PUBLIC NOTICE

A MEETING OF THE FINANCE COMMITTEE OF THE CARSON WATER SUBCONSERVANCY DISTRICT WILL BE HELD ON MONDAY, FEBRUARY 24, 2014, AT 8:30 A.M. IN THE CARSON WATER SUBCONSERVANCY DISTRICT CONFERENCE ROOM AT 777 EAST WILLIAM STREET, SUITE #110, CARSON CITY, NEVADA.

s/TONI LEFFLER
SECRETARY

AGENDA

1. Call to Order
2. Public Comment
3. Discussion regarding the tentative General Fund FY 2014-15 budget and presentations for proposed projects.
4. Discussion regarding the tentative Acquisition/Construction Fund and tentative Floodplain Management Fund FY 2014-15 budgets.
5. Discussion for possible action regarding recommendations for the tentative General Fund, Acquisition/Construction Fund, and Floodplain Management Fund FY 2014-15budgets.
6. Public Comment
7. Adjournment

Supporting information is available through Toni Leffler, 777 E. William St., #110A, Carson City, NV 89701, 775-887-7450, toni@cwsd.org and on CWSD website at www.cwsd.org. This notice has been posted on **FEBRUARY 18, 2014,** at the following locations:

-Dayton Utilities Complex
-Lyon County Courthouse
-Carson City Hall
-Alpine County Administrative Building
-Minden Inn Office Complex
-Churchill County Administrative Complex
-Carson Water Subconservancy District Office

CARSON WATER SUBCONSERVANCY DISTRICT

TO: FINANCE COMMITTEE

FROM: EDWIN D. JAMES

DATE: FEBRUARY 24, 2014

Attached are the proposed tentative budgets for FY 2014-15 for the General Fund, Acquisition/Construction Fund, and Floodplain Fund, and the time schedule for the Finance Committee meeting. On the tentative budgets there are three columns. The left column shows the proposed budget for FY 2014-15, the center column shows the adopted budget for FY 2013-14, and the right column shows the projected actual income and expenses for FY 2013-14.

Copies of the project proposals will be handed out at the board meeting or can be found on the CWSD web site. The number at the top of each proposal correlates with the number in parenthesis on the schedule and indicates the order in which they will be heard.

Currently we do not have the projected Ad Valorem figures for Fiscal Year 2014-15 so we are using Fiscal Year 2013-14 figures. Based on projected income and funding requests, CWSD needs to cut approximately $150,000 from the proposed Fiscal Year 2014-15 budget.

Another issue the committee members need to consider is the possible funding needs for future regional water systems. In 2010, staff put together a list of potential regional water system projects. Over the years the project needs most like have changed; however, the list does show that CWSD currently does not have the funding to meet this proposed list. As the economy begins to improve CWSD needs to develop a plan on how to increase our Acquisition/Construction Fund.

FINANCE COMMITTEE

February 24, 2014
Approximate Time Schedule

8:30 a.m. Income Sources (CWSD staff)

9:00 a.m. Administrative budget for FY 2014-15 (CWSD staff)

9:15 a.m. Multi-Year and On-going Projects (CWSD staff)

- 7114 -00 Professional Outside Services
- 7117 & 7118 Lost and Mud Lake Expenses
- 7120-00 Integrated Watershed Projects
  - -07 Watershed Tour
  - -08 Regional invasive Species Programs
  - -25 Watershed Coordination Program
- 7122-00 Water Conservation Program/BMP
- 7125-00 Environmental Education Program
- 7210-00 CR Conservation Tours
- 7404-00 Noxious Weeds Control
- 7406-01 208 Water Quality EF Algae Study
- 7406-02 208 LID Practices
- 7419-00 FEMA Floodplain Mapping Program MAS # 3
- 7420-00 FEMA Floodplain Mapping Program MAS # 4
- 7421-00 Regional MS4 Stormwater Management Plan
- 7422-00 BOR Basin Plan of Study
- 7424-00 NDEP – Watershed Literacy Program
- 7500-00 USGS Stream Gage (1)
- 7508-00 USGS Douglas Co. GW Collection Data (2)
- 7600-09Alpine County- CASGEM
- 7610-10 Regional Pipeline Payment to Douglas County
- 7620-11 Regional Pipeline Payment to Carson City
- 7640-09 Lahontan Valley WTR Level Program (carryover) (3)

10:00 a.m. Carson River Projects

- Carson River Work Days – River Wranglers (4)
- Alpine County - Watershed Coordinator (5)
- Carson Valley Conservation District/Douglas County Project (6)
- Carson Valley Conservation District/Carson City Buzzy Ranch Project (7)
- Dayton Valley Conservation District Vegetation Mgt/Enh (8)
- Dayton Valley Conservation District Channel Clearing, Snagging, & Maintenance (9)
- Lahontan Conservation District (10)
- Lahontan Conservation District Lower River Channel Clearance (carryover) (11)

