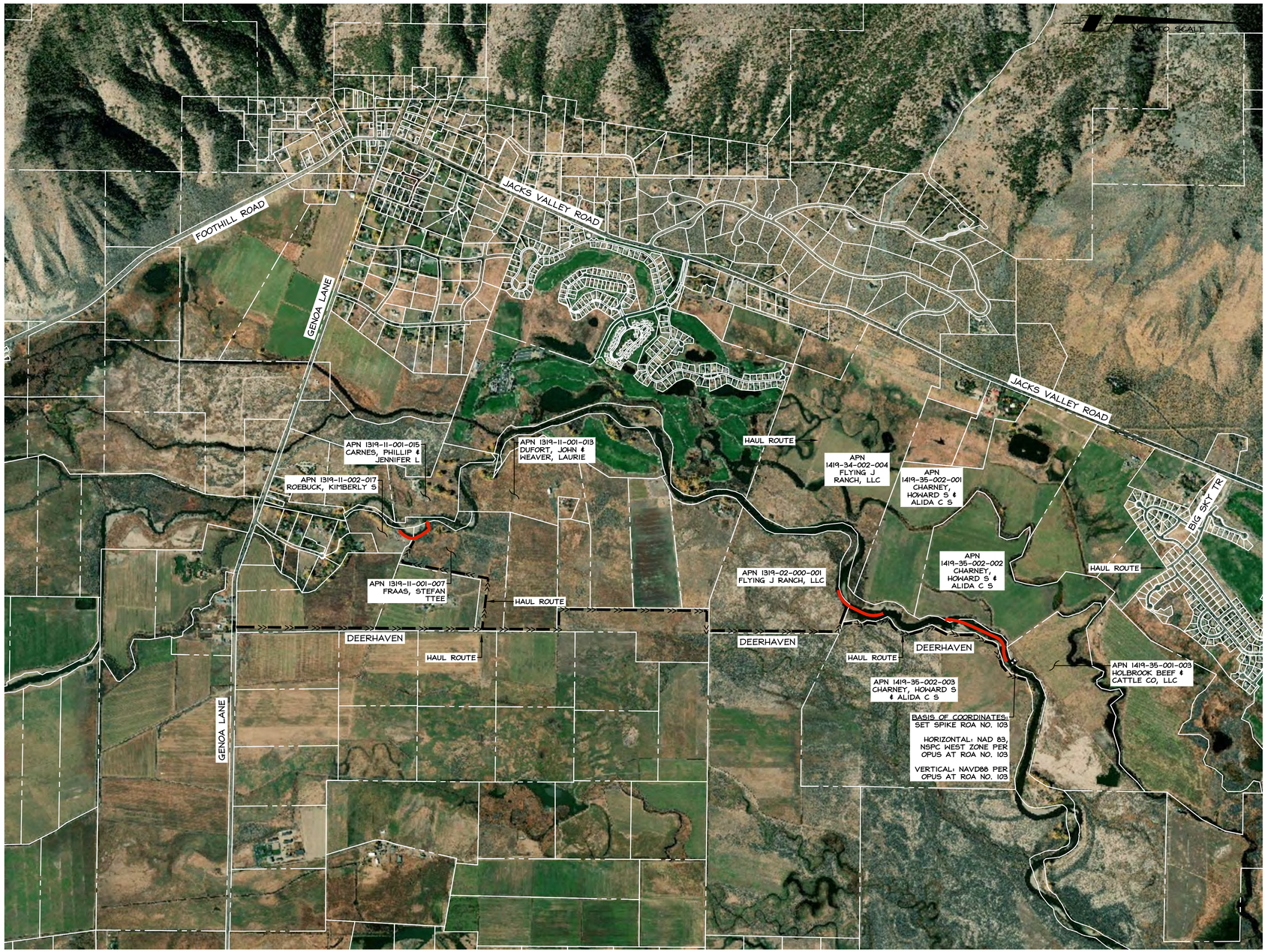
NAME: Richard Wilkinson

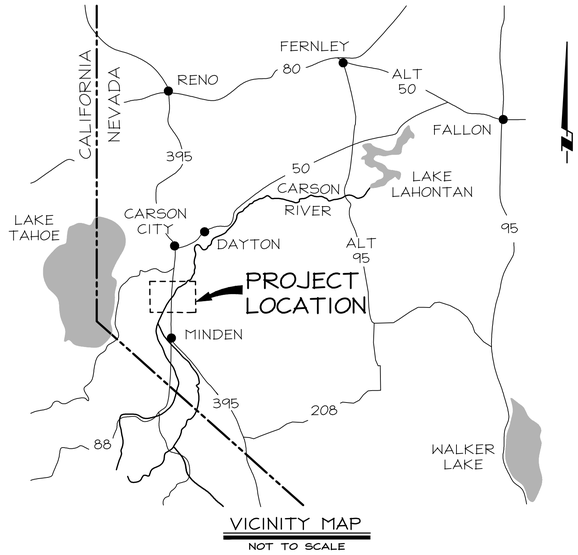
TITLE: Grant Manager/River Coordinator

DATE: 02/02/2022

Carson Water Subconservancy District reserves the right to deny any and/or all applications for funding.

IMPROVEMENT PLANS FOR
2022 CARSON RIVER BANK STABILIZATION PROJECTS
CARSON VALLEY CONSERVATION DISTRICT





VICINITY MAP
NOT TO SCALE

SHEET INDEX

AFFECTED PROPERTIES

APN: 1319-11-001-007 FRAAS, STEFAN TTEE
APN: 1319-11-002-017 ROWBUCK, KIMBERLY S
APN: 1319-02-000-001 FLYING J RANCH, LLC
APN: 1419-35-002-001 CHARNEY, HOWARD S & ALDIA C S
APN: 1419-35-002-003 CHARNEY, HOWARD S & ALDIA C S

NOTE

PROPERTY LINES SHOWN ARE APPROXIMATE ONLY AND DO NOT REPRESENT A BOUNDARY SURVEY.

CALL BEFORE YOU DIG 1-800-227-2600

PERMIT SET 10.15.2021

NO.	DATE	REVISION BLOCK	BY

R|O|Anderson
WWW.ROANDERSON.COM
MINDEN
1603 Esmeralda Ave
P.O. Box 2229
Minden, NV 89423
p 775.782.2322
f 775.782.7084
RENO
9060 Double Diamond Pkwy, Unit 1B
Reno, NV 89521
p 775.782.2322
f 775.782.7084

2022 CARSON RIVER BANK STABILIZATION PROJECTS
CARSON VALLEY CONSERVATION DISTRICT

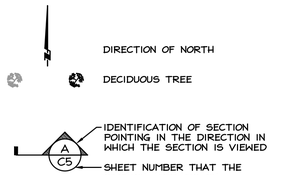
COVER SHEET

PROFESSIONAL ENGINEER - STATE OF NEVADA - NAGASEKHAR R. GORLA - CIVIL - No. 18557 - Exp: 06/30/23

DRAWN: JT/MAH	JOB: 1702-004
ENGINEER: NRG	DRAWING: SEE PLOT STAMP
SCALE: NOT TO SCALE	SHEET: C1
DATE: 10.15.2021	OF: 7 SHEETS

SYMBOLS

EXISTING NEW



ABBREVIATIONS

AASHTO..... AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS
AB..... AGGREGATE BASE
AC..... ASPHALT CONCRETE
ADA..... AMERICANS WITH DISABILITIES ACT OF 1990
ADT..... AVERAGE DAILY TRAFFIC
ALT..... ALTITUDE
ANSI..... AMERICAN NATIONAL STANDARDS INSTITUTE
APN..... ASSESSOR'S PARCEL NUMBER
APPROX..... APPROXIMATELY
APWA..... AMERICAN PUBLIC WORKS ASSOCIATION
ARV..... AIR RELEASE VALVE
ASCE..... AMERICAN SOCIETY OF CIVIL ENGINEERS
ASTM..... AMERICAN SOCIETY OF TESTING AND MATERIALS
@..... AT

BC..... BEGIN CURVE
BCR..... BEGINNING OF CURB RETURN
BFE..... BASE FLOOD ELEVATION
BLD..... BUILDING
BOW..... BOTTOM OF WALL
BS..... BOTH SIDES
BW..... BACK OF WALK
BW..... BARBED WIRE

CAP..... CORRUGATED ALUMINUM PIPE
CAPA..... CORRUGATED ALUMINUM PIPE ARCH
C&G..... CURB AND GUTTER
CB..... CATCH BASIN
CC..... CARSON CITY
CF..... CUBIC FOOT
CHL..... CHAIN LINK
CI..... CURB INLET(THROUGH)
CL..... CENTER LINE
CMP..... CORRUGATED METAL PIPE
CO..... CLEAN OUT
COMP..... COMPACTION
CON..... CONIFEROUS
CRN..... CROWN OF ROAD
CSP..... CORRUGATED STEEL PIPE
CSPA..... CORRUGATED STEEL PIPE ARCH
CUL..... CULVERT INVERT
CY..... CUBIC YARD

°..... DEGREES
D..... DIRT
DEC..... DECIDUOUS
DF..... DEEPEND FOOTING
DG..... DECOMPOSED GRANITE
DI..... DROP INLET
DIA(Φ)..... DIAMETER

E..... EAST
EA..... EACH
EC..... END CURVE
ECR..... END OF CURB RETURN
ED..... EDGE
EGL..... ENERGY GRADE LINE
ELEC..... ELECTRICAL
ELEV..... ELEVATION
EP..... EDGE OF PAVEMENT
EPA..... ENVIRONMENTAL PROTECTION AGENCY
EVC..... END VERTICAL CURVE
EW..... EDGE OF WATER
EX..... EXISTING

F..... FAHRENHEIT
FC..... FACE OF CURB
FC..... FIRE CONNECTION
FEMA..... FEDERAL EMERGENCY MANAGEMENT AGENCY
FF..... FINISHED FLOOR
FG..... FINISHED GRADE
FH..... FIRE HYDRANT
FL..... FLOWLINE
FNC..... FENCE
FND..... FOUND MONUMENT, CORNER OR CONTROL POINT
FS..... FIRE STUB
FT(') ..... FOOT(FEET)

G..... GAS
G..... GATE
GA..... GUY ANCHOR
GB..... GRADE BREAK
GID..... GENERAL IMPROVEMENT DISTRICT
GP..... GUY POLE
GPM..... GALLONS PER MINUTE
GR..... GRAVEL
GS..... GROUND SHOT

H/C..... HANDICAP
HDPE..... HIGH DENSITY POLYETHYLENE
HDS..... HYDRAULIC DESIGN SERIES
HEC..... HYDRAULIC ENGINEERING CIRCULAR
HERCP..... HORIZONTAL ELLIPTICAL REINFORCED CONCRETE PIPE
HGL..... HYDRAULIC GRADE LINE
HH..... HAND HOLE
HORIZ..... HORIZONTAL
HH..... HOG WIRE

ID..... INNER DIAMETER
IE..... INVERT ELEVATION
IN(") ..... INCH
INC..... INCORPORATED
INTX..... INTERSECTION
IRRIG..... IRRIGATION
ITE..... INSTITUTE OF TRANSPORTATION ENGINEERS

LAT..... LATERAL
LOS..... LEVEL OF SERVICE
LS..... LUMP SUM
LT..... LIGHT

M..... METER
MAX..... MAXIMUM
MGD..... MILLION GALLONS PER DAY
MGSD..... MINDEN GARDNERVILLE SANITATION DISTRICT
MH..... MANHOLE

M..... METER
MAX..... MAXIMUM
MGD..... MILLION GALLONS PER DAY
MH..... MANHOLE
MI..... MILE
MIN..... MINIMUM
MISC..... MISCELLANEOUS
MIX..... MIXED
MPH..... MILES PER HOUR
MUTCD..... MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES

N..... NORTH
NAC..... NEVADA ADMINISTRATIVE CODE
NDEP..... NEVADA DIVISION OF ENVIRONMENTAL PROTECTION
NDOT..... NEVADA DEPARTMENT OF TRANSPORTATION
NE..... NORTHEAST
NEC..... NATIONAL ELECTRIC CODE
NFIP..... NATIONAL FLOOD INSURANCE PROGRAM
NSF..... NATIONAL SANITATION FOUNDATION
NO..... NUMBER
NOAA..... NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NOI..... NOTICE OF INTENT
NRCS..... NATIONAL RESOURCE CONSERVATION SERVICE
NRS..... NEVADA REVISED STATUTES
NTS..... NOT TO SCALE
NW..... NORTHWEST
NWS..... NATIONAL WEATHER SERVICE
OC..... ON CENTER
OD..... OUTER DIAMETER
OSHA..... OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970
O/H..... OVERHEAD

±..... PLUS OR MINUS
P..... POWER
PC..... POINT OF CURVATURE
PDL..... PADDLE
PE..... PROFESSIONAL ENGINEER LICENSED BY THE STATE OF NEVADA
PE..... POLY ETHYLENE
PED..... PEDESTAL
PEDX..... PEDESTRIAN CROSSING
PK..... PARKING
%..... PERCENT
P/L..... PROPERTY LINE
PMF..... PROBABLE MAXIMUM FLOOD
PNT..... POINT
PNT..... PAINT MARK
PO..... PUSH ON
PSI..... POUNDS PER SQUARE INCH
PT..... POINT OF TANGENCY
PUE..... PUBLIC UTILITY EASEMENT
PVC..... POLYVINYL CHLORIDE

R..... RADIUS
R..... ROCK
R..... RISER
RB..... RIVER BED
RCBC..... REINFORCED CONCRETE BOXED CULVERT
RCP..... REINFORCED CONCRETE PIPE
ROW..... RIGHT OF WAY
RTC..... REGIONAL TRANSPORTATION COMMISSION OF DOUGLAS COUNTY

S..... SIGN
S..... SLOPE
S..... SOUTH
SAD..... SURFACE AREA DISTURBANCE
SD..... STORM DRAIN
SDMH..... STORM DRAIN MANHOLE
SDR..... STANDARD DIMENSION RATIO
SE..... SOUTHEAST
SET..... SET MONUMENT, CORNER OR CONTROL POINT
SF..... SQUARE FOOT(FEET)
SPP..... STRUCTURAL PLATE PIPE
SPPA..... STRUCTURAL PLATE PIPE ARCH
SRV..... SERVICE
SS..... SANITARY SEWER
SSMH..... SANITARY SEWER MANHOLE
ST..... STREET
STA..... STATION
STB..... STUB
STD..... STANDARD
SW..... SOUTHWEST
S/W..... SIDEWALK
SWPPP..... STORMWATER POLLUTION PREVENTION PLAN

T..... TELEPHONE
TBC..... TOP BACK OF CURB
TC..... TOP OF CURB
TRB..... TRANSPORTATION RESEARCH BOARD
TOE..... TOE OF SLOPE
TOP..... TOP OF SLOPE
TOW..... TOP OF WALL
TR..... TREE
TRF..... TRAFFIC CONTROL
TV..... TELEVISION
TYP..... TYPICAL

U..... UTILITY
UBC..... UNIFORM BUILDING CODE
UG..... UNDERGROUND
UMC..... UNIFORM MECHANICAL CODE
UNO..... UNLESS NOTED OTHERWISE
UPC..... UNIFORM PLUMBING CODE
USACE..... UNITED STATES ARMY CORPS OF ENGINEERS
USBR..... UNITED STATES BUREAU OF RECLAMATION
USGS..... UNITED STATES GEOLOGICAL SURVEY

V..... VALVE
VA..... VAULT
VC..... VERTICAL CURVE
VG..... VALLEY GUTTER
VERT..... VERTICAL
VPC..... VERTICAL POINT OF CURVATURE
VPT..... VERTICAL POINT OF TANGENCY

W..... WEST
W/..... WITH
WEF..... WATER ENVIRONMENT FEDERATION
WL..... WALL
WK..... WALKWAY
WV..... WATER GATE VALVE
YR..... YEAR

NOTES

GENERAL

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE GENERAL SAFETY DURING CONSTRUCTION AND ALL WORK SHALL CONFORM TO PERTINENT SAFETY REGULATIONS AND CODES.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE LOCATION AND/OR PROTECTION OF ALL EXISTING UTILITIES AND/OR STRUCTURES ADJACENT TO IMPROVEMENTS DURING CONSTRUCTION.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL EXCAVATION AND SHORING PROCEDURES.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING THE ENGINEER OF ANY DISCREPANCIES IN THE IMPROVEMENT PLANS.
5. CONTRACTOR SHALL OBTAIN A SWPPP AND NOI WITH THE STATE OF NEVADA, PRIOR TO CONSTRUCTION.
6. THE CONTRACTOR SHALL MAINTAIN A CLEAN PROJECT SITE, REMOVING CONSTRUCTION DEBRIS AT THE END OF EACH ACTIVITY. THE CONTRACTOR SHALL MAINTAIN DEBRIS FREE CONSTRUCTION ROUTES, ADJACENT STREETS AND STORM DRAIN SYSTEMS.

SITE & GRADING

1. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE OSHA REQUIREMENTS FOR EXCAVATION, THE "STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION" 2012 EDITION, DOUGLAS COUNTY STANDARDS, AND SPECIAL REQUIREMENTS OF THE PERMIT. VIOLATIONS WILL RESULT IN THE STOPPAGE OF ALL WORK UNTIL THE VIOLATION IS CORRECTED.
2. NO WORK SHALL BE STARTED WITHOUT FIRST NOTIFYING THE DISTRICT MANAGER, ENGINEER AND AFFECTED PROPERTY OWNER(S) AT LEAST 2 WORKING DAYS BEFORE WORK IS COMMENCED.
3. SLOPES SHALL BE NO STEEPER THAN 3 HORIZONTAL TO 1 VERTICAL.
4. FILLS SHALL BE PLACED IN ACCORDANCE WITH THE REQUIREMENTS OF THE "STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, 2012 EDITION".
5. FILL AREAS SHALL BE CLEARED OF VEGETATION AND DEBRIS, SCARIFIED, AND BE APPROVED BY THE ENGINEER OF RECORD PRIOR TO THE PLACING OF FILL.
6. PROTECTIVE MEASURES AND TEMPORARY DRAINAGE PROVISIONS SHALL BE USED TO PREVENT EXCESSIVE PONDING AND PROTECT ADJOINING PROPERTIES DURING CONSTRUCTION OF IMPROVEMENTS.
7. DUST SHALL BE CONTROLLED BY THE CONTRACTOR TO THE SATISFACTION OF THE ENGINEER, AND IN ACCORDANCE WITH THE AIR QUALITY PERMIT FROM THE NEVADA DIVISION OF ENVIRONMENTAL PROTECTION WHEN REQUIRED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING THE PERMITS WHEN REQUIRED.
8. ALL STREETS SHALL BE MAINTAINED FREE OF DUST AND MUD CAUSED BY GRADING OPERATIONS. ALL OPERATIONS SHALL COMPLY WITH THE REQUIREMENTS OF THE STORMWATER DISCHARGE PERMIT FROM THE NEVADA DIVISION OF ENVIRONMENTAL PROTECTION WHEN REQUIRED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING THE PERMITS WHEN REQUIRED.
9. THE OWNER'S ENGINEER OR SURVEYOR SHALL SET GRADE STAKES FOR ALL GRADING.
10. THE ENGINEER SHALL APPROVE ALL GRADING INCLUDING COMPACTION REQUIREMENTS AND THE STABILITY OF SLOPES CREATED, OR REMAINING.
11. IN THE EVENT OF CHANGES ARISING DURING CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING THE ENGINEER WHO WILL DETERMINE AN ACCEPTABLE SOLUTION AND REVISING THE PLANS FOR REVIEW AND APPROVAL BY THE OWNER. NO CHANGES IN THE DESIGN WILL BE PERMITTED UNLESS WRITTEN APPROVAL IS GIVEN BY THE ENGINEER.
12. EXISTING BANKS SHALL BE RE-GRADED AT 3:1 UNLESS OTHERWISE NOTED.
13. ROCK TOE PROTECTION SHALL BE INSTALLED IN ACCORDANCE WITH APPROVED DETAIL IN AREAS AS SHOWN ON SITE SPECIFIC PLAN. ROCK TOE PROTECTION SHALL BE PLACED WITHIN 5 DAYS OF FINAL BANK GRADING.
14. ALL DISTURBED AREAS SHALL BE RE-SEEDED BY OWNER WITH NATIVE SEED MIX. RE-SEEDING SHALL BE FURNISHED AND INSTALLED BY OWNER.
15. OWNER SHALL FURNISH AND INSTALL BIO-ENGINEERING TREATMENTS. CONTRACTOR SHALL BE RESPONSIBLE WITH ASSISTING OWNER BY EXCAVATING TO ALLOW FOR INSTALLATION AND BACKFILLING ONCE TREATMENT IS INSTALLED.
16. PROTECT EXISTING TREES AND RIPARIAN VEGETATION TO EXTENT POSSIBLE THROUGHOUT CONSTRUCTION. REMOVAL OF 6" DIAMETER TREES OR LARGER PROHIBITED WITHOUT OWNER APPROVAL UNLESS OTHERWISE NOTED.
17. NATIVE MATERIAL GENERATED FROM CHANNEL CLEARING OPERATIONS SHALL BE USED TO SHAPE FAILING BANKS TO CONTOURS AS SHOWN. EXCAVATE ONLY ENOUGH MATERIAL NECESSARY TO CONSTRUCT FAILING BANKS.
18. WORK SHALL BE PERFORMED WITHIN THE MEAN-HIGH WATER LEVEL WHICH IS COMMONLY REFEREED TO AS THE "CHANNEL BED". THIS INCLUDES STOCKPILING OF MATERIAL. CONTRACTOR SHALL ENSURE DE-WATERING PLAN ALLOWS FOR PROPER PROTECTION OF STOCKPILES AND EQUIPMENT.
19. RIVERINE ENVIRONMENTS ARE DYNAMIC SYSTEMS & SUBJECT TO CHANGE. THESE PLANS ARE BASED UPON A TOPOGRAPHIC SURVEYED PERFORMED IN JUNE, 2018. PRIOR TO COMMENCING CONSTRUCTION THE CONTRACTOR SHALL INVESTIGATE THE SITE & SATISFY HIMSELF THAT CURRENT CONDITIONS GENERALLY MATCH THE PLANS. IF CURRENT SITE CONDITIONS ARE SIGNIFICANTLY DIFFERENT TO WARRANT A CHANGE IN CONTRACT PRICE OR SCHEDULE, THE CHANGE ORDER SHALL BE AGREED TO PRIOR TO COMMENCING CONSTRUCTION.
20. REMOVE & REPLACE EXISTING FENCES AS NECESSARY TO FACILITATE CONSTRUCTION. COORDINATE WITH OWNER PRIOR TO CONSTRUCTION. TEMPORARY FENCING MAY BE REQUIRED.

LINE TYPES

EXISTING	NEW	
100	100	CONTOUR - FIVE FOOT INTERVAL
99	99	CONTOUR - ONE FOOT INTERVAL
x x x x	x x x x	FENCE
— — —	— — —	PROPERTY LINE

BASIS OF COORDINATES

HORIZONTAL: NAD 83, NSPC WEST ZONE PER OPUS AT ROA NO. 103

DATUM

VERTICAL: NAVD88 PER OPUS AT ROA NO. 103

SITE BENCHMARK SHOWN ON SHEET C1.