10:45 a.m. Other Projects

- Water Dedication Tracking Database Churchill Co. – Churchill Co Staff/Stanka (12)
- Water Quality and Level Data Collection Churchill Co. - USGS (13)
- Simulating Shifts in Snowmelt Pulse – USGS (14)
- East Fork Channel Restoration Douglas Co. – Douglas County Staff (15)
- Printing of Floodplain Protection Progress Map – John Cobourn/Brenda Hunt (16)

12:05 p.m. Acquisition/Construction Budget for FY 2012-2013

- Carson City/Douglas Co. Intertie Clear Creek – Carson City Staff (17)

Floodplain Management Budget for FY 2012-2013 (CWSD staff)

12:30 p.m. Lunch

12:45 p.m. Review Budgets and Make Recommendations to the Board

CARSON WATER SUBCONSERVANCY DISTRICT - GENERAL FUND
FISCAL YEAR 2013-14 FINAL BUDGET

	Proposed Tentative Budget	Adopted Final Budget	Projected Actual Budget	
	Jul '14 - Jun '15	Jul '13 - Jun '14	Jul '13 - Jun '14	Notes
Income				
5008-00 . Alpine County	8,750.00	8,500.00	8,500.00	
5009-00 · Churchill County Ad Valorem	177,232.81	177,232.81	177,232.81	
5010-00 · Lyon County Ad Valorem	135,674.93	135,674.93	135,674.93	
5011-00 · Douglas County Ad Valorem	446,660.94	446,660.94	446,660.94	
5012-00 · Carson City Ad Valorem	362,347.37	362,347.37	362,347.37	
5022-00 · Mud Lake Water Lease	45,000.00	45,000.00	44,900.00	
5023-00 · Lost Lake Water Lease	0.00	0.00	0.00	
5025-00 · Int. Inc. - US Bank CD	1,250.00	2,000.00	1,300.00	
5031-00 · Interest Income - St Pool Reg	350.00	600.00	380.00	
5043-00 · Interest Income - El Dorado	0.00	1,240.00	397.64	
5050-00 · Watershed Coordinator	40,000.00	16,770.00	30,000.00	Pass Through
5050-07 ·CRC Donation	0.00	0.00	0.00	
5058-02 · 208 Plan NDEP- State NV (Algae Study)	1,400.00	50,135.00	24,300.00	Pass Through
5058-03 · 208 Plan NDEP- LID	33,000.00	20,000.00	7,000.00	Pass Through
5060-00 · Misc. Income / Watershed Tour	3,100.00	3,100.00	3,100.00	
5063-01 · NDEP Grant-Watershed Education	12,600.00	33,400.00	34,000.00	Pass Through ***
5070-00 · NDEP Grant-Clear Cr. Educ. Program	0.00	1,600.00	9,709.03	Pass Through
5073-00 · NDEP CC BMP Stormwater Program	0.00	2,450.00	2,908.00	Pass Through
5077-00 · CR Conservation Tours	2,000.00	5,950.00	500.00	Pass Through
5081-00 · FEMA - MAS # 2	0.00	10,000.00	68,523.28	Pass Through
5082-00 · CASGEM	1,000.00	1,000.00	1,000.00	
5085-00 · Ch Co USGS GW/WQ Study	0.00	8,000.00	14,250.00	
5086-00 · FEMA - MAS # 3	59,000.00	275,000.00	314,320.00	Pass Through
5087-00 · FEMA - MAS # 4	230,000.00	20,000.00	15,000.00	Pass Through
Alpine County- Mesa Study	0.00	0.00	0.00	
Total Income	1,559,366.05	1,626,661.05	1,702,004.00	

*** Does not include any potenial new grant

Expense				Proposal Changes
ADMINISTRATIVE EXPENSES:				
7015-00 · Salaries & Wages	318,100.00	302,650.00	302,650.00	
7020-00 · Employee Benefits	126,000.00	125,580.00	106,600.00	
7021-00 · Workers Comp Ins.	1,000.00	900.00	1,000.00	
7101-00 · Director's Fees	14,000.00	14,000.00	12,400.00	
7102-00 · Insurance	9,500.00	11,000.00	8,400.00	
7103-00 · Office Supplies	5,000.00	6,000.00	4,000.00	
7104-00 · Postage	1,250.00	1,000.00	900.00	
7105-00 · Rent	25,530.00	25,025.00	25,025.00	
7106-00 · Telephone	3,000.00	2,600.00	2,800.00	
7107-00 · Travel-transport/meals/lodging	*13,500.00*	*13,000.00*	*13,000.00*	
7108-00 · Dues & Publications	*800.00*	*800.00*	*800.00*	
7109-00 · Miscellaneous Expense	500.00	500.00	400.00	
7110-00 · Seminars & Education	*2,500.00*	*1,500.00*	*2,000.00*	
7111-00 · Office Equipment	*2,500.00*	*2,500.00*	*2,000.00*	
7112-00 · Bank Charges	200.00	200.00	50.00	
7115-00 · Accounting	*16,000.00*	*10,000.00*	*10,000.00*	Single Audit?
7116-00 · Legal	*40,000.00*	*37,000.00*	*35,000.00*	
Subtotal-Administrative Expenses	579,380.00	554,255.00	527,025.00	$0.00

CARSON WATER SUBCONSERVANCY DISTRICT - GENERAL FUND
FISCAL YEAR 2013-14 FINAL BUDGET

Multi Year and On-Going Projects	Proposed Final Budget	Adopted Final Budget	Projected Actual Budget	Proposal
PROJECTS:	Jul '14 - Jun '15	Jul '13 - Jun '14	Jul '13 - Jun '14	Changes
7114-00 · Professional Outside Services	20,000.00	10,000.00	6,000.00	
7117-00. Lost Lakes Expenses	6,000.00	10,000.00	5,500.00	
7118-00 · Mud Lake O & M	2,000.00	2,000.00	0.00	
7120-00 · Integrated Watershed Plan				
7120-07 · Watershed Tour	3,200.00	3,200.00	3,200.00	
7120-08 . Regional Invasive Species Programs	2,500.00	7,500.00	5,000.00	carryover
7120-10 · Integrated Watershed Donation	0.00	0.00	0.00	
7120-18 · Clear Creek NPS Educ. Program	0.00	500.00	2,785.00	
7120-25 · Watershed Coordinator Expenses	2,500.00	4,610.00	4,000.00	
7122-00 · Water Conservation Program/ BMP	3,000.00	5,000.00	2,000.00	carryover
7125-00 ·Environ. Education Coordinator Program	9,386.00	26,060.00	31,776.00	***
7210-00 . CR Conservation Tours	1,000.00	5,190.00	100.00	
7404-00 · Noxious Weeds Control	75,000.00	75,000.00	75,000.00	
7406-00 · 208 Water Quality EF Algae Study	0.00	44,310.00	51,000.00	+++
7406-02 · 208 LID Program	20,000.00	20,000.00	4,000.00	
7413-00 · BOR Comprehensive Study	0.00	0.00	85.00	
7414-00 · FEMA MAS #2 Ly-CC/DC	0.00	9,800.00	57,435.00	
7419-00 · FEMA MAS #3 Carson Valley	57,000.00	270,000.00	310,000.00	
7420-00 · FEMA MAS #4 Carson Valley	200,000.00	20,000.00	12,000.00	
7421-00 · Reg. MS$ Stormwater Plan	0.00	20,000.00	20,000.00	
7422-00 · BOR Basin Plan of Study	250.00	0.00	250.00	
7500-00 · USGS Stream Gage Contracts	83,000.00	83,060.00	83,060.00	
7508-00 · USGS Do. Co. GW Collection Data	*15,000.00*	*15,000.00*	15,000.00	
7522-00 · USGS Nitrate/GW model Dayton&ChVly	0.00	53,500.00	53,500.00	
7524-00 · USGS GW level & WQ Churchill Co.	0.00	21,375.00	21,375.00	
Subtotal Multi Year & On-going Projects	499,836.00	706,105.00	763,066.00	0.00

*** Does not include any potenial new grant

+++ Additional Funds maybe added to this study from NDEP

Counties and River Projects				Proposal Changes
7332-00 · Carson River Work Days	24,000.00	24,000.00	24,000.00	
7337-00 · Carson River Restoration				
7337-11 · CVCD CV Streambank Protection	45,000.00	35,000.00	35,000.00	
7337-02 · Carson City (CVCD) Buzzy's ranch	20,000.00	20,000.00	20,000.00	
7337-03 · Dayton Valley Conservation	80,000.00	75,400.00	75,400.00	
7337-04 · Lahontan Conservation District	20,000.00	20,000.00	20,000.00	
7339-00 · River ProjectsMaint/Repair	0.00	0.00	0.00	
7600-05 · Alpine Co. Watershed Coord.	20,000.00	15,000.00	15,000.00	
7600-09 · CASGEM	50.00	50.00	50.00	
7610-10 · Douglas Co Regional Pipeline	125,000.00	125,000.00	125,000.00	
7610-15 · Do. Co. Lands Bill	0.00	10,000.00	10,000.00	
7620-11 . Regional Pipeline Payment to Carson City	125,000.00	125,000.00	125,000.00	
7630-09 · Lyon County W/R GIS Database	0.00	20,000.00	20,000.00	
7640-09 . Lahontan Valley WTR Level Program	19,700.00	31,940.00	20,000.00	*+*
7640-12 . Lower CR Channel Clearing (LCD)	15,000.00	15,000.00	0.00	*+*
Subtotal Carson River Projects	493,750.00	516,390.00	489,450.00	0.00