ELEVATION: 4663.64

CALL BEFORE YOU DIG 1-800-227-2600

PERMIT SET 10.15.2021

NO.	DATE	REVISION BLOCK	BY

R|O|Anderson
WWW.ROANDERSON.COM
MINDEN
1603 Esmeralda Ave
P.O. Box 2224
Minden, NV 89423
p 775.782.2322
f 775.782.7084
RENO
9060 Double Diamond Pkwy, Unit 1B
Reno, NV 89521
p 775.782.2322
f 775.782.7084

2022 CARSON RIVER BANK STABILIZATION PROJECTS
CARSON VALLEY CONSERVATION DISTRICT

NOTES, LEGEND & ABBREVIATIONS

PROFESSIONAL ENGINEER · STATE OF NEVADA · NAGASEKHAR R. GORLA · Exp: 06/30/23 · CIVIL · No. 18557

DRAWN: JT	JOB: 1702-004
ENGINEER: NRG	DRAWING: SEE PLOT STAMP
SCALE:	SHEET: C2
DATE: 10.15.2021	OF: 7 SHEETS

X:\Client Files\1702\1702-004\CAD\Engineering\Improvement Plans\PDP\1702-004 COS.dwg 10/14/2021 2:45:31 PM James Turner

SCALE: 1" = 40'

CONSTRUCTION NOTE

1. REGRADE FAILED RIVER BANKS BY CUTTING FROM PROPOSED CREST LINE AT THE SLOPE NOTED ON PLANS. USE MATERIAL GENERATED FROM THE CUT AS FILL IN CONJUNCTION WITH ADDITIONAL FILL MATERIAL FROM THE BORROW AREAS AS NECESSARY. SEE RIVER BANK REGRADE DETAIL ON C6.
2. INSTALL 7,460 S.F. RIP-RAP TOE PROTECTION TO A HEIGHT OF 3' PER DETAIL ON SHEET C6.
3. INSTALL LOG VEIN (OR APPROVED ALTERNATE) ±5' FROM TOP OF NEW BANK AND ROTATE UPSTREAM ±30°. SPACE ±150' TO ±175'. EXTEND LOG VEIN A MINIMUM OF 10' BEYOND TOE OF NEW SLOPE. SEE SHEET C6 FOR DETAIL. FIELD ADJUSTMENT OF ANGLE AND LENGTH MAY BE NECESSARY DUE TO THE DYNAMIC NATURE OF THE SITE.
4. DEPTH OF EXCAVATION IN BORROW AREA SHALL NOT EXCEED ELEVATION OF ADJACENT PROPOSED TOE IN PROJECT AREA. TRANSITION FROM BORROW AREA TO EX. UNDISTURBED GROUND SHALL BE MADE AT 5:1 (MAX.) IN A SMOOTH & WORKMAN-LIKE MANNER.
5. PROTECT EXISTING TREES AND RIPARIAN VEGETATION TO THE EXTENT POSSIBLE THROUGHOUT CONSTRUCTION. REMOVAL OF TREES IN EXCESS OF 6" IN DIAMETER IS PROHIBITED WITHOUT OWNER APPROVAL UNLESS OTHERWISE NOTED.

LEGEND

ROCK TOE PROTECTION, ROCK REFUSAL TRENCH

LOG VEIN SEE DETAIL ON SHEET C6

ESTIMATED QUANTITIES

EARTH WORK: ±860 L.F. 18,398 S.F.

CUT	=	219 CYS
FILL	=	1,840 CYS
NET FILL	=	1,621 CYS

TOTAL OF 4 LOG VEINS THIS SHEET.

NOTE: NO GUARANTEE IS MADE CONCERNING THE ACCURACY OF THE ESTIMATED QUANTITIES. THE CONTRACTOR SHALL DETERMINE ACTUAL QUANTITIES OF WORK ASSOCIATED WITH THE PROJECT.

LOG VEIN LOCATION		
NAME	NORTHING	EASTING
LOG VEIN 1	14,682,229.77	2,273,325.431
LOG VEIN 2	14,682,140.83	2,273,570.64
LOG VEIN 3	14,682,230.44	2,273,830.02
LOG VEIN 4	14,675,333.56	2,273,993.94

CALL BEFORE YOU DIG 1-800-227-2600

PERMIT SET 10.15.2021

NO.	DATE	REVISION BLOCK	BY

SCALE: 1" = 40'

R|O|Anderson
WWW.ROANDERSON.COM
MINDEN
1603 Esmeralda Ave
P.O. Box 2229
Minden, NV 89423
p 775.782.2322
f 775.782.7084
RENO
9060 Double
Diamond Pkwy, Unit 1B
Reno, NV 89521
p 775.782.2322
f 775.782.7084

2022 CARSON RIVER BANK STABILIZATION PROJECTS
CARSON VALLEY CONSERVATION DISTRICT

FLYING J RANCH
SITE PLAN - LOCATION 3

PROFESSIONAL ENGINEER - STATE OF NEVADA
NAGASEKHAR R. GORLA
Exp: 06/30/23
CIVIL
No. 18557

DRAWN: JT	JOB: 1702-004
ENGINEER: NRG	DRAWING: SEE PLOT STAMP
SCALE: 1" = 40'	SHEET: C3
DATE: 10.15.2021	OF: 7 SHEETS

X:\Client Files\1700-1799\1702-004\CAD\Engineering\Improvement Plans\PDP\20221702-004 C03 - C3% Aug 10 14 2021 2:49:32 PM James Turner

CONSTRUCTION NOTE

1. REGRADE FAILED RIVER BANKS BY CUTTING FROM PROPOSED CREST LINE AT THE SLOPE NOTED ON PLANS. USE MATERIAL GENERATED FROM THE CUT AS FILL IN CONJUNCTION WITH ADDITIONAL FILL MATERIAL FROM THE BORROW AREAS AS NECESSARY. SEE RIVER BANK REGRADE DETAIL ON C6.
2. INSTALL 7,365 S.F. RIP-RAP TOE PROTECTION TO A HEIGHT OF 3' PER DETAIL ON SHEET C6.
3. DEPTH OF EXCAVATION IN BORROW AREA SHALL NOT EXCEED ELEVATION OF ADJACENT PROPOSED TOE IN PROJECT AREA. TRANSITION FROM BORROW AREA TO EX. UNDISTURBED GROUND SHALL BE MADE AT 5:1 (MAX.) IN A SMOOTH & WORKMAN-LIKE MANNER.
4. PROTECT EXISTING TREES AND RIPARIAN VEGETATION TO THE EXTENT POSSIBLE THROUGHOUT CONSTRUCTION. REMOVAL OF TREES IN EXCESS OF 6" IN DIAMETER IS PROHIBITED WITHOUT OWNER APPROVAL UNLESS OTHERWISE NOTED.

SCALE: 1" = 40'

LEGEND

ROCK TOE PROTECTION, ROCK REFUSAL TRENCH

LOG VEIN SEE DETAIL ON SHEET C6

ESTIMATED QUANTITIES

EARTH WORK:

±1,052 L.F. 29,307 S.F.

CUT	=	936 CYS
FILL	=	945 CYS
NET FILL	=	9 CYS

NO LOG VEINS THIS SHEET.

NOTE: NO GUARANTEE IS MADE CONCERNING THE ACCURACY OF THE ESTIMATED QUANTITIES. THE CONTRACTOR SHALL DETERMINE ACTUAL QUANTITIES OF WORK ASSOCIATED WITH THE PROJECT.

APN 1419-35-002-002
CHARNEY, HOWARD S & ALIDA C S

APN 1419-35-001-003
HOLBROOK BEEF & CATTLE CO. LLC

STA 50+93.76 99.05'R BEGIN IMPROVEMENTS ROCK REFUSAL TRENCH, SEE C6 FOR DETAILS. BLEND INTO EXISTING GROUND WITHIN PROJECT PROPERTY EXTENTS

CARSON RIVER

BORROW AREA

BORROW AREA

PROPOSED TOE LINE

PROPOSED CREST LINE

REGRADE BANK PER DETAIL SHOWN ON C6. ±686 L.F. 2.5'H:1'V ±1'-±13' FILL, WIDTH VARIES

TOE PROTECTION 3' HIGH

PROPOSED TOE LINE

TOE PROTECTION 3' HIGH

PROPOSED CREST LINE

REGRADE BANK PER DETAIL SHOWN ON C6. 366 L.F. 2.5'H:1'V ±1'-±13' FILL, WIDTH VARIES

STA 60+85.45 84.42'R END IMPROVEMENTS BLEND INTO EXISTING GROUND WITHIN PROJECT PROPERTY EXTENTS

PARCEL LINE

APN 1419-35-002-002
CHARNEY, HOWARD S & ALIDA C S

CALL BEFORE YOU DIG 1-800-227-2600

PERMIT SET 10.15.2021

NO.	DATE	REVISION BLOCK	BY

SCALE: 1" = 40'

R|O|Anderson
WWW.ROANDERSON.COM
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1603 Esmeralda Ave
P.O. Box 2229
Minden, NV 89423
p 775.782.2322
f 775.782.7084
RENO
9060 Double Diamond Pkwy, Unit 1B
Reno, NV 89521
p 775.782.2322
f 775.782.7084

2022 CARSON RIVER BANK STABILIZATION PROJECTS
CARSON VALLEY CONSERVATION DISTRICT

CHARNEY RANCH
SITE PLAN - LOCATION 3

PROFESSIONAL ENGINEER STATE OF NEVADA
NAGASEKHAR R. GORLA
CIVIL
Exp: 06/30/23
No. 18557

DRAWN: JT	JOB: 1702-004
ENGINEER: NRG	DRAWING: SEE PLOT STAMP
SCALE: 1" = 40'	SHEET: C4
DATE: 10.15.2021	OF: 7 SHEETS

X:\Client Files\1700-1799\1702-004\CAD\Engineering\Improvement Plans\PSP-3002\1702-004 C03 - C05 Aug 10\4\2021 2:48:46 PM James Turner

CONSTRUCTION NOTE

1. REGRADE FAILED RIVER BANKS BY CUTTING FROM PROPOSED CREST LINE AT THE SLOPE NOTED ON PLANS. USE MATERIAL GENERATED FROM THE CUT AS FILL IN CONJUNCTION WITH ADDITIONAL FILL MATERIAL FROM THE BORROW AREAS AS NECESSARY. SEE RIVER BANK REGRADE DETAIL ON C6.
2. INSTALL 7,365 S.F. RIP-RAP TOE PROTECTION TO A HEIGHT OF 3' PER DETAIL ON SHEET C6.
3. DEPTH OF EXCAVATION IN BORROW AREA SHALL NOT EXCEED ELEVATION OF ADJACENT PROPOSED TOE IN PROJECT AREA. TRANSITION FROM BORROW AREA TO EX. UNDISTURBED GROUND SHALL BE MADE AT 5:1 (MAX.) IN A SMOOTH & WORKMAN-LIKE MANNER.
4. PROTECT EXISTING TREES AND RIPARIAN VEGETATION TO THE EXTENT POSSIBLE THROUGHOUT CONSTRUCTION. REMOVAL OF TREES IN EXCESS OF 6" IN DIAMETER IS PROHIBITED WITHOUT OWNER APPROVAL UNLESS OTHERWISE NOTED.

LEGEND

ROCK TOE PROTECTION, ROCK REFUSAL TRENCH

LOG VEIN SEE DETAIL ON SHEET C6

ESTIMATED QUANTITIES

EARTH WORK:

±780 L.F. 6,960 S.F.

CUT	=	644 CYS
FILL	=	644 CYS
NET FILL	=	0 CYS

NO LOG VEINS THIS SHEET.

NOTE: NO GUARANTEE IS MADE CONCERNING THE ACCURACY OF THE ESTIMATED QUANTITIES. THE CONTRACTOR SHALL DETERMINE ACTUAL QUANTITIES OF WORK ASSOCIATED WITH THE PROJECT.

CALL BEFORE YOU DIG 1-800-227-2600

PERMIT SET 10.15.2021

NO.	DATE	REVISION BLOCK	BY

1 0 1 2
40' 0 40' 80'
SCALE: 1" = 40'

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2022 CARSON RIVER BANK STABILIZATION PROJECTS
CARSON VALLEY CONSERVATION DISTRICT

500 TWO RANCH SITE PLAN - LOCATION 1

PROFESSIONAL ENGINEER - STATE OF NEVADA
NAGASEKHAR R. GORLA
Exp: 06/30/23
No. 18557
CIVIL

DRAWN: JT	JOB: 1702-004
ENGINEER: NRG	DRAWING: SEE PLOT STAMP
SCALE: 1" = 40'	SHEET: C5
DATE: 10.15.2021	OF: 7 SHEETS

TABLE 200.07.04-1

Percentage by Mass Passing Sieve	Sieve Size (inches)					
	Class 150	Class 300	Class 400	Class 550	Class 700	Class 900
100	10	20	30	40	48	60
70 - 85	9	18	27	36	45	54
30 - 50	6	12	18	24	30	36
5 - 15	2	5	7	12	18	24
0	1	2	3	6	8	12
D50(1)	6	12	16	22	28	35

1. MEAN STONE SIZE.

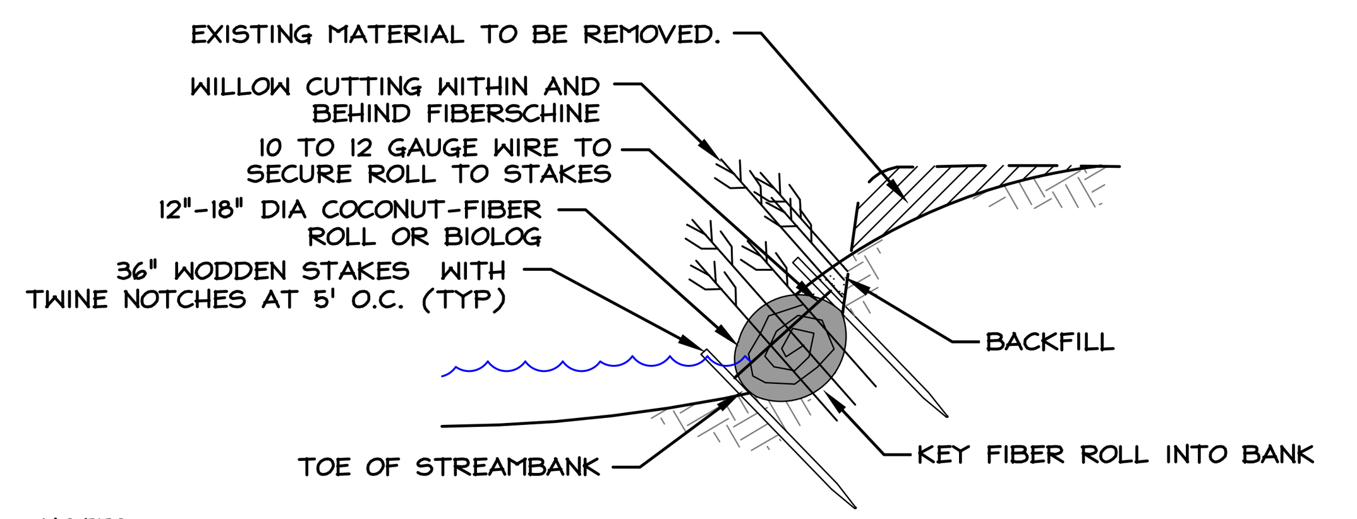
TABLE 200.07.04-2

Test	Test Method	Requirements
Resistance to Wear (percent)	ASTM C 535 (1)	45 Maximum
Absorption (percent)	ASTM C 127	4.2 Maximum
Apparent Specific Gravity	ASTM C 97	2.5 Minimum (2)
Durability	ASTM D 3744	52 Minimum

1. 500 REVOLUTIONS
2. RIP-RAP WITH A SPECIFIC GRAVITY OF LESS THAN 2.5 WILL NOT BE ALLOWED.
3. RIP-RAP SHALL BE QUARRIED WITH FRACTURED FACES.
4. RIP-RAP SHALL HAVE AN EARTH TONE WHICH BLENDS WITH SURROUNDING ENVIRONMENT.

ROCK RIP-RAP SPECIFICATIONS

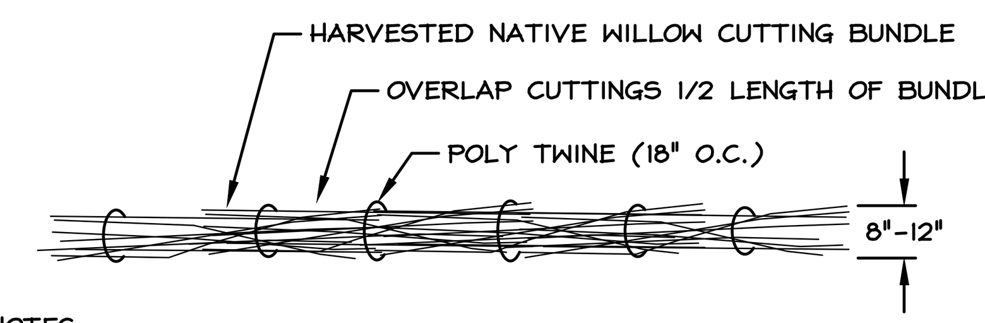
NO SCALE



NOTES:
1. EXTEND FIBERSCHINE 5 FEET BEYOND END OF TREATMENT AREA.
2. WILLOW CUTTINGS TO BE HARVEST FROM LOCAL SOURCE AS AVAILABLE.
3. CLEANLY DETACH WILLOW CUTTING MATERIAL 1' FROM EXISTING GROUND AT THE PLANT BASE. REMOVE SIDE AND TERMINAL BRANCHES. ASSURE NO BARK DAMAGE OCCURS TO REMAINING WILLOW BASE. PRESERVE AND PROTECT BASE IN PLACE.
4. PROTECT HARVEST SITE FROM PERMANENT DISTURBANCE. UPON COMPLETION OF HARVEST ACTIVITY, RESTORE SITE TO NATIVE CONDITIONS.
5. SOAK WILLOW CUTTINGS FOR 5-7 DAYS, BEFORE ROOTS BEGIN TO EMERGE FROM CUTTING.

FIBERSCHINES WITH WILLOW CUTTINGS DETAIL

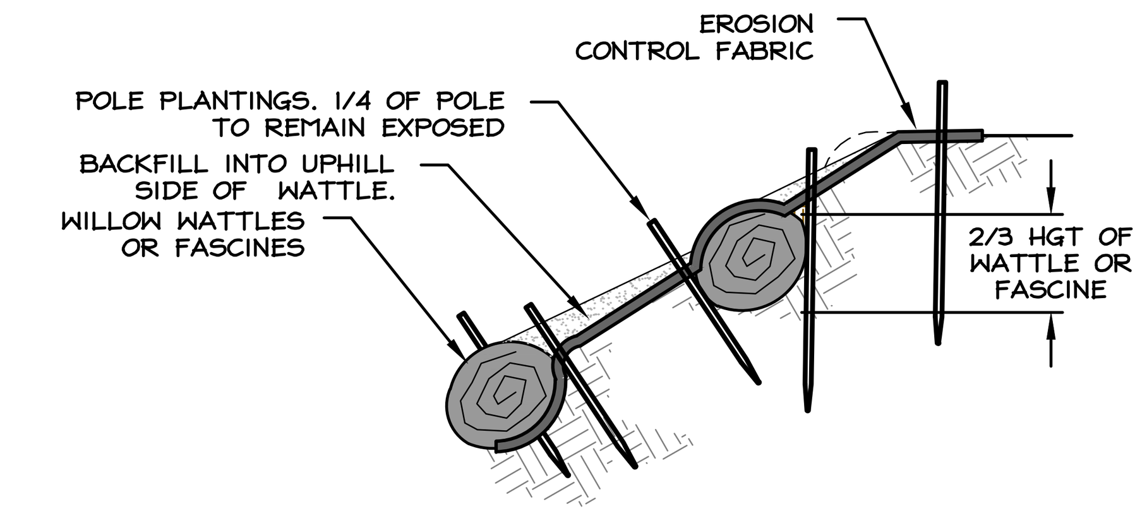
NOT TO SCALE



NOTES:
1. WILLOW CUTTINGS TO BE HARVEST FROM LOCAL SOURCE AS AVAILABLE.
2. CLEANLY DETACH WILLOW CUTTING MATERIAL 1' FROM EXISTING GROUND AT THE PLANT BASE. REMOVE SIDE AND TERMINAL BRANCHES. ASSURE NO BARK DAMAGE OCCURS TO REMAINING WILLOW BASE. PRESERVE AND PROTECT BASE IN PLACE.
3. SECURE WILLOW BUNDLE WITH 2 POLY TWINE PIECES PER BUNDLE.
4. PROTECT HARVEST SITE FROM PERMANENT DISTURBANCE. UPON COMPLETION OF HARVEST ACTIVITY, RESTORE SITE TO NATIVE CONDITIONS.
5. SOAK WILLOW CUTTINGS FOR 5-7 DAYS, BEFORE ROOTS BEGIN TO EMERGE FROM CUTTING.
6. ALTERNATE DIRECTION OF WILLOW BUNDLE TO PRODUCE AN EVEN WIDTH AT THE OVERLAP LOCATION.

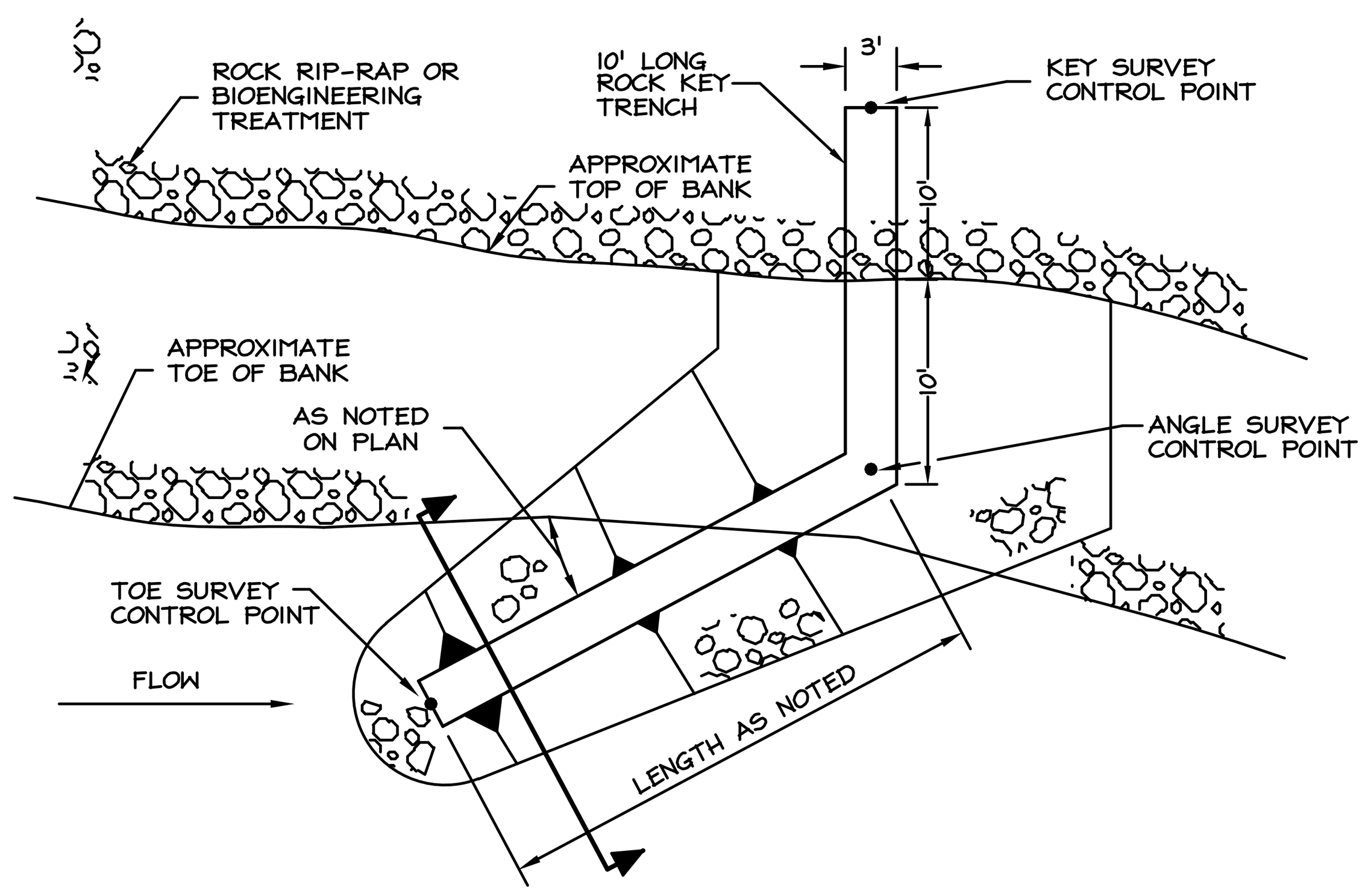
WILLOW WATTLES DETAIL

NOT TO SCALE



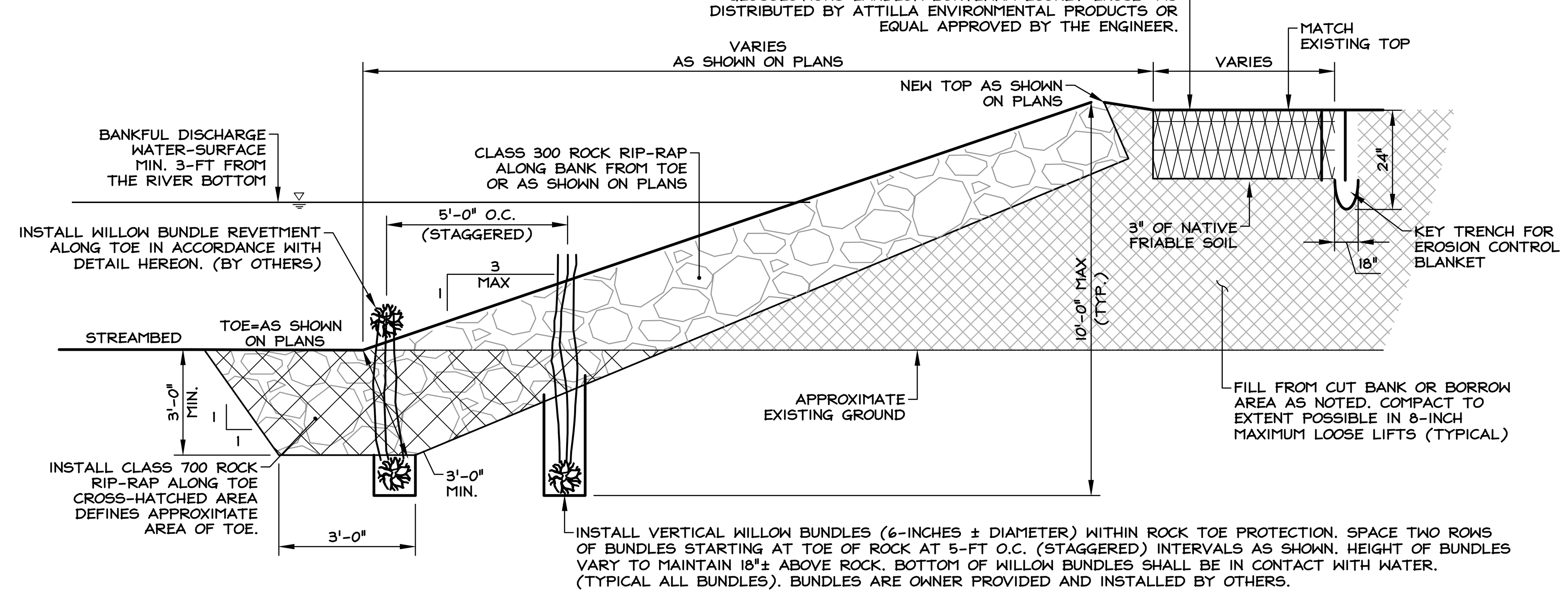
WILLOW WATTLES, FABRIC, AND POLE PLANTINGS

NOT TO SCALE



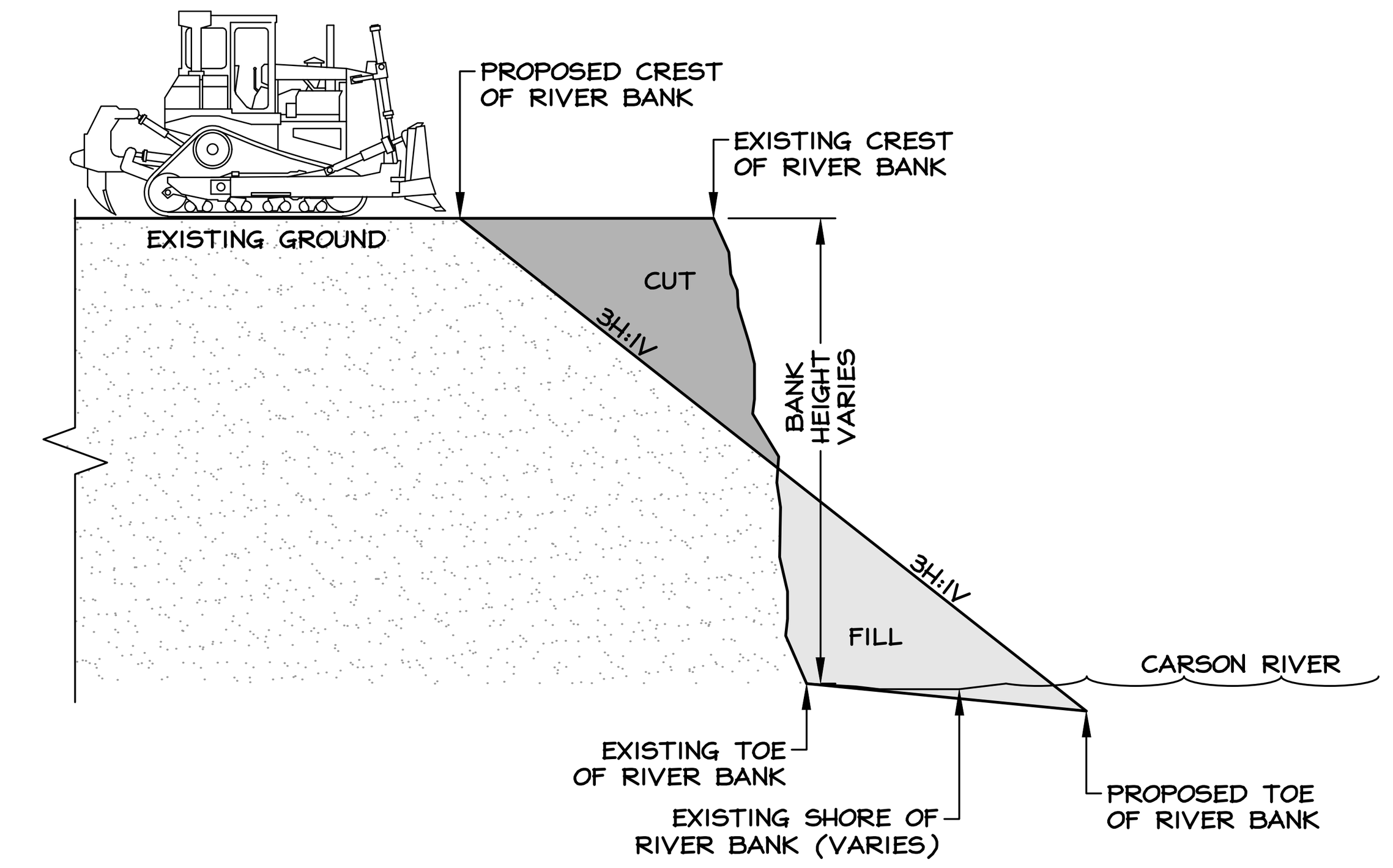
PLAN

OWNER TO PROVIDE THE FOLLOWING
BROADCAST SEED WITH NATIVE SEED MIX. SUBMIT MIX TO ENGINEER FOR APPROVAL. CONTRACTOR TO PROVIDE & INSTALL EROSION CONTROL FABRIC ABOVE ROCK TOE PROTECTION. EROSION CONTROL FABRIC SHALL BE "SI GEOSOLUTIONS LANDLOK BONTERRA ECONET ENCS2" AS DISTRIBUTED BY ATTILLA ENVIRONMENTAL PRODUCTS OR EQUAL APPROVED BY THE ENGINEER.



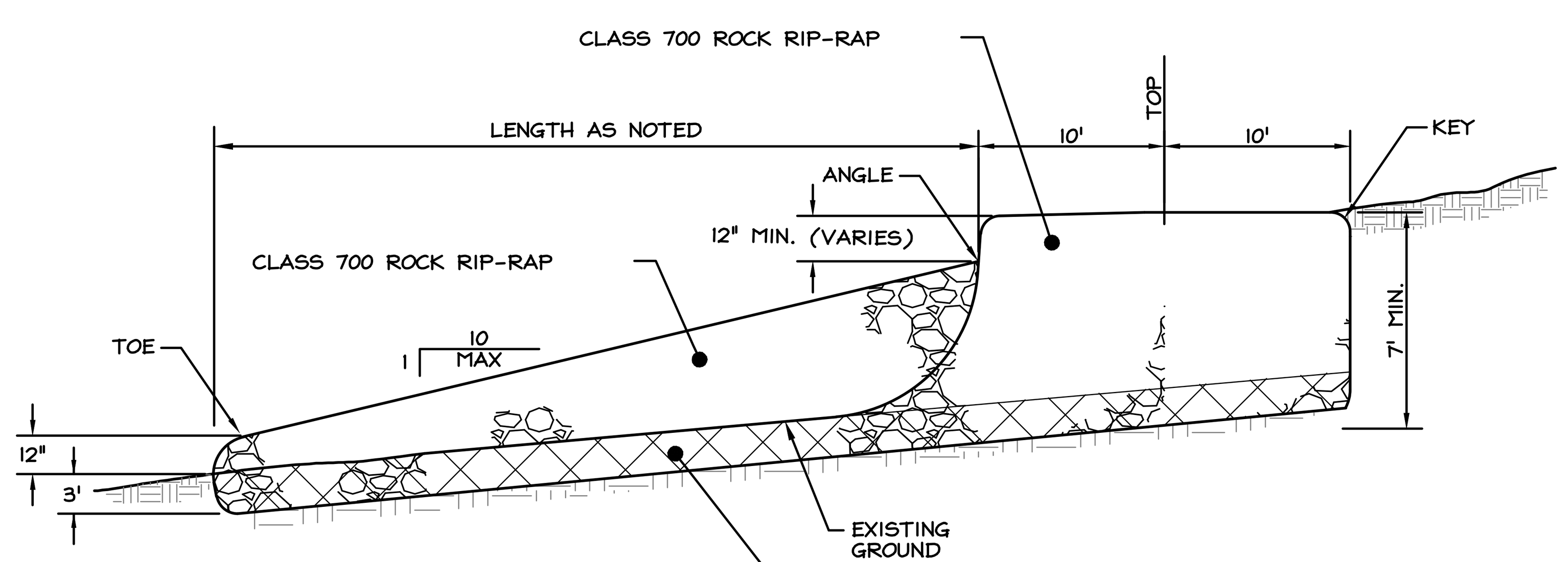
ROCK TOE & SLOPE PROTECTION

NO SCALE



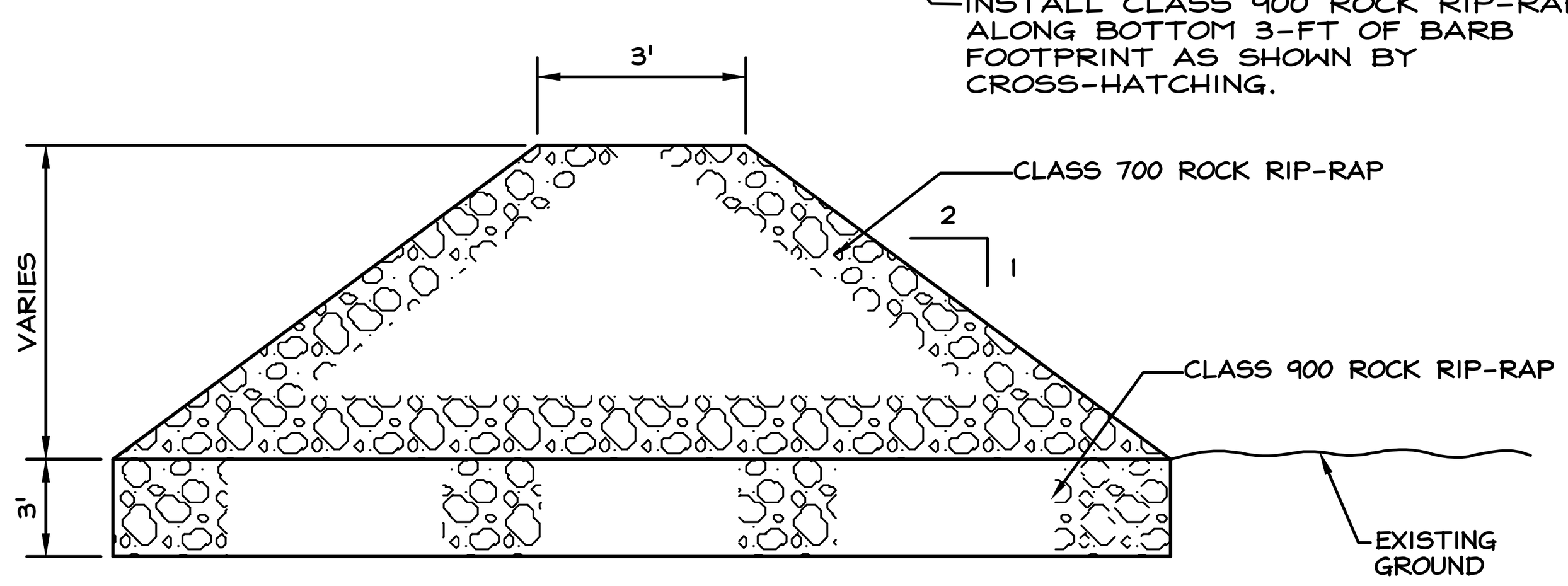
RIVER BANK REGRADE SECTION

NOT TO SCALE



PROFILE

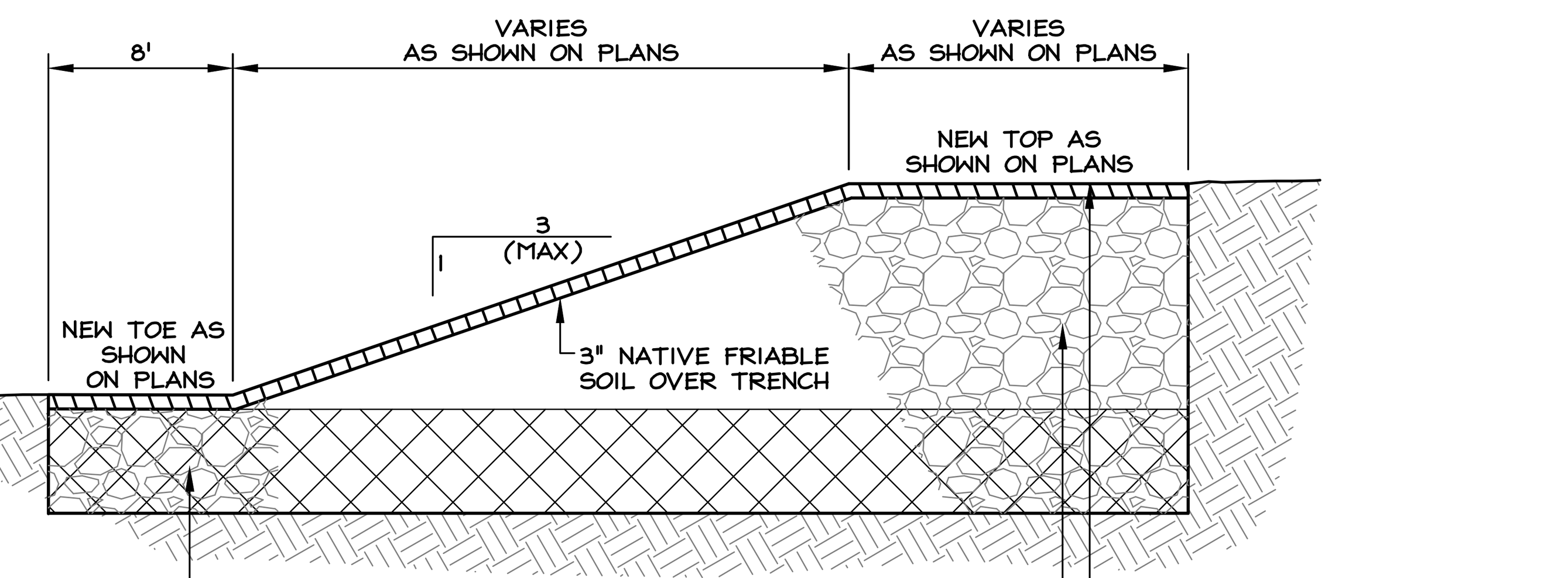
INSTALL CLASS 900 ROCK RIP-RAP ALONG BOTTOM 3-FT OF BARB FOOTPRINT AS SHOWN BY CROSS-HATCHING.



SECTION

STREAM BARB DETAIL (ALTERNATE)

NO SCALE

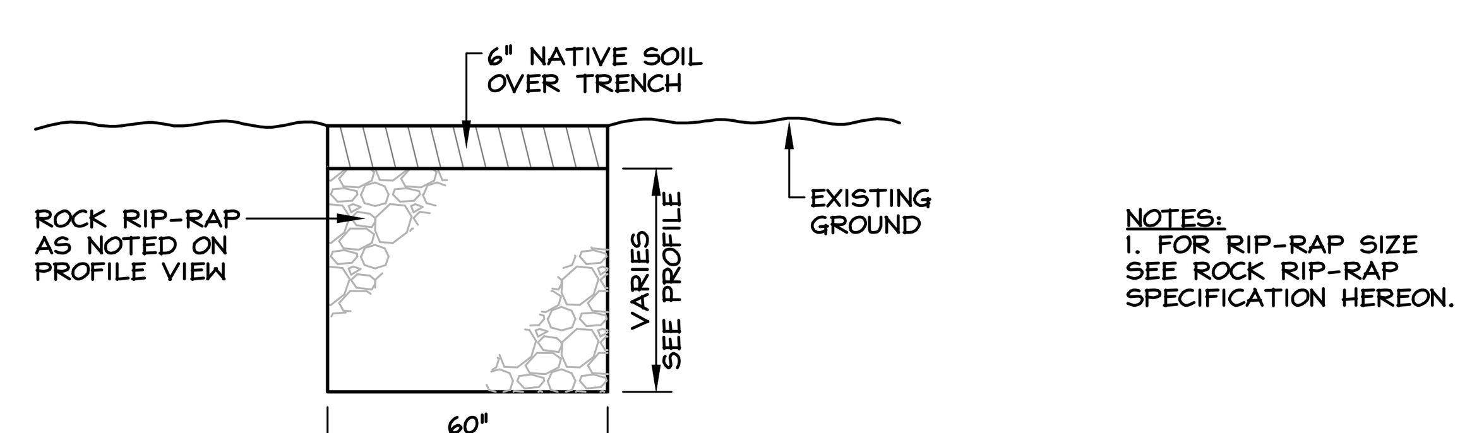


BOTTOM 5-FT OF TRENCH SHALL CONSIST OF CLASS 700 ROCK RIP-RAP, CROSS-HATCHING DEFINES THIS AREA

INSTALL CLASS 550 ROCK RIP-RAP IN THIS AREA OF REFUSAL TRENCH

OWNER TO PROVIDE THE FOLLOWING
BROADCAST SEED WITH NATIVE SEED MIX. SUBMIT MIX TO ENGINEER FOR APPROVAL.

PROFILE



SECTION

NOTES:
1. FOR RIP-RAP SIZE SEE ROCK RIP-RAP SPECIFICATION HEREON.

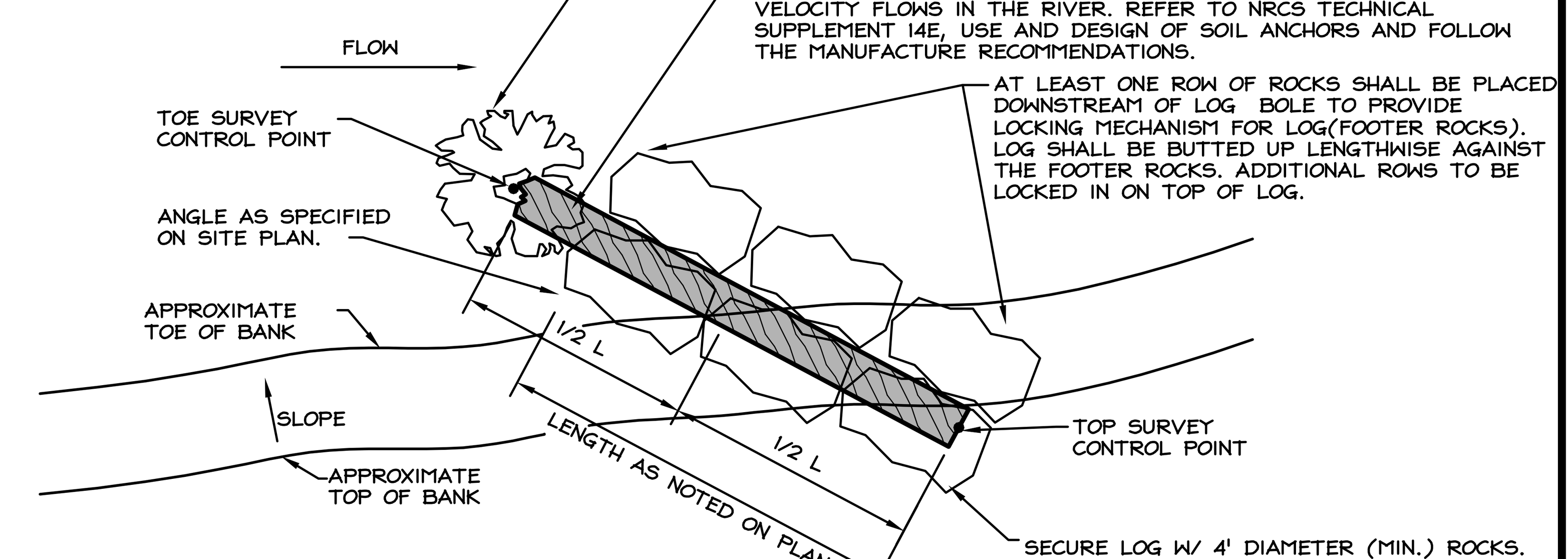
ROCK REFUSAL TRENCH

NO SCALE

2-FT DIAMETER, LENGTH AS NOTED ON SITE PLAN. LOG W/ ROOT WAD. TRENCH AND IMBED LOG BOLE ONE-HALF OF ITS ENTIRE LENGTH INTO RIVERBED BANK STARTING AT TOE OF BANK. ALIGN LOG BOLE W/ ROCK KEY.