CARSON WATER SUBCONSERVANCY DISTRICT - GENERAL FUND
FISCAL YEAR 2013-14 FINAL BUDGET

+ Carryover Project new agreement needed

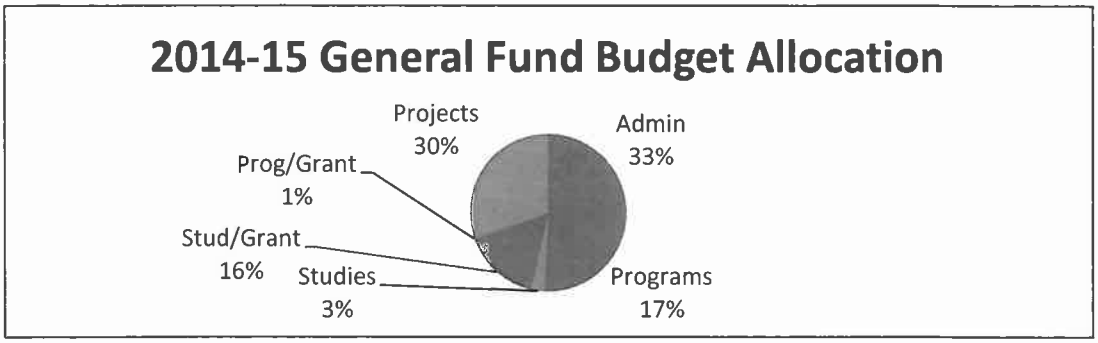
New Projects	Proposed Final Budget Jul '14 - Jun '15	Adopted Final Budget Jul '13 - Jun '14	Projected Actual Budget Jul '13 - Jun '14	Proposal Changes
USGS Snowmelt Pulse Shifts	50,000.00			
Water Quality and level data collection Ch. Co	8,900.00			
Water Dedication Tracking Database	**8,420.00**			
East Fork Channel Restoration	**125,000.00**			
Total Expenses for New Projects	**192,320.00**		**0.00**	**0.00**
*** Total cost $52,500 covers two years**				
Total Expenditures	**1,765,286.00**	**1,776,750.00**	**1,779,541.00**	
Net Income	**-205,919.95**	**-$150,088.95**	**-77,537.00**	
Other Income				
Beginning Equity	*580,262.00*	**661,569.00**	**657,799.00**	Corrected to 2013 audit
Total Other Income	580,262.00	**661,569.00**	657,799.00	
Other Expense				
8008-00 · Preliminary Planning	**425,000.00**	**410,000.00**	**0.00**	
Transfer from Gen. Fd. to Floodplain Fd.	**0.00**	**0.00**	**0.00**	
Transfer from Gen. Fd. to Acqu./Const. Fd.	**0.00**	**0.00**	**0.00**	
Total Other Expense	**425,000.00**	**410,000.00**	**0.00**	
Net Balance from Other Income & Other Expense	**155,262.00**	**251,569.00**	**657,799.00**	
ENDING BALANCE	**-50,657.95**	**101,480.05**	580,262.00	