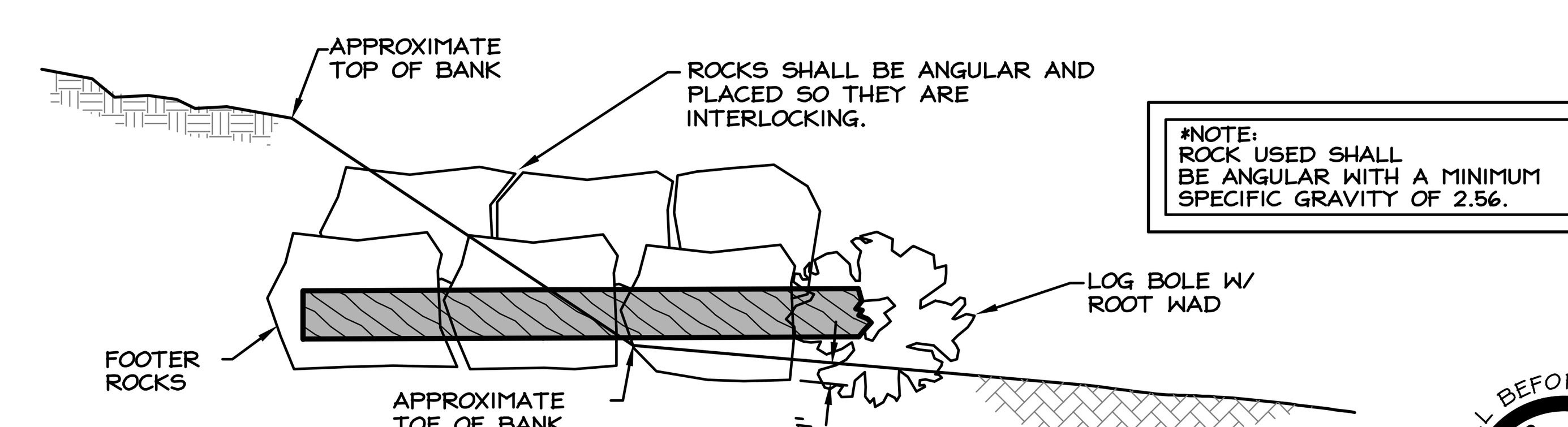
SECURE LOG WITH DUCKBILL ANCHORS OR APPROVED EQUAL DRIVEN ANCHOR MECHANISM TO PREVENT LOG DISPLACEMENT DURING HIGH VELOCITY FLOWS IN THE RIVER. REFER TO NRCS TECHNICAL SUPPLEMENT 14E, USE AND DESIGN OF SOIL ANCHORS AND FOLLOW THE MANUFACTURE RECOMMENDATIONS.

AT LEAST ONE ROW OF ROCKS SHALL BE PLACED DOWNSTREAM OF LOG BOLE TO PROVIDE LOCKING MECHANISM FOR LOG(FOOTER ROCKS). LOG SHALL BE BUTTED UP LENGTHWISE AGAINST THE FOOTER ROCKS. ADDITIONAL ROWS TO BE LOCKED IN ON TOP OF LOG.



SECURE LOG W/ 4' DIAMETER (MIN.) ROCKS. START ROCK PLACEMENT AT APPROXIMATE LOCATION OF EXISTING TOE AND EXTEND OVER TOP OF LOG INTO STREAM BANK

PLAN



*NOTE:
ROCK USED SHALL BE ANGULAR WITH A MINIMUM SPECIFIC GRAVITY OF 2.56.

PROFILE

LOG VEIN DETAIL

NO SCALE

CALL BEFORE YOU DIG 1-800-227-2600

PERMIT SET 10.15.2021

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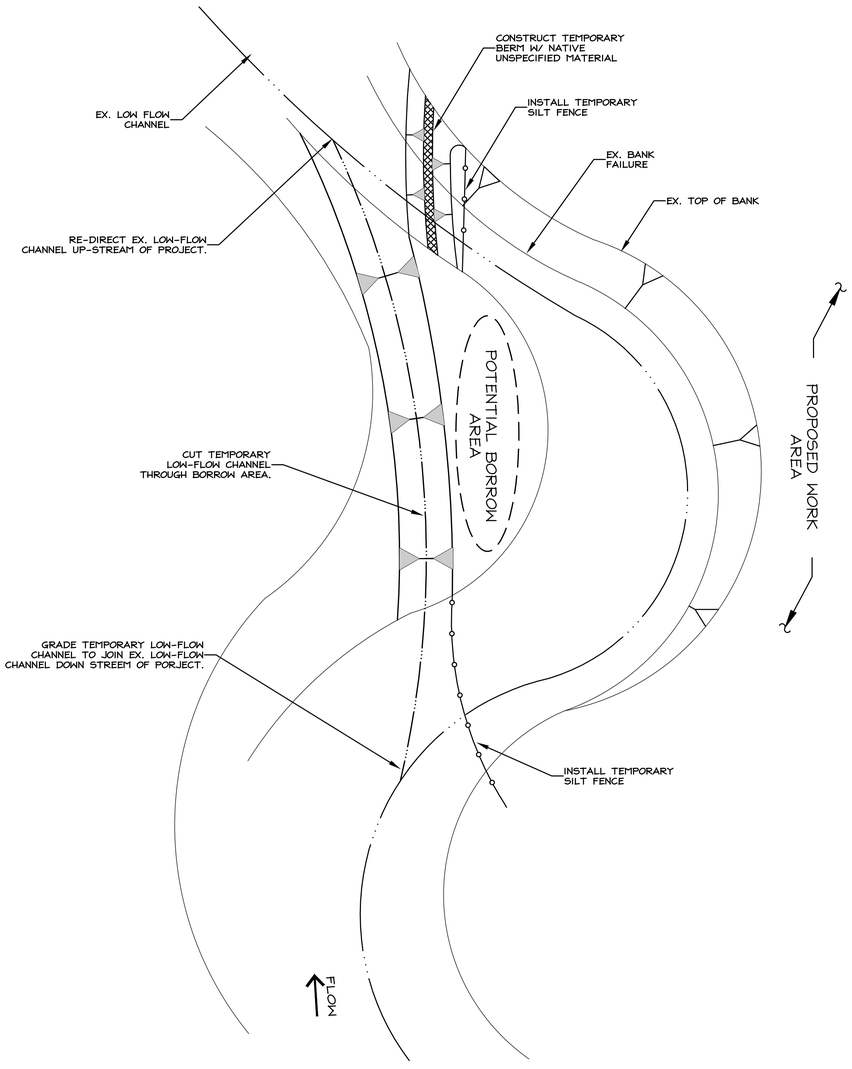
2022 CARSON RIVER BANK STABILIZATION PROJECTS
CARSON VALLEY CONSERVATION DISTRICT

DETAILS

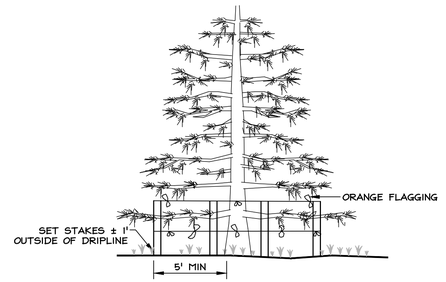
PROFESSIONAL ENGINEER STATE OF NEVADA — NAGASEKHAR R. GORLA — CIVIL — No.18557 — Exp: 06/30/23

DRAWN: JT	JOB: 1702-004
ENGINEER: NRG	DRAWING: SEE PLOT STAMP
SCALE: AS NOTED	SHEET: C6
DATE: 10.15.2021	OF: 7 SHEETS



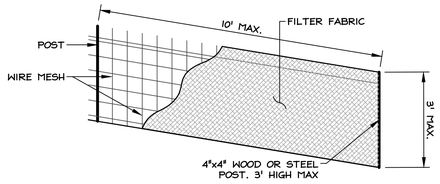
TYPICAL DE-WATERING & EROSION CONTROL PLAN

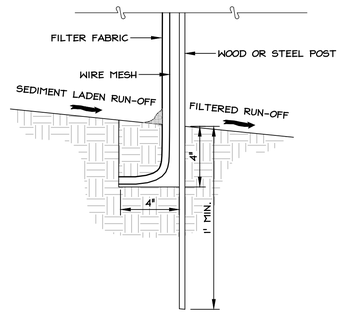
NO SCALE



TREE & VEGETATION PROTECTIVE FENCING

NO SCALE





SILT FENCE

NO SCALE

GENERAL NOTES:

1. SOME TYPES OF FILTER FABRIC FENCE HAVE STAKES INCLUDED AND DO NOT REQUIRE THE MATERIALS LISTED.
2. THE FABRIC SHOULD NOT EXCEED MORE THAN 3' ABOVE THE GROUND. CUT FILTER FABRIC FROM A CONTINUOUS ROLL TO AVOID HAVING JOINTS. WHERE JOINTS ARE NECESSARY, SPLICE THE FABRIC ONLY AT A POST, WITH AT LEAST 6" OF OVERLAP, AND FASTEN BOTH ENDS SECURELY TO THE POST.
3. INSPECT PERIODICALLY AND AFTER EACH STORM. REPLACE DAMAGED FENCE.
4. CLEAN OUT THE SEDIMENT BEFORE IT REACHES 1/3 FENCE HEIGHT. DEPOSIT THE SEDIMENT WHERE IT WILL NOT ENTER A DRAINAGEWAY.

SILT FENCE INSTALLATION INSTRUCTIONS:

1. SPACE POSTS NO MORE THAN 10' APART AND DRIVE THEM AT LEAST 1' INTO THE GROUND. ALIGN THE FENCE ALONG THE SLOPE CONTOUR, CURVING IT SLIGHTLY UPHILL TO AVOID END RUNS.
2. DIG A 4"X4" TRENCH ALONG THE UPHILL SIDE OF THE POSTS.
3. FASTEN WIRE MESH TO UPHILL SIDE OF POST WITH STAPES (ON WOOD POSTS) OR WIRE (ON STEEL POSTS). EXTEND MESH TO BOTTOM OF TRENCH. (DO NOT ATTACH MESH OR FABRIC TO TREES).
4. FASTEN FILTER FABRIC TO UPHILL SIDE OF POSTS WITH STAPES OR WIRE. EXTEND FABRIC 8" INTO TRENCH.
5. BACKFILL TRENCH AND COMPACT THE SOIL.

MATERIALS:

1. SILT FENCE:
   a. FILTER FABRIC SHALL BE 42" WIDE, TENSILE STRENGTH 120 LBS., EQUIVALENT OPENING SIZE 70.
   b. POSTS SHALL BE 5' LONG (MIN.), 4"X4" WOOD OR 1.3 LBS./FT STEEL.
   c. WIRE MESH SHALL BE 42" WIDE, 6" MESH, 16 GAUGE WIRE (MINIMUM).
   d. STAPLES (FOR WOOD POSTS) SHALL BE HEAVY DUTY 1" LONG, 14 GAUGE (MINIMUM).
   e. WIRE (FOR STEEL POSTS).

GENERAL NOTES

1. PLAN SHOWN IS GENERIC & WILL REQUIRE ADJUSTMENT IN FIELD BY CONTRACTOR.
2. PLAN ASSUMES WORK IS CONDUCTED AT EXTREMELY LOW FLOW CONDITIONS.
3. CONTRACTOR SHALL SATISFY HIMSELF THAT LOCATION WHERE TEMPORARY LOW-FLOW CHANNEL IS CUT WILL ALLOW ENOUGH BORROW AREA TO SATISFY FILL REQUIREMENTS OF PROJECT.
4. LOW-FLOW CHANNEL WILL BE FILLED & RESTORED TO EX. CONDITIONS.

SPILL PREVENTION AND RESPONSE

1. CONTRACTOR SHALL STEAM CLEAN ALL EQUIPMENT THAT WILL BE WORKING IN RIVER BED AT SHOP PRIOR TO COMMENCING CONSTRUCTION.
2. ALL EQUIPMENT SHALL BE CHECKED FOR LEAKS AND REPAIRED PRIOR TO COMMENCING CONSTRUCTION.
3. CONTRACTOR SHALL INSURE INTEGRITY OF SILT FENCE AND STRAW BALE BARRIERS DURING THE COURSE OF CONSTRUCTION.
4. CONTRACTOR SHALL USE DRIP PANS OR ABSORBENT MATS DURING FUELING AND MAINTENANCE TO PROTECT AGAINST SPILLS.
5. SPILLED PETROLEUM PRODUCTS, CONTAMINATED SOILS OR WATER, AND ACCUMULATED SEDIMENTS SHALL BE CLEANED UP AND PROPERLY DISPOSED OF AT A LICENSED LANDFILL. DISCHARGE OF SUCH MATERIALS TO THE RIVER CHANNEL OR DITCHES IS PROHIBITED.

REVEGETATION

1. ALL DISTURBED AREAS, CUT & FILL SLOPES SHALL BE RE-SEEDED. THE SEED MIX, APPLICATION RATE ETC. SHALL BE SPECIFIED BY THE CVCD.
2. REVEGETATED AREAS WILL BE INSPECTED AT COMPLETION OF INSTALLATION & ACCEPTANCE SUBJECT TO COMPLIANCE WITH SPECIFIED MATERIALS & INSTALLATION REQUIREMENTS. FOR ONE FULL GROWING SEASON AFTER PLANTING, CONTRACTOR SHALL GUARANTEE 30% COVERAGE BY SEEDED SPECIES & MULCH SUCH THAT THERE IS NO SIGNIFICANT EVIDENCE OF RILLS, GULLIES OR OTHER EVIDENCE OF EROSION. IF ADEQUATE COVERAGE IS NOT ACHIEVED, THE CONTRACTOR SHALL RE-SOIL AMEND, RE-SEED OR RE-MULCH. THE ENGINEER, UPON CONTRACTOR'S REQUEST, WILL MAKE FINAL INSPECTION & ACCEPTANCE ONE FULL YEAR FOLLOWING COMPLETION OF SEEDING(THE MAINTENANCE PERIOD). PROVIDE NOTIFICATION AT LEAST 10 WORKING DAYS BEFORE REQUESTED INSPECTION DATE.

GENERAL DE-WATERING & TEMPORARY EROSION CONTROL PLAN NOTES

1. IN CASE OF EMERGENCY CALL CARSON VALLEY CONSERVATION DISTRICT (RICH WILKINSON, @ 775-782-3661 X 3830 OR ENGINEER @ 775-782-2322).
2. CONTRACTOR MAY SUBMIT ALTERNATE DE-WATERING & EROSION CONTROL PLAN TO ENGINEER. SUBMITTAL SHALL BE MADE IN ADVANCE OF CONSTRUCTION ACTIVITIES FOR REVIEW & APPROVAL.
3. CONSTRUCTION SHALL BE SCHEDULED TO COINCIDE WITH PERIODS OF LOW FLOW IN THE RIVER.
4. RESTORE AREAS DISTURBED BY DE-WATERING ACTIVITIES TO PRE-CONSTRUCTION CONDITIONS.
5. ANY PASTURE FENCES DAMAGED, FAILING OR RELOCATED FOR CONSTRUCTION ACTIVITIES SHALL BE RESTORED TO EXISTING CONDITIONS AT TOP OF BANK.
6. DUST SHALL BE CONTROLLED BY THE CONTRACTOR TO THE SATISFACTION OF THE ENGINEER AND OWNER.
7. THE CONTRACTOR SHALL MAINTAIN A CLEAN PROJECT SITE, REMOVING CONSTRUCTION DEBRIS AT THE END OF EACH ACTIVITY DAY. TRASH WILL BE HAULED TO A LICENSED DISPOSAL FACILITY. NO CONSTRUCTION WASTE MATERIALS SHALL BE BURIED ON SITE.
8. THE CONTRACTOR SHALL MAINTAIN DEBRIS FREE CONSTRUCTION ROUTES, ADJACENT STREETS AND STORM DRAIN SYSTEMS.
9. A STANDBY CREW FOR EMERGENCY WORK SHALL BE AVAILABLE AT ALL TIMES. NECESSARY MATERIALS SHALL BE AVAILABLE ON-SITE AND STOCKPILED AT APPROVED LOCATIONS TO FACILITATE RAPID CONSTRUCTION OF TEMPORARY DEVICES OR TO REPAIR DAMAGED EROSION CONTROL MEASURES. CONTRACTOR SHALL PROVIDE OWNER WITH THE NAME & PHONE NUMBER OF EMERGENCY CONTACT AT THE PRE-CONSTRUCTION MEETING.
10. AFTER A RAINSTORM, ALL BMP'S AND GRADED SLOPE SURFACE PROTECTION MEASURES SHALL BE INSPECTED TO VERIFY CONTINUED SATISFACTORY OPERATION AND REPAIRED OR REPLACED IF NECESSARY.
11. ALL EROSION CONTROL MEASURES SHALL BE MAINTAINED IN GOOD WORKING ORDER. IF A REPAIR IS NECESSARY IT SHALL BE INITIATED WITHIN 24 HOURS OF REPORT.
12. FILL SLOPES AT THE PROJECT PERIMETER MUST DRAIN AWAY FROM THE TOP OF THE SLOPE AT THE CONCLUSION OF EACH WORKING DAY.
13. BUILT UP SEDIMENT SHALL BE REMOVED AS NECESSARY TO MAINTAIN PROPER FUNCTIONING OF THE BMP'S
14. ALL CONTROL MEASURES SHALL BE INSPECTED AT LEAST ONCE PER WEEK AND FOLLOWING ANY STORM EVENT OF 0.5 INCHES OR GREATER.
15. A MAINTENANCE INSPECTION REPORT WILL BE MADE AFTER EACH INSPECTION. THE REPORT WILL CONTAIN THE NAME OF THE INSPECTOR, MEASURES, AREAS INSPECTED, OBSERVED CONDITIONS, AND NOTE CHANGES NECESSARY.
16. REPORT RELEASES OF REPORTABLE QUANTITIES OF OIL OR HAZARDOUS MATERIALS (IF THEY OCCUR) TO NDEP AND THE OWNER WITHIN 24 HOURS.
17. FILTER FABRIC FENCES. IF THE FABRIC BECOMES CLOGGED, TORN, OR DEGRADES, IT SHOULD BE REPLACED. MAKE SURE THE STAKES ARE SECURELY DRIVEN IN THE GROUND AND ARE IN GOOD SHAPE (IE., NOT BENT, CRACKED, OR SPLINTERED, AND ARE REASONABLY PERPENDICULAR TO THE GROUND.) REPLACE DAMAGED STAKES.
18. SEDIMENT THAT ACCUMULATES IN THE BMP MUST BE PERIODICALLY REMOVED IN ORDER TO MAINTAIN BMP EFFECTIVENESS. SEDIMENT SHOULD BE REMOVED WHEN THE SEDIMENT ACCUMULATION REACHES ONE-THIRD OF THE BARRIER HEIGHT. SEDIMENT REMOVED DURING MAINTENANCE MAY BE INCORPORATED INTO EARTHWORK ON THE SITE OR DISPOSED AT AN APPROPRIATE LOCATION.
19. NO DE-WATERING UNTIL FLOWS EXCEED 400 CFS AS READ AT THE CARSON CITY GAUGE.

CALL BEFORE YOU DIG 1-800-227-2600

PERMIT SET 10.15.2021

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2022 CARSON RIVER BANK STABILIZATION PROJECTS
CARSON VALLEY CONSERVATION DISTRICT

DE-WATERING & TEMPORARY EROSION CONTROL PLAN

NAGASEKHAR R. GORLA — Exp: 06/30/23 — CIVIL — No. 18557 — PROFESSIONAL ENGINEER — STATE OF NEVADA

DRAWN: JT	JOB: 1702-004
ENGINEER: NRG	DRAWING: SEE PLOT STAMP
SCALE: AS NOTED	SHEET: C7
DATE: 10.15.2021	OF: 7 SHEETS

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(2) Dayton Valley Conservation District River Project

CARSON WATER SUBCONSERVANCY DISTRICT
REQUEST FOR FUNDING FY 2022-23

APPLICANT: Dayton Valley Conservation District

Name

34 Lakes Blvd. PO Box 1807

Address

Dayton | Lyon

City | County

NV | 89403

State | Zip Code

rholley.dvcd@yahoo.com | 775-246-6220 ext. 1878

Email | Telephone #

APPLICANT'S AGENT (if different from Applicant):

Rob Holley

Name

same

Address

same | | |

City | County

same | | |

State | Zip Code

same

Email | Telephone #

PROJECT NAME: Pradere & Ricci Stabilization/Channel Maint & Riparian/Bridge Protection

PROJECT LOCATION/ADDRESS:

Carson River, Upstream from Dayton Bridge

PROJECT DESCRIPTION: Briefly describe the project. Provide maps, drawings, photographs or other information. Additional sheets may be attached.

Reference attached narrative, including aerial photos and video link

Key: white areas denote sources of fill/channel clearing
green lines denote areas requiring stabilization

PROJECT GOALS AND BENEFITS: Briefly describe the project goals and benefits to be realized if the project is implemented, and how it is consistent with the CRASP and/or CRRFMP. Additional sheets may be attached.

Reference attached narrative

TOTAL ESTIMATED PROJECT COST: $950,000.000

AMOUNT REQUESTED FROM CWSD: $150,000.00

SOURCE OF OTHER FUNDS: List all other sources of funds to be used to match funds requested from CWSD. List the provider of the matching funds and the amount requested from each provider.

See Attached Breakdown

Note: $100,000.00 requested in FY 2023 and $50,000 in FY 2024

ESTIMATED DATE PROJECT TO BEGIN: July 1, 2022

ESTIMATED TIME TO COMPLETE PROJECT: 18 mo to 2 years
(If completion date is greater than a year, please indicate how much funding is needed in each fiscal year.)

PERMIT REQUIREMENTS: If your project requires a permit, license and/or approval from a governmental agency to proceed, please provide the current status of each requirement. If approval has not been requested or is in progress, please provide the estimated date on which approval can be expected. Additional sheets may be attached.

Reference Attached Summary

OTHER INFORMATION: Provide any other information that may be important to the approval of this application.

SIGNED: Robert L. Holley

NAME: Rob Holley

TITLE: District Manager

DATE: 02/03/2022

Carson Water Subconservancy District reserves the right to deny any and/or all applications for funding.

PROJECT PURPOSE & DESCRIPTION:

The requested funds intended to match other funds, and help fund the cultural assessment, engineer's survey, engineering costs and staff time required to initiate and coordinate permitting and construction of critical bank stabilization and channel maintenance at and directly upstream from the Dayton Bridge.

The Dayton Bridge has three passageways through which water flows. The primary passage (west and closest to Hwy 50) remains clear and free of restrictions, while the center passage has gathered sediment. The high water passage beneath the east end of the bridge is rendered minimally functional as a result of cottonwood/willow growth, and sediment deposition from Eldorado Canyon, which meets the Carson River immediately upstream from the bridge. Collectively, the restricted capacity of the center and east passages impacts the ability of the bridge to effectively pass high flows, impacting the safety of the bridge, access to adjoining communities, and flood damage to upstream properties in even moderate flood events such as 2017.