Expense

ADMINISTRATIVE EXPENSES:	579,380.00	Admin
7114-00 · Professional Outside Services	20,000.00	Program
7117-00. Lost Lakes Expenses	6,000.00	Admin
7118-00 · Mud Lake O & M	2,000.00	Admin
7120-03 ·Environ. Education Coordinator	9,386.00	Program Grant
7120-07 · Watershed Tour	3,200.00	Program
7120-08 . Regional Invasive Species Programs	2,500.00	Program
7120-09 · Watershed Coordinator Expenses	2,500.00	Program Grant
7120-18 · Clear Creek NPS Educ. Program	0.00	Program Grant
7122-00 · Water Conservation Program/ BMP	3,000.00	Program
7210-00 . CR Conservation Tours	1,000.00	Program Grant
7404-00 · Noxious Weeds Control	75,000.00	Project
7406-00 · 208 Water Quality EF Algae Study	0.00	Study Grant
7419-00 · FEMA - MAS # 3	57,000.00	Study Grant
7420-00 · FEMA - MAS # 4	200,000.00	Study Grant
7422-00 · BOR Basin Plan of Study	250.00	Study
7500-00 · USGS Stream Gage Contracts	83,000.00	Program
7508-00 · USGS Do. Co. GW Collection Data	*15,000.00*	Program
7522-00 · USGS Nitrate/GW model Dayton&ChVly	0.00	Study
7522-00 · USGS GW level & WQ Churchill Co.	8,900.00	Program
7211-00 · St. Engr. GW Pumping Inventories	0.00	Program
7332-00 · Carson River Work Days	24,000.00	Project
7337-11 · CVCD CV Streambank Protection	45,000.00	Project
7337-02 · Carson City (CVCD)	20,000.00	Project
7337-03 · Dayton Valley Conservation	80,000.00	Project
7337-04 · Lahontan Conservation District	20,000.00	Project
7600-05 · Alpine Co. Watershed Coord.	20,000.00	Program
7600-09 · CASGEM	50.00	Program
7610-10 · Douglas Co Regional Pipeline	125,000.00	Project
7620-09 · NDEP - CC BMP Program	0.00	Study Grant
7620-11 . Regional Pipeline Payment to Carson City	125,000.00	Project
7640-09 . Lahontan Valley WTR Level Program	19,700.00	Program
7640-12 . Lower CR Channel Clearing	15,000.00	Project
Regional MS4 Stormwater Mgt Plan	0.00	Program
Douglas Co. East Fork Channel Restoration	125,000.00	Program
Churchill Co. Water Dedication Tracking	**8,420.00**	Program
NDEP 208 Funding	20,000.00	Study Grant
USGS Snowmelt Pulse Shift	50,000.00	Study
total	1,765,286.00	

201-15 Budget Allocation

Admin	587,380.00
Programs	308,770.00
Studies	50,250.00
Stud/Grant	277,000.00
Prog/Grant	12,886.00
Projects	529,000.00
Total	1,765,286.00



CARSON WATER SUBCONSERVANCY DISTRICT
ACQUISITION/CONSTRUCTION FUND
2014-15 Tentative Budget

ACQUISITION/CONSTRUCTION FUND	Proposed Tentative Budget	Approved Final Budget	Projected Actual Budget	Notes
	Jul '14 - Jun '15	Jul '13 - Jun '14	Jul '13 - Jun '14	
Ordinary Income/Expense				
Income				
5032-01 · Interest Inc - Inv. Pool	630.00	860.00	620.00	
5038-01 · Interest Income - Heritage CD	1,200.00	2,000.00	1,255.00	
5034-01 · Interest Income - GNCU CD	0.00	0.00	0.00	
Total Income	1,830.00	2,860.00	1,875.00	
Expense				
7325-01 Acquisition Wtr.	540,000.00	725,000.00	0.00	
Douglas County Sierra Estates		0.00	25,000.00	
Carson City/Douglas Co Clear Ck. Intertie	180,000.00			
Total Expense	720,000.00	725,000.00	25,000.00	
Net Ordinary Income	-718,170.00	-722,140.00	-23,125.00	
Other Income/Expense				
Other Income				
8000-01 · Beginning Equity	**750,806.00**	**974,253.00**	773,931.00	
8001-01 · Transfer In-General Fund	0.00	0.00	0.00	
Total Other Income	750,806.00	974,253.00	773,931.00	
* based on 2013 audit				
Other Expense				
7325-01 · Acquisition Wtr Rts/Structures	0.00	0.00	0.00	
Total Other Expense	0.00	0.00	0.00	
Net Balance from Other Income & Other Expense	750,806.00	974,253.00	773,931.00	
Ending Equity	**32,636.00**	**252,113.00**	**750,806.00**	

CWSD - ACQUISITION/CONSTRUCTION FUND
PROPOSED PROJECTS

Regional Water System List

	Acq./Const. Fund Proposed Project Costs
Beginning Fund Balance	773,900.00
Proposed Projects List	
South Douglas County Pipeline Upsize	750,000.00
Douglas/Carson City Intertie near Clear Creek	180,000.00
Gardnerville Water Co Upsize	50,000.00
Gardnerville Water Co-GRGID Intertie	100,000.00
Lyon County/Stagecoach Upsize	280,000.00
Churchill County Regional Pipeline Upsize	N/A
Total Expenses for All Projects	1,360,000.00
Ending Fund Balance	-586,100.00