The Baroni diversion, ¼ mile upstream from the Dayton Bridge, frequently catches mature cottonwood trees which have fallen from eroding banks into the river channel. Should these deadfalls break loose during high water events (including annual spring runoff), they present a significant danger to the bridge, and will serve as strainers, catching additional debris on the upstream of the bridge, thereby raising water levels at the bridge.

Further exacerbating the situation is a large bar of cobble and sand at the Baroni diversion. This deposit was left after the two flood events of January and February 2017 and originated from a levee originally constructed by the US Army Corps of Engineers in the early 1960s. After its destabilization in 2017, the levee continues to erode during normal high water flows, adding sediment, and contributing more cottonwoods to the river.

Immediately upstream from the Baroni diversion are two long, actively eroding banks. Located on the Ricci and Pradere properties, these banks continue to erode in even normal water years, and are the source of the large cottonwood trees and significant amounts of sediment coming from the banks. These banks are the only sites upstream from Dayton Bridge that have not been stabilized since DVCD projects were implemented after the 1997 floods. They are the only active and significantly eroding sites in this stretch of river.

These banks are located within close proximity to numerous historic mill sites and areas of known high concentrations of mercury.

Additionally, in the area of and upstream from the eroding banks, the river channel has become narrow and choked with willows and woody vegetation. These areas constrict the flow, raise water levels onto adjoining private lands, and exacerbate the erosion of the banks and the deepening of the narrow river channel.

PROJECT GOALS AND BENEFITS:

This project is intended to address the following goals (working downstream):

1. Increase the capacity of the river channel in the area adjacent to and upstream from frequently flooded areas and eroding stream banks.
2. Stabilize and protect private property, restore actively eroding banks, sequester mercury and minimize its introduction into stream flows, and protect the mature cottonwood gallery in that area from continued loss.
3. Restore the location and function of the US Army Corp's levee in order to protect the Baroni diversion from continued obstruction, to reduce active sediment deposition in the river, and to prevent uncontrolled river flow from entering the Baroni ditch and adjacent private lands.
4. Restore and protect the capacity of the Dayton Bridge and remove willows, cottonwood trees and sediment at the bridge, below the confluence with Eldorado Canyon, and to a point near and below the bridge. Stabilize eroded banks at the terminus of Eldorado Canyon, left eroded by the 2017 floods.

This project site has long been identified as necessary for the protection of highly erodible riparian communities, irrigation infrastructure, vital transportation corridors, and adjacent agricultural, residential, and commercial/industrial properties.

PROJECT PLANS:

Detailed project plans will be developed after initial engineer's survey has been completed.

The erosion sites are characterized by steep vertical banks devoid of vegetation. Mature cottonwood trees survive in the floodplain adjacent to the banks, and fall into the river annually. The base of the bank has minimal vegetation, leaving the escarpment prone to continued severe erosion at even normal flows. This project has been identified for several years as a high priority. The design will include stream barbs, four (4) rock refusal trenches, and rip-rap toe protection. Bio-engineering will be incorporated, as will erosion matting, and native seed mixes. The riverbank will be reshaped to a 3 to 1 slope.

Material for bank restoration and slope establishment will be obtained from within the project site from existing, constricting sand bars within the stream banks. This material will be rich in willow material, which will help address the bioengineering aspect and aid in the establishment of native vegetation.

Detailed plans, developed by RO Anderson Engineering, will be provided to all funding partners when made available.

Similar projects completed in Dayton Valley have been highly successful and have withstood both the high floods and runoff periods of recent years.

PERMITS:

As soon as plans are +/- 60% completed, application will be made to the following agencies:

US Army Corp of Engineers

Nevada Division of Environmental Protection

Nevada Division of State Lands

Additionally, and through the aforementioned processes, notification and authorization will be obtained from multiple agencies regarding historical/archaeological impacts, endangered/sensitive species, etc.

MONITORING AND METRICS:

Dayton Valley regularly monitors projects within the district by visual monitoring and reporting from staff/landowners. Projects are monitored regularly, and always after flood or high runoff events. As needed, funds are sought to make needed repairs.

DVCD maintains the NDEP maintenance permit and works with permitting and funding agencies to ensure that maintenance needs are met and project integrity and function is not diminished.

Additional water/sediment and site testing will be conducted when required for permit compliance.

ESTIMATED PROJECT COSTS:

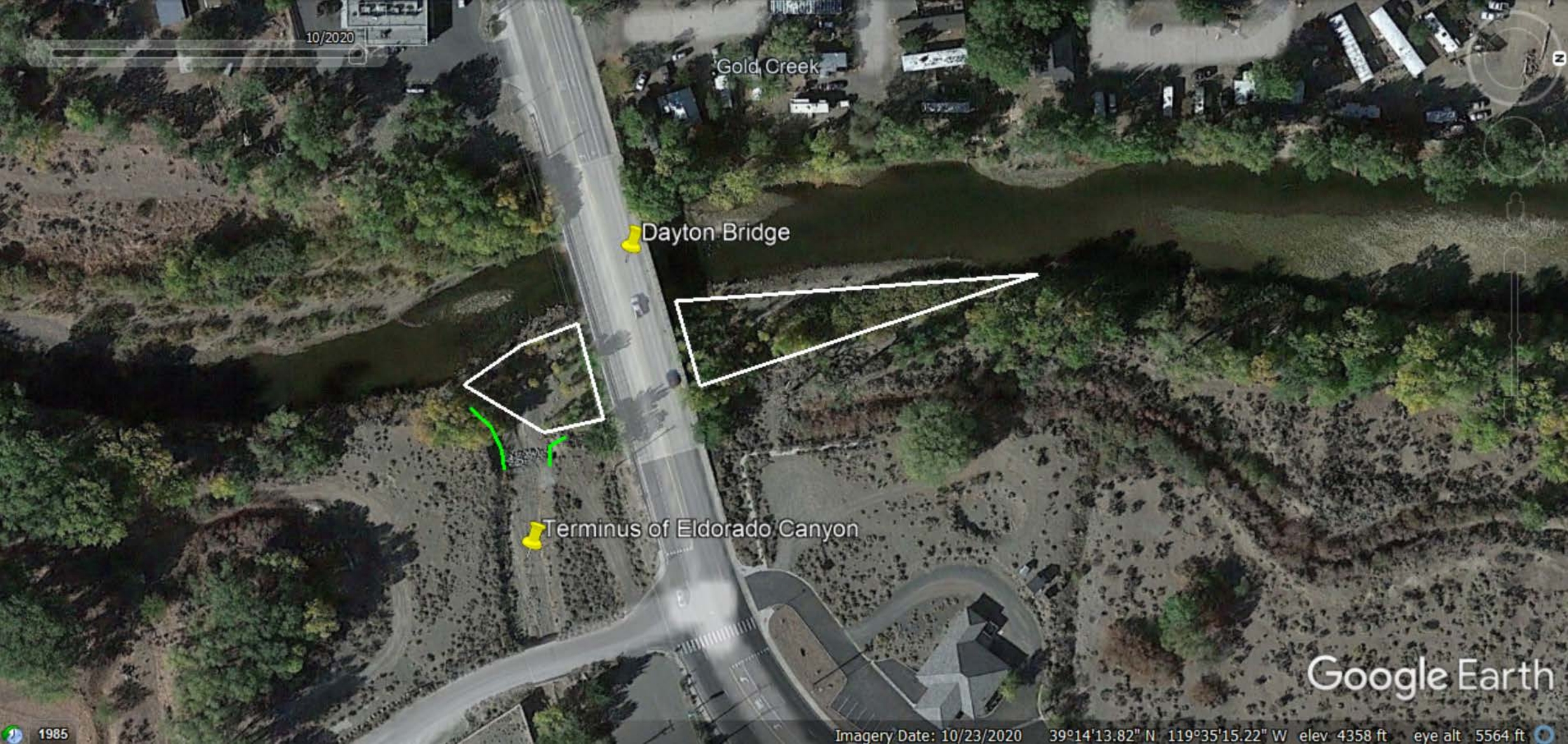
Category	TOTAL BUDGET
Salaries/Fringe	$60,000
Archaeologic Survey	$10,000
Engineering/Survey	$40,000
Operating/Supplies	$4,000
Travel/Equipment Costs	$4,000
Contractor Services	$832,000
TOTAL	$950,000

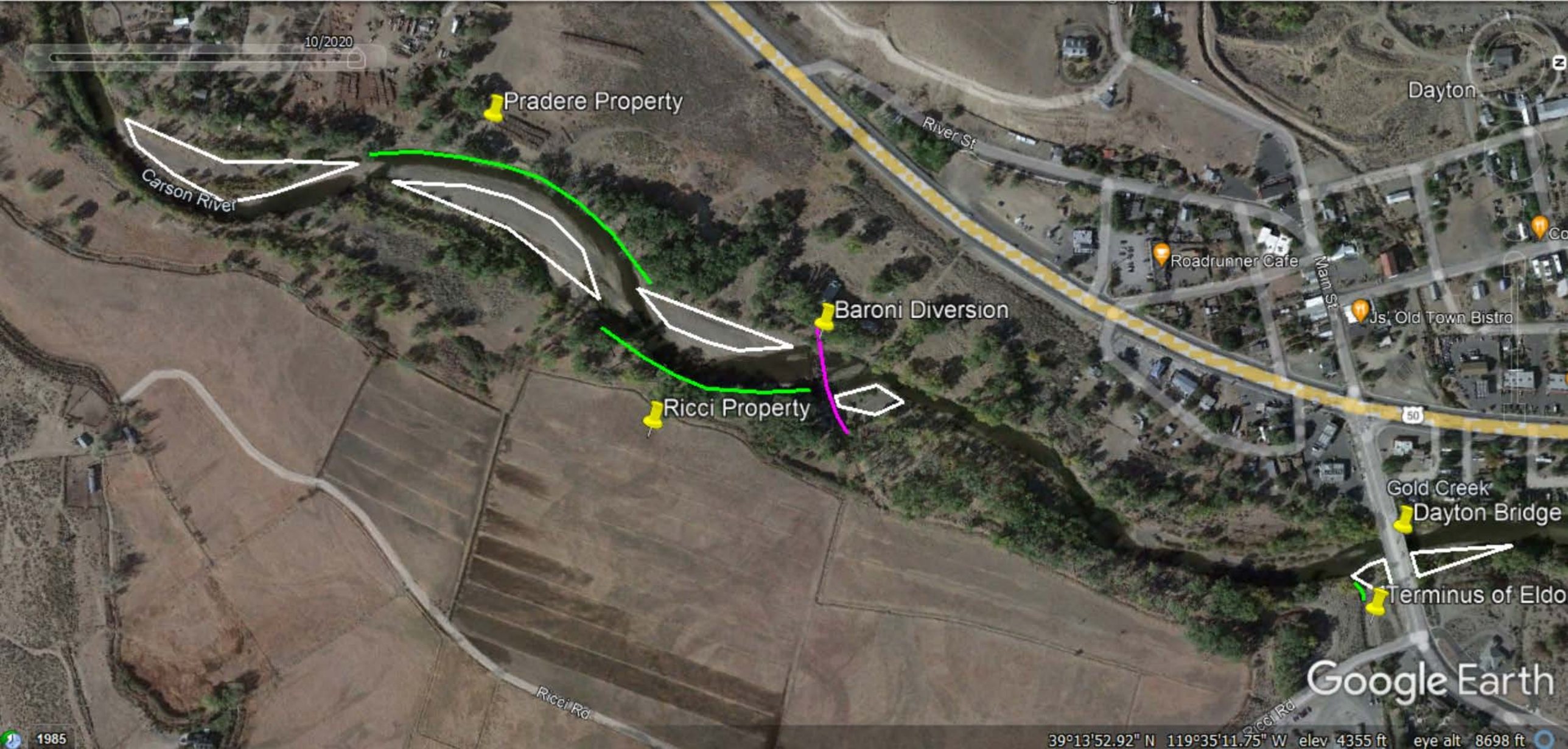
FUNDING:

Source	Amount	
Project Funds		
NDOT	$300,000.00	Site inspection with NDOT and pending final terms and $$
Lyon County	$300,000.00	Pending Request
NV Division of Water Resources	$50,000.00	Pending Request
NDEP 319 (H)	$100,000.00	Pending Request
CWSD	$150,000.00	Requested
CTWCD	$50,000.00	Requested
Overall Projects Total:	**$ 950,000.00**	

TIMELINE:

Timeline	Date
Initiate Archaeologial and Engineering Surveys and Engineering documents	July 1, 2022
Initiate Permitting Process	Fall, 2022
Complete Engineering and Permitting	Spring, 2023
Begin Construction	Fall 2023
Complete Construction	Winter/Spring, 2024


10/2020
Gold Creek
Dayton Bridge
Terminus of Eldorado Canyon
Google Earth
1985
Imagery Date: 10/23/2020 39°14'13.82" N 119°35'15.22" W elev 4358 ft eye alt 5564 ft


10/2020
Pradere Property
Carson River
River St
Dayton
Roadrunner Cafe
Main St
Js. Old Town Bistro
Baroni Diversion
Ricci Property
50
Gold Creek
Dayton Bridge
Terminus of Eldo
Ricci Rd
Ricci Rd
Google Earth
1985
39°13'52.92" N 119°35'11.75" W elev 4355 ft eye alt 8698 ft


10/2020
Pradere Rd
Cemetery Rd
Pradere Property
River St
Carson River
Roadrunner C
Baroni Diversion
Ricci Property
Google Earth
1985
39°13'45.52" N 119°35'27.51" W elev 4373 ft eye alt 8154 ft

(3) Lahontan Conservation District

CARSON WATER SUBCONSERVANCY DISTRICT
REQUEST FOR FUNDING

APPLICANT: Lahontan Conservation District
Name
111 Sheckler Road
Address
Fallon NV 89406
City County State Zip Code
christy.sullivan@nv.nacdnet.net (775) 423-5124 exe 101
Email Telephone #

APPLICANT'S AGENT (if different from Applicant):

Name

Address

City County State Zip Code

Email Telephone #

PROJECT NAME: Clearing and Snagging Carson River

PROJECT LOCATION/ADDRESS: Carson River Channel Below Diversion Dam to the Carson River Sink

PROJECT DESCRIPTION: Briefly describe the project. Provide maps, drawings, photographs or other information. Additional sheets may be attached.

The project is a ongoing effort to create a river channel that is clear of obstructions/abstraction and provides a free flow at natural choke points. For example, the Reno Highway Bridge has historically been clogged by debris during high water flooding events. Obstructions in these locations causes back up and overflow that moves into residential housing areas in both the county and City of Fallon. Locations where sediment caused islands changed the flow, eroded banks, or blocked flows under bridge. Removal of sediment will provide debris/obstructions to flow downstream more freely.

- Continue with a long-term monitoring program on the lower Carson River.
- Beaver and beaver dam removal to improve water flow in the channel.
- Clear brush and sediment back to original riverbank starting at Diversion Dam and continuing downstream.
- Remove sediment build-up above and below Sheckler Bridge.
- Remove sediment build-up above and below McLean Bridge.
- Remove sediment build-up above and below Highway 50 Bridge.
- Remove sediment build-up above and below Highway 95 Bridge.
- Remove sediment build-up above and below Bafford Bridge.

PROJECT GOALS AND BENEFITS: Briefly describe the project goals and benefits to be realized if the project is implemented. Additional sheets may be attached.

This project will prevent and minimize property loss and other damage during flood conditions. Riverbank stabilization after sediment removal will minimize erosion, improve water quality and re-establish native vegetation. Maintaining a clear channel will enable the citizens to utilize the river for recreation. Maintaining an adequate velocity of the river flow prevents stagnant pools from developing where mosquitoes can propagate and create health issues for residents along the course of the Carson River.

TOTAL ESTIMATED PROJECT COST: $54,000.00
AMOUNT REQUESTED FROM CWSD: $27,000.00

SOURCE OF OTHER FUNDS: List all other sources of funds to be used to match funds requested from CWSD. List the provider of the matching funds and the amount requested from each provider.

Churchill County Grant Funding	$ 5,000.00
In-kind Match:	
Lahontan Conservation District Administration and Equipment	$ 10,000.00
Landowners Equipment and Labor	$ 12,000.00
Total	$ 27,000.00

Truckee-Carson Irrigation District – Maintenance including personnel and equipment

ESTIMATED DATE PROJECT TO BEGIN: November 1, 2022

ESTIMATED TIME TO COMPLETE PROJECT: March 30, 2023
(If completion date is greater than a year, please indicate how much funding is needed in each fiscal year.)

PERMIT REQUIREMENTS: If your project requires a permit, license and/or approval from a governmental agency to proceed, please provide the current status of each requirement. If approval has not been requested or is in progress, please provide the estimated date on which approval can be expected. Additional sheets may be attached.

Permit with the Nevada Division of Environment Protection.

- Site/ID Invoice # GMNT-40165
- Permit type: Routine Maintenance Activities
- Valid from July 1, 2021 to June 30, 2022 (Pending July 1, 2022 to June 30, 2023)

OTHER INFORMATION: Provide any other information that may be important to the approval of this application.

It takes a combination of debris, foliage, beaver dam and sediment removal to maintain a clear channel. This work effort provides the following benefits on an annual basis and must also be maintained and continued to overcome the normal foliage growth, discarding of manmade debris and natural obstructions that enter the channel repeatedly.

Improvement Criteria Achieved:

- Downstream benefits to improve the Carson River Watershed.
- Minimize stream bank erosion, improve water quality, and re-establish native vegetation.
- Reduce flooding risk along the Carson River, particularly to residential and commercial development.
- Reduce flood damage risk to water and sewage infrastructure installed in Churchill County.
- Improve the administration and management of the river and stream system.
- Improve the opportunities for citizens to use the river for recreational purposes.
- Maintaining a clean/clear river channel will improve water quality and aid the overall stewardship plan for the Carson River.

SIGNED: Bill Washburn

NAME: Bill Washburn

TITLE: Chairman

DATE: February 4, 2022

THE CARSON WATER SUBCONSERVANCY DISTRICT RESERVES THE RIGHT TO DENY ANY AND/OR ALL APPLICATIONS FOR FUNDING.

(4) River Wranglers
Carson River Workdays

CARSON WATER SUBCONSERVANCY DISTRICT
REQUEST FOR FUNDING FY 2022-23

APPLICANT: River Wranglers
Name

P.O. Box 1612
Address

Dayton | Lyon
City | County

NV | 89403
State | Zip Code

rw@riverwranglers.org | 775.386.2743
Email | Telephone #

APPLICANT'S AGENT (if different from Applicant):

Darcy Phillips, Executive Director
Name

Address

City | County

State | Zip Code

Email | Telephone #

PROJECT NAME: Conserve the Carson River Workdays

PROJECT LOCATION/ADDRESS:

Multiple locations in the Carson River watershed

PROJECT DESCRIPTION: Briefly describe the project. Provide maps, drawings, photographs or other information. Additional sheets may be attached.

See attached sheet.

PROJECT GOALS AND BENEFITS: Briefly describe the project goals and benefits to be realized if the project is implemented, and how it is consistent with the CRASP and/or CRRFMP. Additional sheets may be attached.

See attached sheet.

TOTAL ESTIMATED PROJECT COST: 100,000

AMOUNT REQUESTED FROM CWSD: 26,000

SOURCE OF OTHER FUNDS: List all other sources of funds to be used to match funds requested from CWSD. List the provider of the matching funds and the amount requested from each provider.

River Wranglers is currently involved in a grant through NDEP for environmental education. This cycle extends through the majority of the 2022-2023 fiscal year. After that money is exhausted, we have an award of another grant from NDEP to extend the work.

ESTIMATED DATE PROJECT TO BEGIN: July 1, 2022

ESTIMATED TIME TO COMPLETE PROJECT: June 30, 2023

(If completion date is greater than a year, please indicate how much funding is needed in each fiscal year.)

PERMIT REQUIREMENTS: If your project requires a permit, license and/or approval from a governmental agency to proceed, please provide the current status of each requirement. If approval has not been requested or is in progress, please provide the estimated date on which approval can be expected. Additional sheets may be attached.
N/A

OTHER INFORMATION: Provide any other information that may be important to the approval of this application.
See additional attachment

SIGNED: _____

NAME: Darcy Phillips

TITLE: Executive Director

DATE: 2/2/2022

Carson Water Subconservancy District reserves the right to deny any and/or all applications for funding.

CARSON WATER SUBCONSERVANCY DISTRICT
REQUEST FOR FUNDING FY 2022-23

APPLICANT: River Wranglers

PROJECT NAME: Conserve the Carson River Workdays

PROJECT DESCRIPTION: Briefly describe the project. Provide maps, drawings, photographs or other information. Additional sheets may be attached.

River Wranglers continues to Conserve the Carson River Workdays (CCRWD) throughout the Carson River watershed. We are thrilled to be back in the classroom and at the river with students. We plan to go into high school FFA and science classrooms to teach high school students the necessary information and skills so that they in turn can teach elementary students at the river in a combined workday. The high school students are trained on activities that teach children about our watershed, the importance of clean water, the water cycle, and non-point source pollution. At the river, they become "mentors" to the younger students, spending the day with them, leading them through the activities. In addition to the educational stations, we partner with conservation districts to include river work projects that the students complete together.

After the workdays, elementary students are visited by River Wranglers staff to do a "wrap-up," which reinforces the messages they learned at the river. We once again discuss non-point source pollution, the geography and features of the watershed, and the importance of the river and watershed to their own lives. We do a pre- and post-test with all involved students to track their increase in knowledge about the watershed and non-point source pollution to gauge the effectiveness of our programs.

PROJECT GOALS AND BENEFITS: Briefly describe the project goals and benefits to be realized if the project is implemented, and how it is consistent with the CRASP and/or CRRFMP. Additional sheets may be attached.

River Wranglers wants students to value the Carson River watershed and recognize their place in it. We want them to understand that their actions have impacts, and that even as children, there are things they can do to help with the health of the watershed. Ultimately, our overarching goal is to bring awareness and action to non-point source pollution issues in our watershed. By working off the issues the CWSD watershed

survey brought forward, we are able to increase knowledge of people's relationship to the watershed and to the river. By reaching the children, our hope is to make them care and be aware for the duration of their lives. If they bring their parents along in their awareness, all the better. Our goals include reaching every student in the watershed sometime during their K-12 years. We work with most of the schools in the Carson River watershed in a given year; in some counties we work with every school.

High school students and their teachers report the benefits of increased confidence in public speaking, leadership skills, and an appreciation of working with younger children. They have an increased sense of responsibility in being in charge of teaching students and keeping them safe during the workday. When RW staff goes back into the elementary classrooms for wrap-ups, we are greeted with enthusiasm, excitement, and thank you notes expressing thanks for all the things they learned, whether it was learning about beaver adaptations, the journey water takes through the water cycle, why it's important to pick up their dog's poop, or that they never knew about tree wrapping for beaver protection.

Years later, when we see the students again in high school, they remember their field trip in 4th or 5th grade. They remember learning about their watershed and visiting the river, many of them for the first time.

OTHER INFORMATION: Provide any other information that may be important to the approval of this application.

The $26,000 would be broken down by county - $6,000 for Douglas, Carson, Lyon, and Churchill Counties, plus $2,000 for administrative costs/supplies/mileage associated with the project.