CARSON WATER SUBCONSERVANCY DISTRICT
FLOODPLAIN MANAGEMENT FUND
FY 2014-15 Tentative Budget

FLOODPLAIN MANAGEMENT FUND	Proposed Tentative Budget	Final Budget	Projected Actual Budget
	Jul '14 - Jun '15	Jul '13 - Jun '14	Jul '13 - Jun '14
Ordinary Income/Expense			
Income			
5032-01 · Interest Inc - Inv. Pool	200.00	300.00	195.00
5033-03 · Interest Inc - Mutual Of Omaha CD	700.00	1,000.00	745.00
Total Income	900.00	1,300.00	940.00
Expense			
7203-03 Floodplain Planning	400,000.00	360,000.00	0.00
7206-03 Flood Project along SR 88 in Minden	0.00	40,000.00	0.00
Total Expense	400,000.00	400,000.00	0.00
Net Ordinary Income	-399,100.00	-398,700.00	940.00
Other Income/Expense			
Other Income			
8000-01 · Beginning Equity	427,860.00	425,621.00	426,920.00 *
8001-01 · Transfer In-General Fund	0.00	0.00	0.00
Total Other Income	427,860.00	425,621.00	426,920.00
Ending Equity	28,760.00	26,921.00	427,860.00

* Based on the 2013 Audit

(1)

United States Department of the Interior

U.S. GEOLOGICAL SURVEY
PACIFIC REGION
NEVADA WATER SCIENCE CENTER
2730 N. Deer Run Road
Carson City, Nevada 89701
Phone: 775-887-7600; Fax: 775-887-7629
Website: http://www.usgs.gov/

May 21, 2013

Edwin James
Carson Water Subconservancy District
777 East William Street, Suite 110-A
Carson City, NV 89701

Dear Mr. James:

This letter is in regards to the on-going cooperative monitoring program between the Carson Water Subconservancy District (CWSD) and the U.S. Geological Survey (USGS) for the surface-water monitoring program activities in the Carson River Basin in west-central Nevada for fiscal years (FY) 2014-2015 (July 1, 2013 – June 30, 2015). The USGS Nevada Water Science Center (NVWSC) currently operates streamflow data-collection sites for this monitoring program.

Beginning in Federal fiscal year 2013 and continuing through this agreement, the USGS, under a new business practice, can no longer include the monies that pay for support benefits and services from headquarters in our annual Joint Funding Agreements. Federal funding levels provided in Item 2a of the Joint Funding Agreement will only include monies directly associated with the Cooperative Water Program at the Science Center level. No additional costs will be incurred by CWSD resulting from this change in business practice.

Cost for operation and maintenance (O&M) of program activities in CWSD's FY14-15 is $284,492. Pending availability of Federal Matching Funds from our Cooperative Water Program, the USGS will provide $118,678 towards this program; cost to CWSD for this program is $165,814.00. The table below reflects total costs for this program. See a detailed breakdown at Enclosure 1.

Contribution Breakdown By Period	***CWSD***	***USGS****	***Yearly Total***
CWSD FY 2014			
July 1, 2013 – June 30, 2014	82,907	59,339**	142,246
CWSD FY 2015			
July 1, 2014 – June 30, 2015	**82,907**	**59,339****	**142,246**
Total Program Funding	$165,814	$118,678	$284,492

*USGS contributions are subject to availability of Federal Matching Funds
** USGS funding based on new business practice

#7500-00 USGS Stream Gage

#7506-00 (2)

United States Department of the Interior

U.S. GEOLOGICAL SURVEY

PACIFIC REGION
NEVADA WATER SCIENCE CENTER
2730 N. Deer Run Road
Carson City, Nevada 89701
Phone: 775-887-7600; Fax: 775-887-7629
Website: http://www.usgs.gov/

April 24, 2013

Edwin James
Carson Water Subconservancy District
777 East William Street, Suite 110-A
Carson City, NV 89701

Dear Mr. James:

This letter is in regards to the on-going cooperative monitoring program between the Carson Water Subconservancy District (CWSD) and the U.S. Geological Survey (USGS) for the water-quality and groundwater monitoring program activities in Douglas County, Nevada for fiscal years (FY) 2014-2015 (July 1, 2013 – June 30, 2015).

Beginning in Federal fiscal year 2013 and continuing through this agreement, the USGS, under a new business practice, can no longer include the monies that pay for support benefits and services from headquarters in our annual Joint Funding Agreements. Federal funding levels provided in Item 2a of the Joint Funding Agreement will only include monies directly associated with the Cooperative Water Program at the Science Center level. No additional costs will be incurred by CWSD resulting from this change in business practice.

Cost for operation and maintenance (O&M) of program activities in FY14-15 is $52,598. Pending availability of Federal Matching Funds from our Cooperative Water Program, the USGS will provide $22,598 towards this program; cost to CWSD for this program is $30,000. The table below reflects total costs for this program. See a detailed task and cost breakdown at Enclosure 1.