We thank CWSD for their continued support in this important project. We appreciate the chance to partner with so many other applicants and CWSD to do our work. We couldn't do the work without you, and we appreciate your guidance and funding to continue.

(5) Alpine Watershed Group Watershed Programs

CARSON WATER SUBCONSERVANCY DISTRICT
REQUEST FOR FUNDING FY 2022-23

APPLICANT: Alpine Watershed Group

Name

PO Box 296

Address

Markleeville | Alpine

City | County

CA | 96120

State | Zip Code

awg.kimra@gmail.com | (530) 694-2327

Email | Telephone #

APPLICANT'S AGENT (if different from Applicant):

Name

Address

City | County

State | Zip Code

Email | Telephone #

PROJECT NAME: Upper Carson River Watershed Programs

PROJECT LOCATION/ADDRESS:

Service area - Alpine County

AWG office - 50 Diamond Valley Road in Woodfords, CA

PROJECT DESCRIPTION: Briefly describe the project. Provide maps, drawings, photographs or other information. Additional sheets may be attached.

See Project Description attached.

PROJECT GOALS AND BENEFITS: Briefly describe the project goals and benefits to be realized if the project is implemented, and how it is consistent with the CRASP and/or CRRFMP. Additional sheets may be attached.

See Project Goals and Benefits attached.

TOTAL ESTIMATED PROJECT COST: $164,118

AMOUNT REQUESTED FROM CWSD: $25,000

SOURCE OF OTHER FUNDS: List all other sources of funds to be used to match funds requested from CWSD. List the provider of the matching funds and the amount requested from each provider.

American Rivers - $5,000
California Department of Fish & Wildlife Kirkwood Settlement - $7,560
California Integrated Regional Water Management - $67,000
National Fish and Wildlife Foundation - $37,000
National Forest Foundation - $10,000
Trout Unlimited - Sagebrush Chapter - $12,558

ESTIMATED DATE PROJECT TO BEGIN: July 1, 2022

ESTIMATED TIME TO COMPLETE PROJECT: June 30, 2023
(If completion date is greater than a year, please indicate how much funding is needed in each fiscal year.)

PERMIT REQUIREMENTS: If your project requires a permit, license and/or approval from a governmental agency to proceed, please provide the current status of each requirement. If approval has not been requested or is in progress, please provide the estimated date on which approval can be expected. Additional sheets may be attached.

While large-scale restoration projects with other funding sources require various permits, no permits are required for AWG's Upper Carson River Watershed Programs as described in this application.

A letter of support for this funding request on behalf of the Alpine County Board of Supervisors is attached.

OTHER INFORMATION: Provide any other information that may be important to the approval of this application.

In 2021 AWG volunteers contributed 565 hours on water quality sampling, Hope Valley project maintenance tasks, and large community workdays for Creek Day and the Musser & Jarvis Restoration Weekend. CWSD support helps our small, community-based organization build the capacity of Alpine County to address the most critical environmental concerns by utilizing local expertise to monitor changes, lead projects to improve water quality, and educate residents and visitors on water issues. Thank you!

SIGNED: 

NAME: Kimra D. McAfee

TITLE: Executive Director

DATE: February 4, 2022

Carson Water Subconservancy District reserves the right to deny any and/or all applications for funding.

CARSON WATER SUBCONSERVANCY DISTRICT
Fiscal Year 2022-23

Alpine Watershed Group Funding Request – Additional Sheets

PROJECT DESCRIPTION:

Alpine Watershed Group (AWG) seeks funding for the fiscal year 2022-23 from the Carson Water Subconservancy District for the coordination of its Upper Carson River watershed programs. AWG's mission is to preserve and enhance the natural system functions of Alpine County's watersheds for future generations. For 21 years, AWG has organized volunteers and inspired widespread participation to address water quality monitoring and restoration needs in Alpine County. To further the stewardship of our county's natural resources, our organization has developed diverse partnerships around watershed issues. As the nonprofit environmental organization for the Carson River headwaters (see attached map), our positive impacts extend downstream, where the Carson River flows into Northern Nevada.

Through this project, AWG staff will: 1) involve local citizens in watershed stewardship; 2) plan and implement watershed monitoring and restoration activities; 3) recruit diverse stakeholders and strengthen community partnerships; and 4) support local watershed education and community outreach.

Alpine County attracts thousands of visitors each year from Nevada, California, and beyond. It is a popular recreation area for fishing, hiking and backpacking, river-running, and winter sports, and it is particularly well-loved by outdoor enthusiasts who reside in nearby Nevada. The recreational offerings and magnificent nature in Alpine County depend on the clean water that AWG helps to protect. While it is one of AWG's goals to expand involvement in the watershed group by Nevadans, we already have volunteers and participating stakeholders from throughout Northern Nevada. Our active participation in CWSD through forums, seminars, and newsletters allows us to help educate residents of the other counties in the watershed about where the water originates and the programs AWG carries out—programs that protect and improve water quality for human use and habitat values both in Alpine County and downstream.

PROJECT GOALS AND BENEFITS:

Our organization's goals are to:

- Monitor and restore Alpine County watersheds
- Inspire community involvement and build public awareness around watershed issues
- Build organizational capacity for a sustainable future

Our monitoring, restoration, and education programs benefit the watershed not only in Alpine County, where the Carson River headwaters are located, but also have positive impacts downstream. Protecting and enhancing the headwaters is a critical start to maintaining healthy water quality conditions throughout the watershed's region. Our programs are consistent with the *Carson River Watershed Adaptive Stewardship Plan* and meet the following funding criteria:

- Provide regional benefits within the Carson River watershed
- Improve water quality
- Prevent further stream bank erosion in the long term
- Reduce flooding along the Carson River
- Improve the administration and management of river and stream systems
- Assist water users and the general public in understanding current water issues

Our work to restore and rehabilitate river function is also consistent with the *Carson River Regional Floodplain Management Plan* as these actions help to maintain the waterway in a condition to help ensure unimpeded flows during high storm water events. This year there is heightened concern about debris flow hazards because of the 2021 Tamarack Fire.

In spanning two states, the Carson River watershed presents unique opportunities and challenges. Upper Carson River watershed management planning is of concern to the Nevada Department of Environmental Protection, but the Alpine County portion of the watershed depends on the State of California and the Lahontan Regional Water Quality Control Board to become eligible for funding from the US Environmental Protection Agency's 319 Grant Program. AWG continues to work closely with the Regional Board as part of the West Fork Carson River Multiple Pollutants Vision Project. AWG is currently planning the fourth and final forum in partnership with the Regional Board to inform their Vision Project document. Taking place in March 2022, this forum on ranching in relation to improving water quality will include a presentation from Alpine County's Ace Hereford Ranch on their 2016 project to improve the ranch and cattle management processes. The Regional Board anticipates finalizing the Vision Project Plan in September 2022, and we will assist with getting community input on the draft plan this summer. We also continue to liaison with CWSD staff so the Vision Project Plan complements CWSD's *Carson River Watershed Adaptive Stewardship Plan*, with the hope that the upper watershed in California at last will become eligible for 319 funding, as the Nevada parts of the watershed have been. Along with CWSD staff, we continue to push the Regional Board to elevate the East Fork Carson River to the same level of watershed planning as the West Fork Carson River.

As a very small nonprofit, our challenge in 2022-23 is to continue all of AWG's usual programs and ongoing projects while being a community leader in the wake of the Tamarack Fire. Because of the strong relationships we have built with public land managers over the last two decades, AWG is uniquely qualified to be the catalyst needed for Upper Carson River watershed recovery from the Tamarack Fire. As the list of sources of other funds shows, we have been successful at garnering support for post-fire work including data collection, community outreach and education, agency collaboration, and, when safe and appropriate, volunteer restoration projects (National Fish and Wildlife Foundation and Trout Unlimited - Sagebrush Chapter). The goal of healing the watershed will take years and even decades to achieve, but these early actions will lay the foundation. We see the scar of the 2015 Washington Fire, and we are committed to making sure that what is needed to help heal the Tamarack Fire burn area will be done. CWSD funding in 2022-23 will serve a critical role in helping to leverage resources for post-Tamarack Fire restoration needs. In addition, AWG currently has a proposal pending for Regional Forest and Fire Capacity Program (RFFCP) Early Action funding from the Sierra Nevada Conservancy; this funding would help Alpine County increase its capacity to address forest health, fire recovery, and resilience in Alpine County.

Following is a summary of AWG's monitoring, restoration, and education program plans and projects in the coming year.

<u>Monitoring</u>

- Continuing our long-standing river monitor program, collecting data at eight sites in the Carson River watershed four times/year
- Coordinating with the Lahontan Regional Water Quality Control Board to implement the *Tamarack Post-fire Monitoring Plan 2021*; enlist AWG volunteers to assist with the expanded water quality sampling program as well as photo monitoring
- Conducting Year 4 of harmful algal bloom (HAB) monitoring in Alpine County, in partnership with the Lahontan Regional Water Quality Control Board, and coordinating with the Alpine County Public Health Officer on public outreach; our long-term goal in

continuing to build the dataset on HABs is to learn more about the causes so that we can eventually explore mitigation or control strategies to manage these water bodies to potentially prevent future toxin releases
- Coordinating with Markleeville Water Company to conduct vegetation and photo monitoring of the work areas from the Musser & Jarvis drainage post-fire restoration workdays on November 19–21, 2021 (installing wattles, felling and chinking trees, and spreading native seed)
- Partnering with The Institute for Bird Populations to conduct bird and associated vegetation monitoring in and around meadows looking at post-fire response, including volunteer help with monitoring; partnering with California State Parks and private landowners to identify monitoring needs; partnering with the Washoe Tribe of Nevada and California to apply data and traditional ecological knowledge for restoration plans
- Entering data from monitoring into the California Environmental Data Exchange Network (CEDEN), creating data summaries and reports for the public and Alpine County, and analyzing data trends over time to identify priority projects
- Ongoing recruitment of new volunteers for the AWG's monitoring programs
- Developing our GIS database for the county's watersheds

Restoration

Faith Valley Project – American Rivers lead, 6/2017 to 5/2023
The overarching goal of this project is to improve hydrologic and ecosystem processes in Faith Valley meadow located in the headwaters of the West Fork Carson River. AWG's involvement includes monitoring and community outreach.
Update: *The start of implementation did not occur in 2021 due to the wildfires. American Rivers is planning to start implementation in 2022.*

Hope Valley Restoration & Aquatic Habitat Enhancement Project – 11/2016 to 12/2024
This project will stabilize approximately 450 feet of eroding banks along the West Fork Carson River just downstream of the Highway 88 bridge on California Department of Fish & Wildlife (CDFW) land. The first site is a new project on the first meander downstream of the bridge; the second site is the 2015 American Rivers project site downstream of the first site, where adjustments will increase bank stability.
Update: *Construction was completed in fall 2020, and the annual monitoring reports are available on the project webpage: https://www.alpinewatershedgroup.org/hope-valley-restoration-and-aquatic. Funding from CDFW via the National Fish & Wildlife Foundation, funded by the State Water Board as part of a settlement of a Water Board enforcement action for Kirkwood Resort, covers monitoring and adaptive management through 2024.*

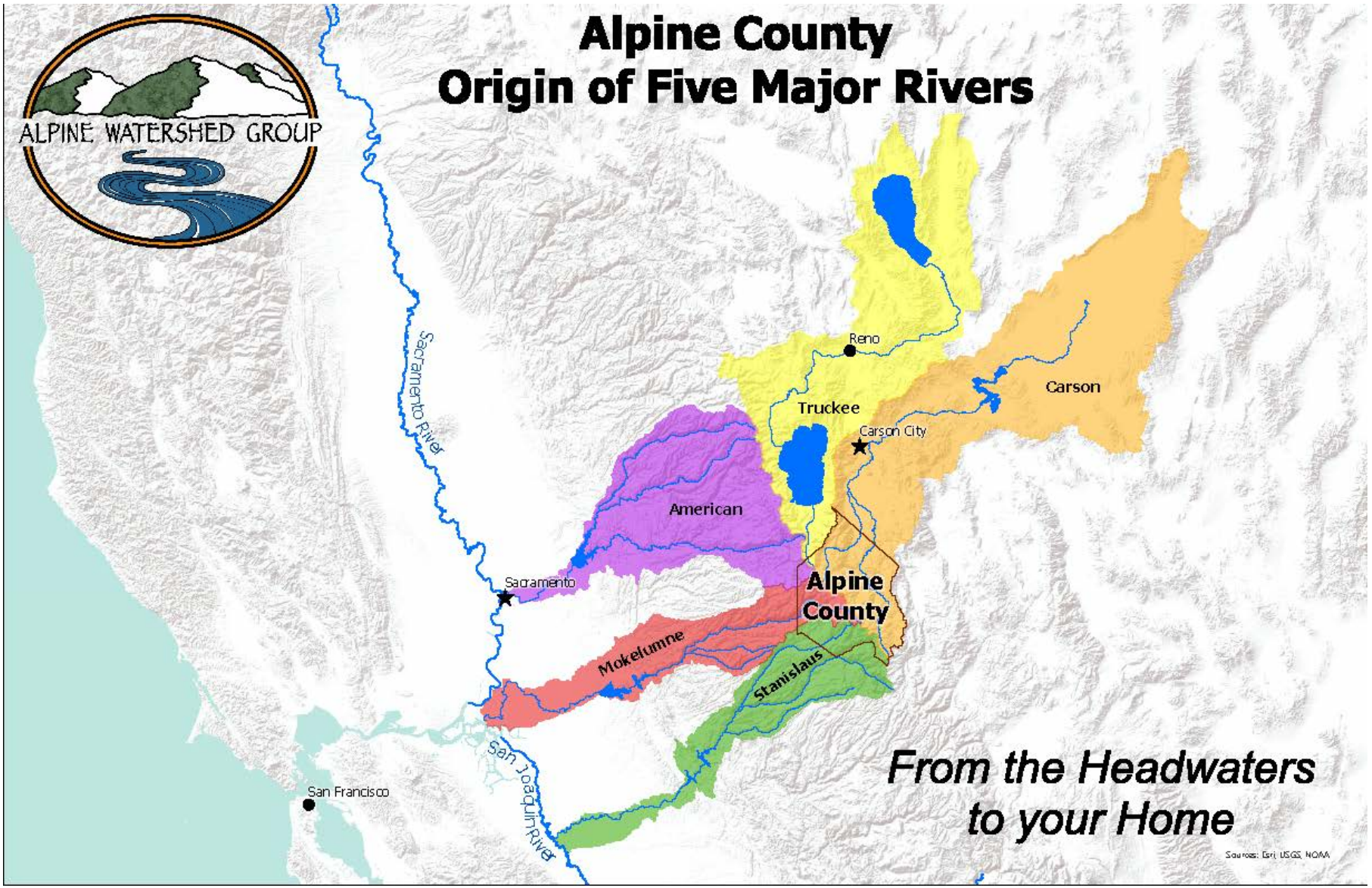
Markleeville Creek Restoration Project – 2005 to 12/2027 (estimated)
This project will re-establish the natural form and function of Markleeville Creek through the site of the former US Forest Service Guard Station. The project will re-create the streamside habitat by removing the floodwall and re-vegetating the floodplain. Markleeville Public Utility District is concurrently working on an infrastructure upgrade project that includes removing manholes from the floodplain and upgrading the sewer line that runs under the creek. Our community hopes that future funding will allow for development of public access amenities, such as a public restroom.
Update: *AWG has secured a portion of the implementation funding from California's Integrated Regional Water Management program. Alpine County and AWG are working with Caltrans to secure the remainder of the implementation funding by having the project's revegetation serve as mitigation for Caltrans' Markleeville Bridge replacement project (construction in 2022). Construction of the floodplain restoration project is anticipated in 2023.*

West Fork Carson River Fuels Reduction, Aspen, and Meadow Restoration Project – National Forest Foundation lead, 10/2021 to 12/2024

The National Forest Foundation, in partnership with the Carson Ranger District of the Humboldt-Toiyabe National Forest, will move forward on this project in 2022 to remove conifers in the Hope Valley area. AWG's involvement includes aspen monitoring and community outreach.

Education and Community Outreach

- Hosting bimonthly watershed group meetings; we anticipate that speakers, topics, and discussions will be heavily focused on fire-related topics as we help to bridge conversations between agencies and stakeholders
- Ongoing education of community members about water quality to encourage stewardship, working especially closely with Alpine County Health & Human Services to communicate about harmful algal blooms
- Depending on the pandemic and public safety, engaging community members and visitors through our annual Earth Day and Creek Day workdays, and expanding volunteer opportunities through other events such as Adopt-A-Highway cleanups; volunteers who assist with restoration projects have the opportunity to help improve critical wildlife habitat while also learning about the connection between watershed conservation activities and water quality; volunteers also learn simple restoration techniques that they can implement on their own, extending the impact beyond our workday and region
- Engaging volunteers to complete small on-the-ground post-fire restoration projects identified by collaborating with agencies; projects may include seeding and revegetating banks and slopes to help reduce erosion, improve water quality, and enhance both instream and riparian habitat; and removing invasive species to prevent their establishment and spread, which benefits wildlife habitat and benefits other ecological processes, such as biodiversity
- Building a stronger partnership with the Hung-A-Lel-Ti (Woodfords) community of the federally-recognized Washoe Tribe of NV and CA, as well as the Washoe Environmental Protection Department; in addition to seeking help with post-fire restoration plans, working to partner on the new community walking trail project
- Continuing to advance sustainable recreation in Alpine County through agency collaboration, community discussions, and utilizing the outreach tools of partners including Carson River Coalition, Eastern Sierra Sustainable Recreation Partnership, and Sierra Nevada Alliance; continuing to work with partners and agencies on specific issues such as graffiti and litter
- Participating in Lahontan Cutthroat Trout Carson Recovery Implementation Team meetings and helping to ensure that agency studies and plans are communicated to stakeholders, with opportunities for community involvement
- Participating in community-led efforts to create a sustainable fishery in Alpine County
- Re-starting environmental education programs with Diamond Valley School and working to reach Alpine County youth when they move on to Douglas High School, including assisting with Carson River Snapshot Day, as the pandemic allows
- Expanding watershed awareness by ongoing tabling presence at events throughout the region; continuing to be creative on how to expand watershed awareness during the pandemic, such as through social media and creating the opportunity to tune in to watershed group meetings virtually


ALPINE WATERSHED GROUP
Alpine County
Origin of Five Major Rivers
Sacramento River
Reno
Truckee
Carson City
Carson
American
Sacramento
Alpine
County
Mokelumne
Stanislaus
San Joaquin River
San Francisco
From the Headwaters
to your Home
Sources: Esri, USGS, NOAA

COUNTY OF ALPINE
County Administrative Office

Carson Water Subconservancy District

RE: Alpine Watershed Group Letter of Support for Funding

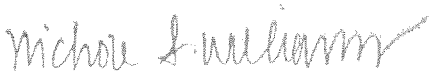
This letter serves as an official letter of support on behalf of the County of Alpine in the State of California. The County of Alpine hereby supports the Alpine Watershed Group's request for funding from the Carson Water Subconservancy District in the amount of $25,000.

Alpine Watershed Group (AWG) plans to submit a $25,000 funding request (due February 4, 2022) for support of program staffing and monitoring, restoration, and community outreach and education supplies. These funds will enable Alpine Watershed Group to continue to provide regional collaboration and watershed benefits within the Upper Carson River watershed. The funds are especially critical for AWG's monitoring programs, both the River Monitoring program (a community-science based program that has continuously collected water quality data at eight sites throughout the Upper Carson River watershed since 2004) and the harmful algal bloom (HAB) monitoring program.

This funding also helps to support AWG's annual Creek Day workday, involving community members in hands-on restoration projects. It also supports AWG's involvement in the Lahontan Regional Water Quality Control Board's West Fork Carson Vision Project; when completed, the Upper Carson River watershed will at last become eligible for funding from the US Environmental Protection Agency's 319 Grant Program. AWG's watershed programs are currently funded by grants from American Rivers, California Alpine Club Foundation, California Department of Water Resources, The Campbell Foundation, National Fish and Wildlife Foundation, National Forest Foundation, The Strong Foundation for Environmental Values, and Trout Unlimited-Sagebrush Chapter. Each year funding from CWSD helps to leverage other funding sources by providing matching funds that strengthen AWG's grant applications.

Therefore, the Alpine County Board of Supervisors respectfully requests that the Carson Water Subconservancy District approve the $25,000 funding request.

Respectfully,



Nichole Williamson

County Administrative Officer

Alpine County, California

CC: Kimra McAfee
Executive Director
Alpine Watershed Group
awg.kimra@gmail.com

Carson Water Subconservancy District
777 E. William St., #110A
Carson City, NV 89701
Attn: Ed James

(6) The Nature Conservancy
River Fork Ranch

CARSON WATER SUBCONSERVANCY DISTRICT
REQUEST FOR FUNDING FY 2022-23

APPLICANT: The Nature Conservancy (River Fork Ranch Preserve)

Name

One E. First Street, Suite 1007

Address

Reno — Washoe/Douglas

City — County

NV — 89501

State — Zip Code

lori.leonard@tnc.org — (702) 533-3255

Email — Telephone #

APPLICANT'S AGENT (if different from Applicant):

Name

Address

City — County

State — Zip Code

Email — Telephone #

PROJECT NAME: Riparian Revegetation & Streambank Stabilization

PROJECT LOCATION/ADDRESS:

381 Genoa Lane
Minden, NV 89423

PROJECT DESCRIPTION: Briefly describe the project. Provide maps, drawings, photographs or other information. Additional sheets may be attached.

We are looking for effective cost-effective methods to use native plant materials to stabilize streambanks, create wildlife habitat, and improve ecological diversity and floodplain resiliency at The Nature Conservancys 805-acre River Fork Ranch Preserve.

(See attached maps and Project Details)

PROJECT GOALS AND BENEFITS: Briefly describe the project goals and benefits to be realized if the project is implemented, and how it is consistent with the CRASP and/or CRRFMP. Additional sheets may be attached.

The goal of the proposal is to reduce nonpoint source pollution from agriculture and irrigation in the Carson Valley. This project aims to experiment with cost-effective streambank restoration options, using native willows, cottonwood trees, and native shrubs along river, stream, and irrigation ditch banks to improve and enhance streambank stabilization, reduce sediment, and improve water quality.

TOTAL ESTIMATED PROJECT COST: 38,284

AMOUNT REQUESTED FROM CWSD: $25,142

SOURCE OF OTHER FUNDS: List all other sources of funds to be used to match funds requested from CWSD. List the provider of the matching funds and the amount requested from each provider.

Community Foundation of Northern Nevada - Dream Tags: Support planting of ~1000 Cottonwood trees will be planted in Feb 2022, 1000 native shrubs will be planted Spring of 2022 (Dream Tags awarded: ~$23,400)

Match amount for CWSD 2022-23 grant: $4000 Dream Tags, $9,142 TNC

ESTIMATED DATE PROJECT TO BEGIN: July 2022

ESTIMATED TIME TO COMPLETE PROJECT: May 2024

(If completion date is greater than a year, please indicate how much funding is needed in each fiscal year.)

PERMIT REQUIREMENTS: If your project requires a permit, license and/or approval from a governmental agency to proceed, please provide the current status of each requirement. If approval has not been requested or is in progress, please provide the estimated date on which approval can be expected. Additional sheets may be attached.