Water Quality and Groundwater Monitoring Program			
Contribution Breakdown By Period	**CWSD**	**USGS***	**Yearly Total**
CWSD FY 2014			
July 1, 2013 – June 30, 2014	**15,000**	**11,299****	**26,299**
CWSD FY 2015			
July 1, 2014 – June 30, 2015	15,000	11,299**	26,299
Total Program Funding	**$30,000**	**$22,598**	**$52,598**

*USGS contributions are subject to availability of Federal Matching Funds
** USGS funding based on new business practice

Office of the Churchill County Manager

January 31, 2013

Ed James
General Manager
Carson Water Subconservancy District
777 E. William St., Suite 110A
Carson City, NV 89701

RE: Request for No-Cost Extension, Contract 2011-6

Dear Mr. James,

On July 7, 2011 Churchill County entered into Interlocal Contract #2011-6 addressing reimbursement from Carson Water Subconservancy District to assist in the Lahontan Valley Water Level Measurement Program. The contract provides up to $70,000 for a three-year period, commencing on July 1, 2011 and ending June 30, 2014. Furthermore, the contract states that Churchill County may submit requests for $30,000 in fiscal year 2011-12; $20,000 in fiscal year 2012-13; and $20,000 in fiscal year 2013-14. These figures were based on estimates provided in the County's Request for Funding Application.

Our current requests are as follows:

FY 11-12: $ 9,507.88
FY 12-13: $20,793.79
FY 13-14: $19,286.48 (as of 12/31/13)

$49,588.15 Total Received

With $20,411.85 remaining until June 30, 2014, we hereby request a one (1) year extension of Interlocal Contract #2011-6. We are not requesting additional funding, just the ability to utilize the remaining $20,411.85 until June 30, 2015.

Due to the lack of water level measurements in the intermediate aquifer, Churchill County, the USGS, and the State Engineer recognize the importance of an ongoing water level measurement program. Per 'Exhibit A' of the contract, although the initial funding request is for a three year program, it is anticipated the program will be successful as a long term management tool, and therefore be continued as an ongoing effort. At the end of FY 14, a summary report is to be prepared, which will include a map of wells monitored in the Churchill and USGS networks, key hydrographs and discussion of the data or any trends observed.

Churchill County Administrative Complex • 155 No. Taylor St., Suite 153 • Fallon, NV 89406 • PHONE (775) 423-5136 FAX (775) 423-0717

Email: countymanager@churchillcounty.org

Churchill County is requesting a one (1) year no-cost extension of this contract so that the monitoring and data collection continues. We anticipate Mahannah & Associates and USGS to make a presentation before the Churchill County Commission in spring 2014, and provide a summary report by June 30, 2015, which will help determine the success of the program and any future requests for funding.

The County appreciates the opportunity to partner with the Carson Water Subconservancy District on this important program.

If you have any questions or concerns, please feel free to contact me at (775) 423-5136.

Sincerely,

Eleanor Lockwood

Eleanor Lockwood
County Manager

CARSON WATER SUBCONSERVANCY DISTRICT
REQUEST FOR FUNDING

APPLICANT: River Wranglers
Name
1355 E Badger Street
Address
Silver Springs | Lyon | NV | 89429
City | County | State | Zip Code

APPLICANT'S AGENT:

Linda Conlin, director
Name

1355 E Badger Street
Address

Silver Springs | Lyon | NV | 89429
City | County | State | Zip Code

PROJECT NAME: Conserve Carson River Work Days and Vegetation Management

PROJECT LOCATION: The Carson River watershed including but not limited to Douglas, Carson, Lyon, Storey and Churchill counties

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

River Wranglers plans to continue Conserve Carson River Work Days and vegetation management projects in the Carson River watershed. This work, initiated in 1995, resulted in more than 100 projects involving more than 2,500 citizens contributing more than 63,000 volunteer hours.

The grant allocates $2,400 per county or $9,600 for Conserve Carson River Workdays projects. These projects work with local conservation districts to construct projects along the Carson River and/or tributaries. Dozens of community partners work on these projects. In addition, the grant allocates $3,600 per county or $14,400 for Vegetation Management Projects. These projects utilize local labor crews and conservation crews to cut and plant willows for workdays and restoration, rodent control, and reduce potential flood hazards in the river and tributaries.

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

The benefits of Conserve Carson River Workdays are numerous. The events link all of the communities in the watershed and provide hands-on conservation activities for volunteers. Participants realize they are part of a larger, watershed wide community and that efforts made in one location will benefit that community as well as communities downstream

The work done focuses on stabilizing river banks, providing habitat for nesting birds and bats, and protecting the cottonwood gallery forest (one of the largest and most beautiful in our state) from rodent damage. River Wranglers organizes Conserve Carson River Work Days and arranges for elementary and high school students to work on the riverbanks with the guidance of local conservation districts. These educational days, focusing on projects and watershed education, have a ripple effect as it educates the teachers, their students and students' families. As a result, Carson River issues often become a part of dinner time conversation.