None

OTHER INFORMATION: Provide any other information that may be important to the approval of this application.

This is part of a multi-phase project. (See attachment for details)

SIGNED: /s/ Lori Leonard

NAME: Lori Leonard

TITLE: River Fork Ranch Preserve Manager

DATE: Feb. 4, 2022

Carson Water Subconservancy District reserves the right to deny any and/or all applications for funding.

January 31, 2022

CARSON WATER SUBCONSERVANCY DISTRICT (CWSD)
777 E. William St., #110A
Carson City, NV 89701

Dear Carson Water Subconservancy District Board:

Carson Valley Conservation District would like to express its support for The Nature Conservancy's application for CWSD 2022-2023 grant funding for Streambank and Irrigation Ditch Stabilization projects at River Fork Ranch.

Since 2002, the CVCD has partnered with TNC to implement weed management, habitat improvements, and experiments with bioengineering on the Carson River and other waterways that run through River Fork Ranch Preserve. We have also partnered with TNC for several community events to highlight ways that ranching can be a great way to protect nature. We support The Nature Conservancy's efforts to plant willows and cottonwoods along the waterways in the Carson Valley to improve streambank stability, help reduce erosion, improve water quality, and provide shade and habitat for the many plants and animals unique to the Carson Valley.

Clean water and water availability are critical for ranching in the Carson Valley, so finding cost effective ways to stabilize riverbanks and reduce nonpoint source water pollution is important.

For these reasons and more, we support The Nature Conservancy's CWSD 2022-2023 grant proposal.

Sincerely,

Richard Wilkinson
Richard Wilkinson
Grant and Watershed Coordinator
Carson Valley Conservation District
1702 County Road, Suite A1
Minden, Nevada 89423

February 1, 2022

CARSON WATER SUBCONSERVANCY DISTRICT (CWSD)
777 E. William St., #110A
Carson City, NV 89701

Dear Carson Water Subconservancy District Board:

Lekumberry Land and Livestock would like to express its support for The Nature Conservancy's application for CWSD 2022-2023 grant funding for Streambank and Irrigation Ditch Stabilization projects at River Fork Ranch.

For several years, we have held a grazing lease on The Nature Conservancy's River Fork Ranch Preserve and partnered with TNC to implement sustainable grazing, weed management, and habitat improvement. We have also partnered with TNC for several community events to highlight ways that ranching can be a great way to protect nature. We support The Nature Conservancy's efforts to plant willows and cottonwoods along the waterways in the Carson Valley to improve streambank stability, help reduce erosion, improve water quality, and provide shade and habitat for the many plants and animals unique to the Carson Valley.

Clean water and water availability are critical for ranching in the Carson Valley, so finding cost effective ways to stabilize riverbanks and reduce nonpoint source water pollution is important.

For these reasons and more, we support The Nature Conservancy's CWSD 2022-2023 grant proposal.

Sincerely,

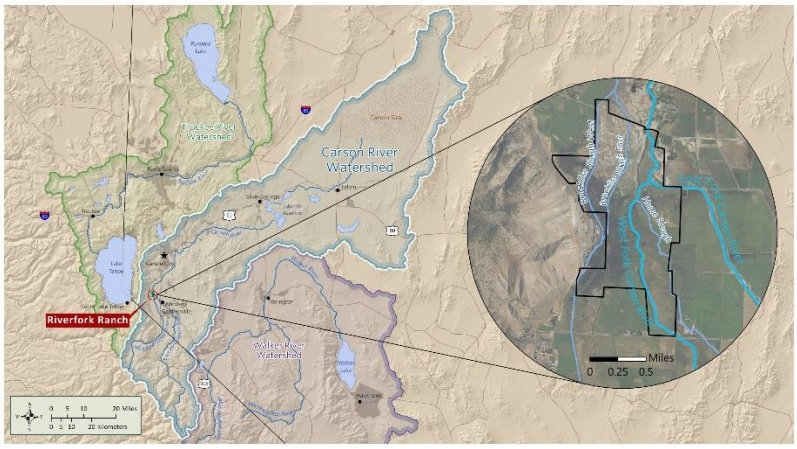
Jean Baptiste Lekumberry

Jean Baptiste Lekumberry
Lekumberry Land & Livestock, LLC

The Nature Conservancy's River Fork Ranch Preserve
Riparian Revegetation and Streambank Stabilization
Carson Water Subconservancy District (CWSD) 2022-23 Grant Proposal

Project Description

Historic "channelization and levee construction in the Carson Valley "…has resulted in channel instability and an increase in sediment loading to the river" (CWSD, 2007). We are looking for effective cost-effective methods to use native plant materials to stabilize streambanks, create wildlife habitat, and improve ecological diversity and floodplain resiliency at The Nature Conservancy's (TNC) 805-acre River Fork Ranch Preserve.



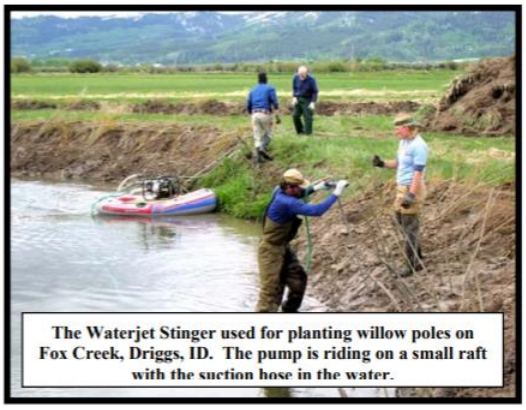
River Fork Ranch Preserve Map

Project Goals and Benefits

The goal of the proposal is to reduce nonpoint source pollution from agriculture and irrigation in the Carson Valley. This project aims to experiment with cost-effective streambank restoration options, using native willows, cottonwood trees, and native shrubs along river, stream, and irrigation ditch banks to improve and enhance streambank stabilization, reduce sediment, and improve water quality.

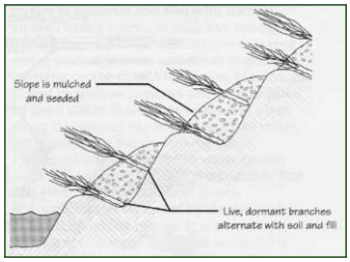
Planting Technique 1: Willow Cuttings

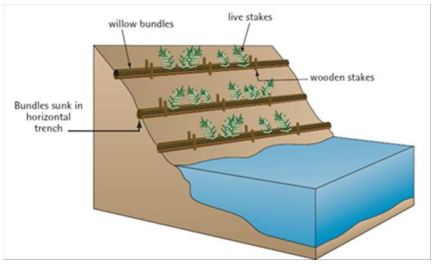
We will experiment by planting native willow cuttings in the late fall and willows in the early spring to determine if planting times impact the success of willow establishment. We will also use a rooting hormone on half of the willow cuttings to determine if this aids in willow growth along streambanks.


The Waterjet Stinger used for planting willow poles on Fox Creek, Driggs, ID. The pump is riding on a small raft with the suction hose in the water.

Photos: Waterjetting dormant-live willow cuttings into streambank. (Hoag, 2007)

Irrigation Bank Stabilization (Home Slough): Live Willow Bundles and Biodegradable Erosion Mats.
In areas with steep slope, we will experiment with live willow stakes planted through biodegradable erosion mats, willow bundles covered with back fill, and willow bundles supported by straw swaddles.



- **Phase 1**: **Completed in 2019** by the Carson Water Conservation District (CWCD) with funding from the Nevada Department of Environmental Protection (NDEP) 319(h) funding. (.35 acres)
- **Phase 2**: 2022-23 Bioengineering extension. (~.25 acres)

Planting Technique 3: Cottonwood Planting in Five-foot Trenches
Cottonwood trees will be harvested in January or February from The Nature Conservancy's McCarran Ranch Preserve, where cottonwood trees have successfully grown from seed to heights of six-ten feet. The roots are wrapped in burlap and soaked to keep the roots damp. Trees are then transplanted into trenches dug ~3-5 feet with a backhoe in riparian areas. This places the roots at or near the water table, giving them the greatest potential for success during the dry summer months.

TNC Cottonwood tree planting along the Truckee River (2016). Photo: http://tahoequarterly.com/environment/pines-to-pyramid

Other Information
This is part of a multi-phase project focused on streambank stabilization with native vegetation and cottonwood gallery establishment. The completed and in progress phases include:

- **Phase 1**: **Completed in 2021** - 750 Cottonwood trees planted at eight locations at River Fork Ranch to identify locations where trees had greatest success and survival rates. Bioengineering along ~150 linear feet by the Carson Valley Conservation District (Funding from Nevada Department of Environmental Protection (NDEP) 319 (h) **$29,696**.
- **Phase 2**: **To be completed in 2022** – 1000 Cottonwood trees to be planted in locations that did well in 2021. (Funding from the Community Foundation of Northern Nevada – Dream Tags **$23,489** with TNC Match **$23,420**)

Application Pending: TNC has also applied for pasture and irrigation improvements through the Natural Resources Conservation Service (NRCS) Environmental Quality Incentive Program (EQIP) for up to **$100,000** in cost share funds. These Pasture improvements would include:

- fencing off waterways to improve water quality and reduce erosion
- installing solar powered watering facilities
- developing an updated grazing management plan
- streambank stabilization & bioengineering

References:

Carson Water Subconservancy District (CWSD), (2007). Carson Watershed Adaptive Stewardship Plan. Retrieved from http://www.cwsd.org/wp-content/uploads/2014/07/StewardshipPlan_Part1.pdf

Hoag, C. (2007). HOW TO PLANT WILLOWS AND COTTONWOODS FOR RIPARIAN RESTORATION. USDA-Natural Resources Conservation Service Boise, Idaho. Retrieved from https://www.nrcs.usda.gov/Internet/FSE_PLANTMATERIALS/publications/idpmctn7064.pdf

CWSD 2022-23
TNC RFR: Riparian Revegetation and Streambank Stabilization

Salaries and Labor	$/Hour	# of Hours	Total		CWSD	In Kind	Match (Dream Tags)
TNC Staffr (Grant Reporting, volunteer organization, tree & willow harvesting/planting)	$37	125	$4,625		$4,625		$4,000
Benefits	41.1% of Salary	125	$1,901		$1,901		
Volunteer Hours (In Kind)	$28.54	40	$1,142			$1,142	
			Total Labor		**$6,526**	$1,142	$4,000

Supplies	Cost per item	Total items	Total		CWSD	In Kind	
Willow cuttings	$10	800	$8,000			$8,000	
Tree Fencing (beaver protection) ($/roll)	$60	16	$960		$960		
Coconut Coir matting & staples	$2,500	1	$2,500		$2,500		
			Total Supplies		**$3,460**	$8,000	

Contractual	Cost per item	Week	Total		CWSD	In Kind	
Independent Contractors (Willow harvesting & bioengineering) Crew of 5 - $7000/week	$7,000	1.5	$10,500		$10,500		
				Contractual	**$10,500**	**$0**	

		CWSD	In Kind	Match			
*updated independent sector value of volunteer time: $28.54/hr (https://independentsector.org/value-of-volunteer-time-2021/)	*TNC Direct Costs*	**$20,486**	**$9,142**	**$4,000.00**			
**(NICRA 2023 Rate 22.73%)	*Indirect Costs 22.73% ** *	$4,656					
	Total	**$25,142**	$9,142	$4,000.00			
	% of Project total	0.66	0.24	0.10			
				Project Total:	**$ 38,284**		

(7) Carson City Pollinator Gardens

CARSON WATER SUBCONSERVANCY DISTRICT
REQUEST FOR FUNDING FY 2022-23

APPLICANT:

Carson City
201 N. Carson Street
Carson City, NV 89701

Contact: Georgia Vasey
Senior Natural Resource Specialist
gvasey@carson.org
(775) 283-7693

APPLICANT'S AGENT:

Carson City Parks, Recreation & Open Space Department
3303 Butti Way, Building 9
Carson City, NV 89701

PROJECT NAME: Carson River Pollinator Gardens

PROJECT LOCATION/ADDRESS:

Tentative pollinator garden locations include Morgan Mill Preserve (39.18258, -119.70538), Riverview Park (39.16382, -119.70627), along Buzzy's Ranch Trail (39.148636, -119.709063), and Carson River Park (39.140613, -119.704738).

PROJECT DESCRIPTION:

Pollinators are vital species in Nevada, supporting healthy watersheds, ecosystem diversity, and invaluable food production. Yet, over the years many pollinators have been in decline due to habitat loss. For pollinators to thrive, they need ample pollen and nectar from established native wildflowers and grasses, water for drinking and reproduction, and bare ground and available nesting materials for shelter. In addition, having connected natural areas provides a wildlife corridor for pollinators to breed among different populations to ensure genetic diversity and stability.

The riparian habitat along the Carson River in Carson City is a perfect location to augment pollinator habitat by having five miles of contiguous protected natural areas free from development and within close proximity to year-round water supply. The aim of this project is to outplant pollinator gardens in different open space properties along the river using plants grown from locally-adapted seed sources. Increasing native and locally-adapted vegetation will not only benefit the native wild pollinators, such as the birds, bats, butterflies, and bees, but improve the water quality by filtering runoff, and enhance the aesthetic value for recreational users. Moreover, by increasing habitat for native pollinator populations, this project will support nearby farms and agricultural lands for crop production. The gardens will be strategically located in areas that are highly accessible to the public, with the goal to educate about pollinator importance using new

interpretive panels, building nesting sites like bee hotels, and engaging community members in stewarding the gardens through planting and weeding programs.

PROJECT GOALS AND BENEFITS:
The project goals are to:

1) In the fall 2022, plant approximately 1,100 plants in four pollinator gardens along the Carson River using volunteer support during organized planting events.
    a. Each garden will have 200-300 plants.
b) Install two interpretive panels on pollinators at Carson River Park and Riverview Park.
c) Install at least one bee hotel in one of the pollinator gardens.
d) Install bat boxes on poles throughout the river corridor.
e) Lead weeding volunteer programs in the spring 2023 to reduce noxious and nuisance weed competition within pollinator gardens.

The goals of this project are consistent with the CRRFMP, as they protect and improve water quality and wildlife habitat; promote conservation of lands within the river corridor and riparian habitat; enhance the aesthetic and recreational qualities which enrich the human environment; provide important breeding and feeding areas for birds; and lastly, support hands-on educational programs that engage and connect the community to the local watershed.

Furthermore, this project is aligned with the Carson Water Subconservancy District watershed literacy campaign, “I Am Carson River Watershed,” which has put together short and impactful public service announcement (PSA) videos, one of which highlights the importance of pollinator habitat in the watershed and reducing the use of chemical herbicides. Carson City plans to promote the “I Am Carson River Watershed” campaign by including a QR code on the proposed interpretive panels that link to the Pollinator PSA.

These pollinator gardens will be the first of many planned along the river corridor, providing regional benefits within the Carson River Watershed. Additionally, as the newly established 76th Bee City USA since 2018, this project supports the City’s commitment to sustaining pollinators and their habitat on Parks and Open Space lands. Lastly, this project provides a unique opportunity to partner with the Sagebrush in Prisons Project ran by the Institute for Applied Ecology, which will engage inmate volunteers in helping with the grow-out of pollinator plants, including the horticultural training, educational activities to learn about native pollinators and host plant species, and provide a mechanism to involve incarcerated crew members in giving back to their local wild ecosystems.

TOTAL ESTIMATED PROJECT COST: **$8,000.00**

AMOUNT REQUESTED FROM CWSD: **$7,200.00**

SOURCE OF OTHER FUNDS: **$800.00 (10% match)**
Carson City Quality of Life Funds (cash match)

ESTIMATED DATE PROJECT TO BEGIN: July 1, 2022

ESTIMATED TIME TO COMPLETE PROJECT: May 30, 2023

PERMIT REQUIREMENTS:
No permits are required for this project.

OTHER INFORMATION:
List of Attachments:

- Attachment 1 – Map of Pollinator Gardens
- Attachment 2 – Photos
- Attachment 3 – Species List
- Attachment 4 – Proposed Budget

SIGNED: Georgia Vasey

NAME: Georgia Vasey

TITLE: Senior Natural Resource Specialist

DATE: 1/27/2021

Carson Water Subconservancy District reserves the right to deny any and/or all applications for funding

CARSON CITY, NEVADA
CONSOLIDATED MUNICIPALITY AND STATE CAPITOL

January 27, 2022

Carson Water Subconservancy District
777 E. William St., #110A
Carson City, NV 89701

RE: Carson Water Subconservancy District FY2022-2023 Funding Request

Dear Mr. Ed James and Carson Water Subconservancy District Finance Committee,

Please find enclosed a grant application to the Carson Water Sub-conservancy District FY22-23 Funding Requests to help establish pollinator gardens along the Carson River in Carson City. This funding request for **$7,200.00** will allow the Carson City Parks, Recreation & Open Space Department to contract the grow-out of locally adapted wildflowers and grasses for fall planting in four unique gardens, as well as fund the construction of pollinator homes (e.g., bee hotel and bat houses) and new interpretive panels.

Augmenting pollinator habitat along the river corridor not only improves the wildlife value for bees, butterflies, birds, and bats, it increases the aesthetic and recreational experience for park users by displaying an array of blooming flowers and inviting the public to learn about pollinators through both service projects and new signage. Additionally, planting native vegetation improves water quality in the surrounding areas by acting as a filter to ensure a healthy watershed.

We thank you for your consideration for this funding request. If you have any questions regarding this proposal, please do not hesitate to contact Georgia Vasey, Senior Natural Resource Specialist at 775-283-7693 or gvasey@carson.org.

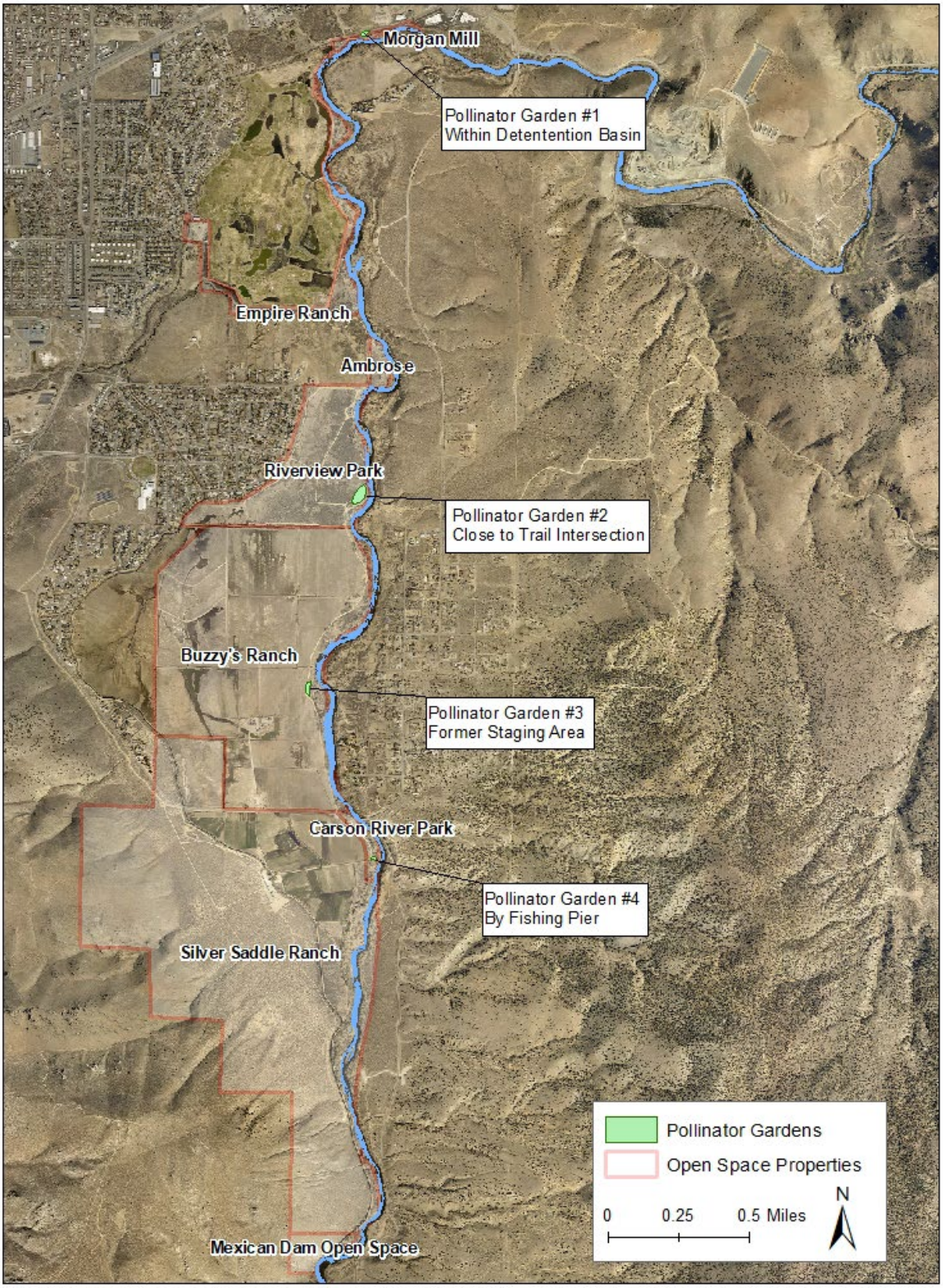
Respectfully,

Nancy Paulson

Nancy Paulson
Carson City Manager

CARSON CITY
PARKS, RECREATION, & OPEN SPACE
3303 Butti Way, Building #9, Carson City, NV 89701 • Tel (775) 887-2262 Fax (775) 887-2145

Attachment 1: Map of Pollinator Gardens



Attachment 2: Photos

Volunteers planting a pollinator garden.

Bee pollinating Rocky mountain penstemon (Penstemon strictus).

Example of "bee hotel" at Foothill Trailhead in Carson City.

Attachment 3: Species List

	Species	Sow	Approximate Deliver
1	*Penstemon strictus*	196	120
2	*Penstemon eatonii*	196	120
3	*Cleome serrulate*	196	120
4	*Machaeranthera canescens*	196	120
5	*Eriogonum nudum* var. *nudum*	196	100
6	*Eriogonum umbellatum*	50	25
7	*Dalea searsiae*	196	120
8	*Ascelpias fascicularis*	294	200
9	*Asclepias speciosa*	294	200
10	*Leymus cinereus*	50	25
	Total plants	**1766**	**1080**

Attachment 4: Proposed Budget

Itemized Budget			
Item	*Amount*	*Cost*	***Total Cost***
Pollinator Plants			
Contractual			
Institute for Applied Ecology – greenhouse staff for plant grow-out	75 hours	$45.00/hour	$3,675.00
Supplies			
Potting containers	1776	$0.17	$302.00
Planting trays	18	$18.60	$335.00
Soil	1	$190.00	$190.00
Fertilizer	1	$70.00	$70.00
Inoculant	1	$10.00	$10.00
Plant labels	1	$10.00	$10.00
Community Outreach			
Interpretive panels (sign, pedestal, artwork, and shipping)	2	$900.00	$1,800.00
Pollinator Habitat			
Supplies			
2”x4” boards for frame (bee hotel and bat boxes) –	20	$5.00	$100.00
2’ x 4’ plywood for boards (bee hotel and bat boxes)	25	$20.00	$500.00
Fence posts (bee hotel and bat boxes) – 4”x6” pressure treated 20’ wooden posts	10	$47.00	$470.00
Materials to infill bee hotel	Several	TBD	$150.00
Fencing to surround bee hotel	20 feet	$20.00	$400.00
TOTAL			**$8,012.00**

(8) Churchill County
Dixie Valley Study

CARSON WATER SUBCONSERVANCY DISTRICT
REQUEST FOR FUNDING FY 2022-23

APPLICANT: Jim Barbee, Churchill County Manager

Name

155 N. Taylor Street, Suite 153

Address

Fallon | Churchill

City | County

NV | 89406

State | Zip Code

jbarbee@churchillcounty.org | 775-423-5136

Email | Telephone #

APPLICANT'S AGENT (if different from Applicant):

Chris C. Mahannah, P.E., WRS

Name

PO Box 2494

Address

Reno | Washoe

City | County

NV | 89505

State | Zip Code

chris@mah2o.com | 775-323-1804

Email | Telephone #

PROJECT NAME: Dixie Valley Water Level Measurement & Precip Gage Monitoring

PROJECT LOCATION/ADDRESS:

Dixie Valley, NV
Churchill County

PROJECT DESCRIPTION: Briefly describe the project. Provide maps, drawings, photographs or other information. Additional sheets may be attached.

See attached Exhibit A

PROJECT GOALS AND BENEFITS: Briefly describe the project goals and benefits to be realized if the project is implemented, and how it is consistent with the CRASP and/or CRRFMP. Additional sheets may be attached.

See attached Exhibit A. A copy of the Bureau of Reclamation Dixie Valley Plan of Study, dated May 2009 was provided with the original application in February 2016. The project meets criteria 1, 5 & 6 listed above under CRASP & CRRFMP.

TOTAL ESTIMATED PROJECT COST: $95,000

AMOUNT REQUESTED FROM CWSD: $71,000

SOURCE OF OTHER FUNDS: List all other sources of funds to be used to match funds requested from CWSD. List the provider of the matching funds and the amount requested from each provider.

FY	CWSD	Churchill	Total
22/23:	$23,000	$8,000	$31,000
23/24:	$23,000	$8,000	$31,000
24/25:	$25,000	$8,000	$33,000
Totals:	$71,000	$24,000	$95,000

ESTIMATED DATE PROJECT TO BEGIN: 7/1/22

ESTIMATED TIME TO COMPLETE PROJECT: 6/30/25
(If completion date is greater than a year, please indicate how much funding is needed in each fiscal year.)

PERMIT REQUIREMENTS: If your project requires a permit, license and/or approval from a governmental agency to proceed, please provide the current status of each requirement. If approval has not been requested or is in progress, please provide the estimated date on which approval can be expected. Additional sheets may be attached.

Permitting previously acquired

OTHER INFORMATION: Provide any other information that may be important to the approval of this application.

See attached Exhibit A. A copy of the Bureau of Reclamation Dixie Valley Plan of Study, dated May 2009 was provided with the original application in February 2016

SIGNED: _____

NAME: Jim R. Barbee

TITLE: Churchill County Manager

DATE: 1/28/22

Carson Water Subconservancy District reserves the right to deny any and/or all applications for funding.

Exhibit A

Introduction: Churchill County's Water Resource Plans have identified Dixie Valley as a potential long-term underground supply for Quasi-municipal purposes in the Lahontan Valley. This would involve a groundwater importation project which would represent the only supply to Lahontan Valley totally independent of the highly litigated and contested waters of the Truckee and Carson River watersheds and associated underground aquifers. Churchill County currently has the senior most priority pending applications before the State Engineer dating from the mid-1980's to appropriate all remaining underground waters in Dixie Valley for export to the Lahontan Valley.

The natural recharge in to the Carson Desert Hydrographic Basin #101 has been estimated by the USGS at 1,300 afa from precipitation and 1,200 afa inflow from other basins for a total estimate of natural recharge of 2,500 afa. The committed underground water rights and domestic well use exceeds 21,000 afa, therefore the basin is over-appropriated without considering recharge from the Newlands Irrigation project. For this reason, the State Engineer issued Order# 1116 in 1995 limiting any new underground appropriations to 4,000 gallons per day (4.48 afa) or less. Additionally, the State Engineer has rejected recent proposals from developers seeking dedication rates less than 1.12 AF/EDU even when actual use is significantly less than the dedication rate due to the unique circumstances in Basin 101. There are significant losses from unlined canals/laterals and on-farm losses to deep percolation which recharge the shallow aquifer. The Bureau of Reclamation (BOR) has recently expressed interest in canal lining in portions of the basin which could reduce groundwater recharge. The shallow aquifer recharges the intermediate aquifer in the western portion of the basin which is hydraulically connected to the Basalt aquifer in the central portion of the valley. During the drought and reduced Newlands Project allocations, many of the 5,000+ shallow aquifer domestic wells went dry or experiencing water level declines demonstrating the reliance of the valley on recharge from Newlands Project deliveries. CWSD and Churchill County are currently funding water level monitoring projects with the USGS and Churchill County to monitor water levels in the Shallow, Intermediate and Basalt Aquifers.

Recognizing the competing interests for Truckee and Carson River waters and potential for an independent supply, legislation was enacted, and funds allocated under Public Law 110-161 (Sec. 208) to conduct a study to update and quantify the perennial yield or groundwater discharge from the Dixie Valley Flow System (DVFS) shown in Figure 1. This study was a component of the BOR's Desert Terminal Lakes Program, which was authorized by Public Law 107-171 (Sec. 2507). A copy of this Dixie Valley Export Study dated May, 2009 was attached to the original application in February 2016 for reference which explains the study in detail. The detailed study was initiated in 2008 and was completed in 2016. The study team consisted of an interdisciplinary team of experts from the BOR, USGS, DRI, Churchill County, State Engineer, and several private consultants.

The study has identified a potential range of groundwater available for appropriation between 11,200 – 15,600 afa, which assumes a median estimate of groundwater discharge from the DVFS and a range of potentially committed existing underground water rights. Additional water could be available if existing water rights were acquired from unused rights or marginally economical agricultural operations currently pumping groundwater with diesel motors. A

calibrated groundwater flow model has been constructed using data collected during the study. This model was also used to test various pumping scenarios where rates and locations for withdrawal were analyzed. In May 2019, a field trip to Dixie Valley was conducted and attended by CWSD Board members and representatives along with Churchill County representatives and consultants to tour the valley and discuss the study results and ongoing monitoring efforts requested in this funding request.

Project Description /Benefits: The Dixie Valley study included a significant amount of instrumentation and site-specific data collection throughout the DVFS which was described in detail in the BOR plan of study. As part of this study (13) high altitude precipitation storage type gages were installed in watersheds surrounding the DVFS as shown in Figure 2. These gages were installed in 2008 and are monitored semi-annually to determine summer, winter and total water year precipitation volumes. It was always envisioned that maintenance and data collection from these gages would continue beyond the study period several decades to develop a long-term period of record. Additionally, a well inventory was conducted for the study and quarterly water level data collection is ongoing in approximately (25) wells shown in Figure 3. The water level data is important to continue to develop baseline data prior to a possible export project and to identify any current trends from anthropogenic stresses and/or natural climatic variability. There were approximately 20 temporary stream gages installed during the study to quantify ephemeral and perennial streamflow at the mountain fronts and run-on to the playa. Two of these sites are still maintained to continue to develop baseline data from perennial mountain front streams. A complete weather station to collect meteorological data within Dixie Valley was installed and continues to be maintained. The primary purpose of this project and funding request is to maintain the ongoing semi-annual precipitation gage data collection and maintenance and quarterly water level data collection. Secondary benefits which do not add significant cost to the project are continued maintenance of the weather station and the perennial stream gages.

Following are some of the regional and flow system benefits for maintaining the ongoing data collection and equipment maintenance. Precipitation models such as PRISM, developed at Oregon State University were used extensively on many components of this study provide predicted long-term average annual precipitation over the Great Basin and in Dixie Valley. The models have limited actual measurements sites to constrain and calibrate to, especially in central Nevada. If the Dixie Valley precipitation network can be maintained over the long-term (several decades) it will provide valuable information for refinement of long-term precipitation models or trends in a geographic region with sparse data. Thirteen years of precipitation data have been collected thus far which is statistically significant for analysis now however. High altitude precipitation measurements are even sparser in the Great Basin - almost all long-term precipitation stations are situated on low altitude valley floors. Most of the precipitation that becomes available to streams, springs and groundwater recharge to the Great Basin aquifers is derived from high altitude precipitation, not low-altitude (valley floor) precipitation. Maintaining the high-altitude precipitation network in Dixie Valley provides valuable information where data are limited, and ongoing data collection is even more limited. The lack of long-term high-altitude precipitation data collection in the Great Basin is even more concerning given the acknowledged change in climate.

There is considerable geographic and temporal variability in precipitation in the Great Basin. Having basin-specific precipitation and complimentary hydrologic data (water level and stream/spring discharge) will provide needed data from which to define natural hydrologic responses to water resources. In Dixie Valley, a robust back-ground hydrologic baseline dataset will provide valuable information for long-term water resources management, and to identify current or future pumping effects, from potential freshwater development for export to Lahontan Valley and/or continued or expanded geothermal development within the basin. Use of long-term precipitation data from outside the near proximity of a basin, or from low altitudes within a basin, always presents complications and lowers confidence in estimating precipitation and groundwater recharge volumes, and when trying to differentiate natural climate responses from other potential causes to hydrologic changes such as pumping.

Baseline precipitation, groundwater level, and streamflow data collection will allow for refinements to groundwater flow simulations and improved estimates of groundwater recharge and discharge. Annual precipitation measurements are needed to compare, validate, and bias correct annual precipitation products such as PRISM, DAYMET, NLDAS and other gridded climate products that are commonly used as a starting point for estimating groundwater recharge and discharge. These products (including PRISM) are not just long-term average, they are daily, monthly, and annual. Because of this we can easily compare measured monthly and annual totals with the product totals. In addition, precipitation data can be integrated within the PRISM process developed and maintained by Oregon State University, which was done with all the USGS and State high elevation gauges, and now PRISM is using them. We plan on contacting the PRISM group to integrate the precipitation data collected in Dixie Valley into their mapping process. One aspect that is important to the PRISM group for integration into their mapping process is robust quality assurance and control, and the potential for continued operation and maintenance. Currently, we don't have any independent data to compare PRISM precipitation maps except this potential network, and all of Wynn Ross' network in Northern Washoe County.

Coordination with Dr. Justin Huntington at DRI who is also affiliated with the Western Regional Climate Center (WRCC) is ongoing to host the data, so it can be made publicly available. Hosting the data is not expensive, however efforts are being taken to set up the database, make all the linkages, and integrate the data within the mapping environment. Additionally, one of Dr. Huntington's graduate students was made available for an in-kind contribution for their time to research integration and hosting the data at WRCC and make comparisons with PRISM, DAYMET and NLDAS which reduces the requested grant amount.

This project is technically and environmentally sound and will assist the water users, managers, hydrologists and public in understanding climate, water issues and the status of their aquifers. It will help identify potential areas where discharge exceeds recharge and aquifer storage change. The project has regional benefits to the Carson River watershed in that it is supporting data collection efforts for an importation project, which if constructed, would lessen the demand on the over allocated and contested waters of the Truckee and Carson River watersheds. There also exists the possibility of resource trading in the Carson watershed if the

importation project were implemented, however this would require additional consideration of feasibility and investigation of possible legal/physical constraints that would need to be overcome. The project also has a larger regional benefit for the west-central portion of Nevada in helping define high altitude precipitation distributions with site specific data where virtually none exists now, and reliance is currently on models such as PRISM.

This funding request is for another three-year term; however it is anticipated for this program to provide continued value as a long-term data collection and management tool, it be continued as an ongoing effort.

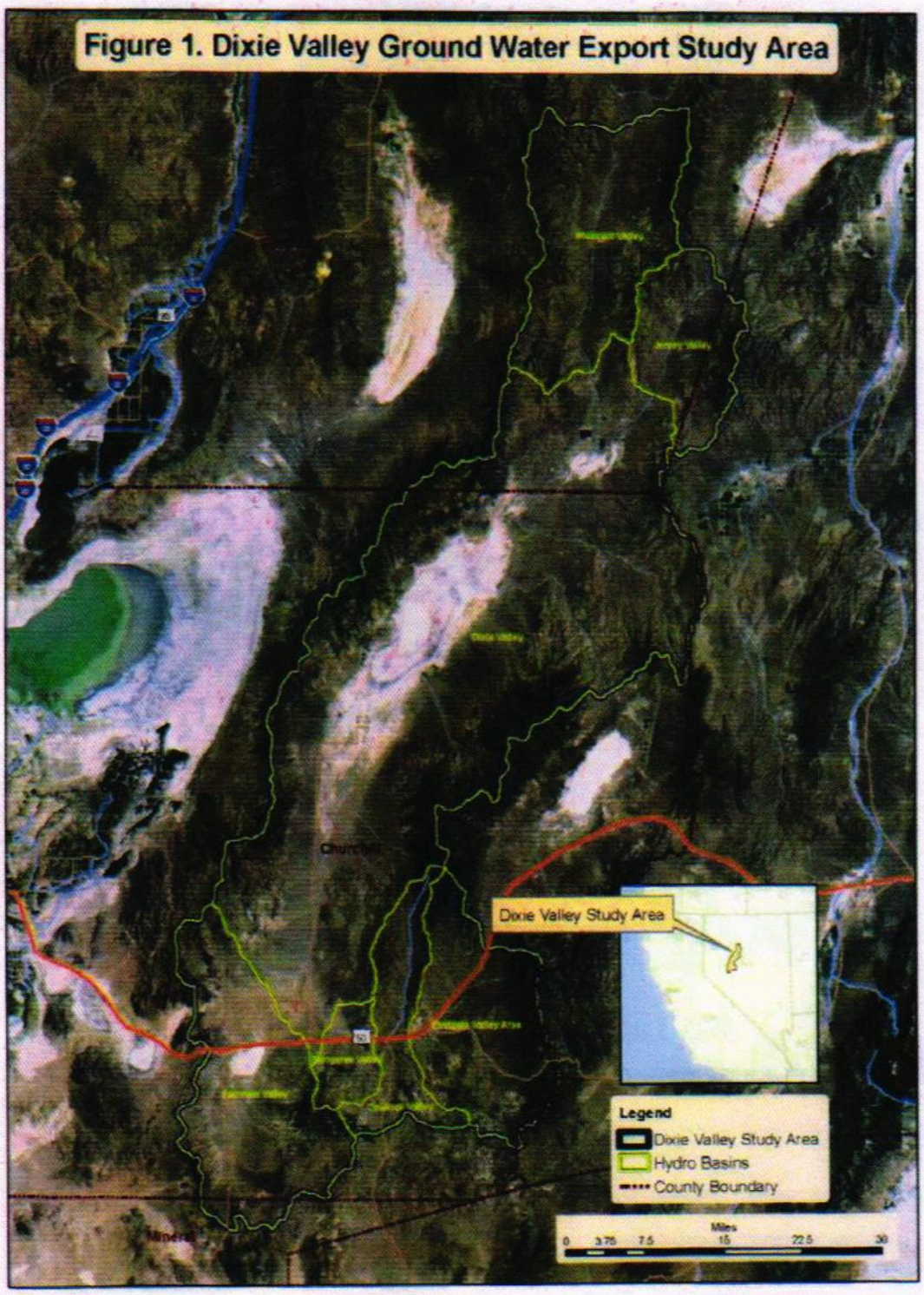


Figure 1. Dixie Valley Ground Water Export Study Area
Dixie Valley Study Area
Legend
Dixie Valley Study Area
Hydro Basins
County Boundary
Miles
0
3.75
7.5
15
22.5
30

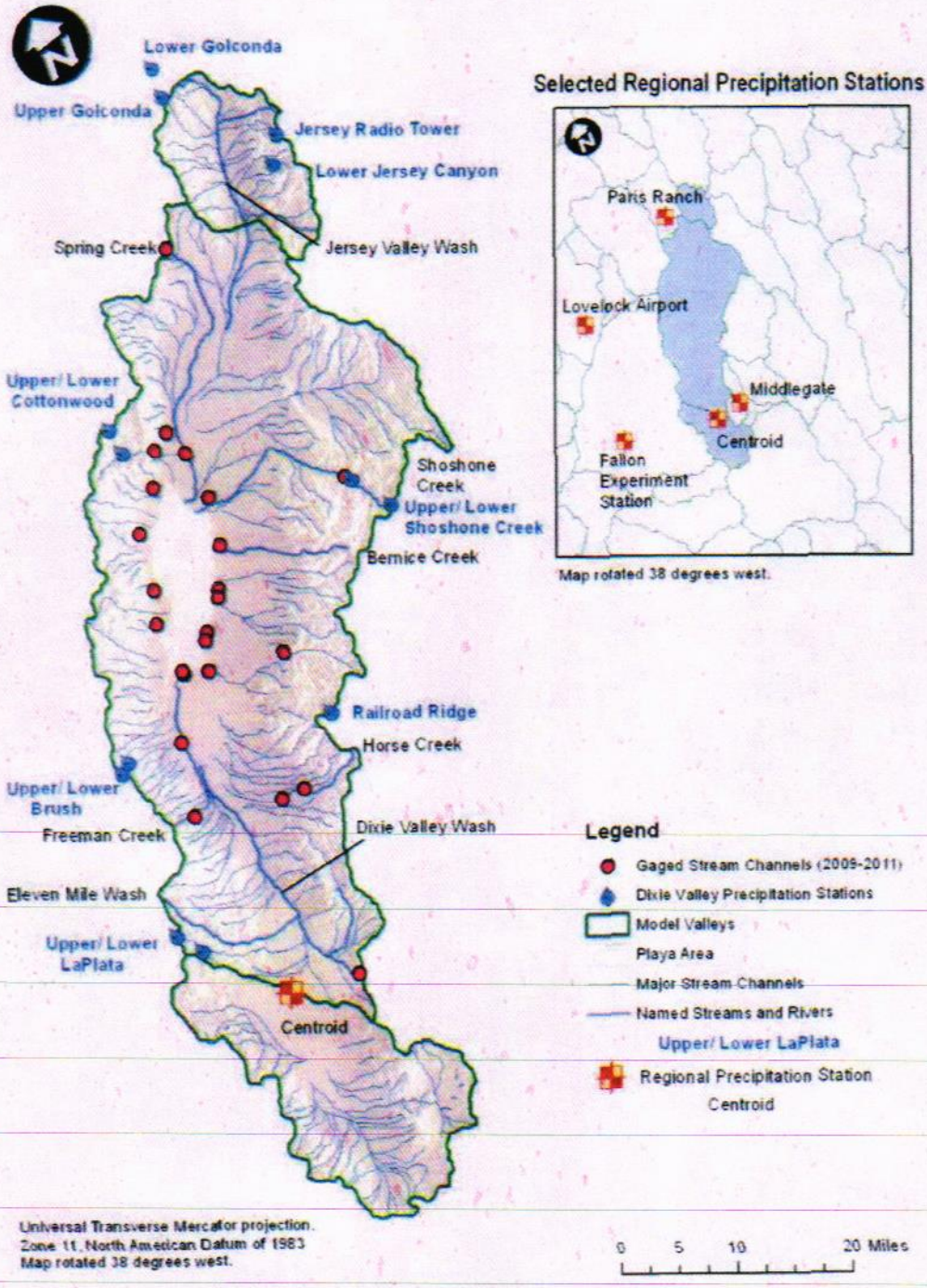


Figure 2. Stream flow and high-altitude precipitation networks within the study area.

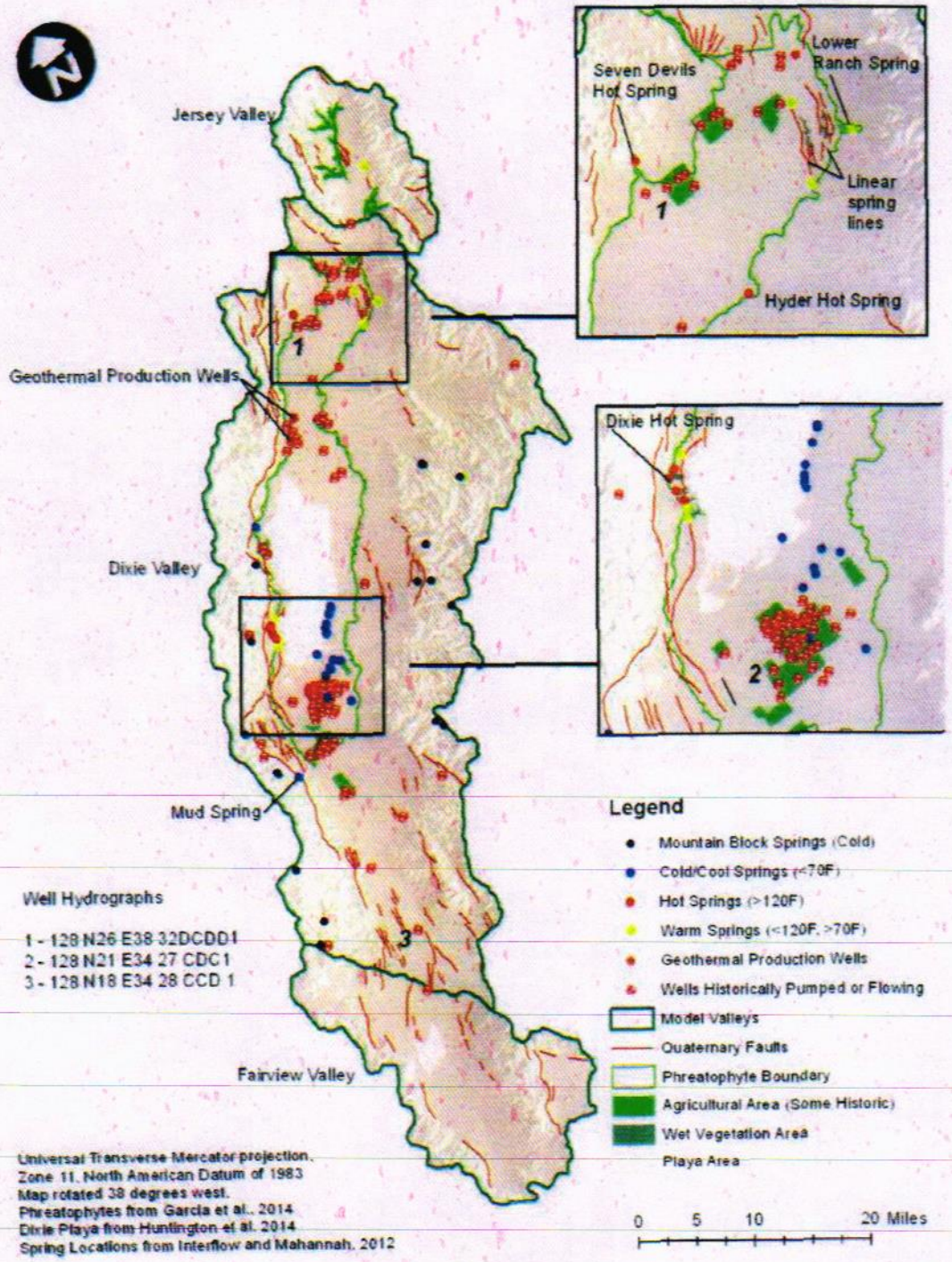


Figure 3. Springs and wells in Dixie Valley.