In summary, this grant proposal meets several criteria for funding established by the CWSD; it provides regional benefit and improves water quality by preventing stream bank erosion. The vegetation projects also reduce flooding. By involving the public in the projects, we increase their understanding of current water issues. The Conserve Carson River Work Days and Vegetation Management grant is consistent with the Stewardship Plan for the Carson River.

AL ESTIMATED PROJECT COST: _____

AMOUNT REQUESTED FROM CWSD: $24,000.00

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.

ESTIMATED DATE PROJECT TO BEGIN: July 1, 2014

ESTIMATED TIME TO COMPLETE PROJECT: June 30, 2015

REQUIRED APPROVALS: List all permits, licenses and approvals, if any, that are required to complete the project. Provide the current status of each approval required. If approval has not been requested or is in progress, provide the estimated date on which approval can be expected. Additional sheets may be attached.

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

CARSON WATER SUBCONSERVANCY DISTRICT
REQUEST FOR FUNDING

APPLICANT: Alpine Watershed Group
Name

P.O. Box 296
Address

Markleeville	Alpine	CA	96120
City	County	State	Zip Code

530-694-2327	sgreen@alpinecountyca.gov
Phone Number	Email Address

PROJECT NAME: Upper Carson River Watershed Programs

PROJECT LOCATION: Alpine County

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

The Alpine Watershed Group (AWG) is seeking funds for the fiscal year 2014-15 from the Carson Water Subconservancy District for the coordination of its Upper Carson River Watershed programs.

AWG has implemented a comprehensive community-based watershed program for the Upper Carson River Watershed. Our organization has served Alpine County for over ten years. AWG's mission is to preserve and enhance the natural system functions of Alpine County's watersheds for future generations. This is accomplished through a collaborative group of stakeholders, and strong citizen involvement. We also function as a forum for dialogue around natural resource planning and management.

AWG's program staff works to: 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. Attached are photos of work conducted in all three-program areas.

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

The Alpine Watershed Group's water quality monitoring and restoration programs directly benefit Alpine County's public lands and support the management efforts of regional natural resource agencies. AWG strives to enhance the health of our water resources, the availability of wildlife habitat and the quality of recreational opportunities, including fishing, boating,

swimming, and scenic benefits. The organization's outreach efforts educate the community about watershed processes by engaging individuals in hands-on learning and stewardship activities around stream functions, wildlife habitat and riparian corridors.

AWG utilizes many restoration techniques in order to limit erosion and turbidity in streams and to present damage to wetlands. For over a decade, our volunteers have conducted noxious weed pulls, planted native vegetation, and stabilized stream banks.

The Markleeville Creek Floodplain Restoration Project, AWG's largest restoration project, will re-establish the natural form and function of Markleeville Creek through the site of the former United States Forest Service (USFS) Guard Station. The completed project will 1) restore the natural stream channel and floodplain to reduce water velocity and erosion, 2) relocate and replace aging sewer infrastructure in the floodplain to reduce the threat of water quality impairments from flooding and sewer leaks, and 3) provide public access and recreation features, which will include walking trails and interpretive signage.

AWG has developed monitoring programs that give our volunteers the tools they need to be knowledgeable stewards of Alpine County's watersheds. Our monitoring programs have been a continuous volunteer-supported effort designed to characterize trends in water quantity and quality, along with the sustained presence of biologic diversity and resiliency of stream habitat along the Upper Carson River. Water quality monitoring serves to identify possible sources of pollution and evaluate improvements due to restoration efforts. A core team of ~20 volunteers are involved in ambient, bacteria, stream flow, and bio-assessment monitoring at 15 locations throughout the Upper Carson River Watershed.

A sustainable watershed program also relies on strong community partnerships. Since AWG's inception, our staff has maintained collaborations with regional land and resource managers, along with other watershed focused organizations, in order to identify monitoring, assessment and restoration needs. Resource managers throughout the Upper Carson River Watershed are concerned about water quality and management issues. AWG strives to educate community members and our visitors about the values of our natural resources. We reach out in a variety of ways - from tabling regional events to providing educational presentations to community groups. Our organization is also active in engaging youth in the study of earth sciences and providing hands-on opportunities to participate in restoration projects. Community education is critical in providing long-term protection of our watersheds.

Our recent association with the Sierra Nevada AmeriCorps Partnership (SNAP) has significantly increased our capacity for outreach. Through this partnership, our AmeriCorps member, Tess Braun, will be serving as Watershed Program Assistant through September 2014. Tess will lead the development of programs that focus on watershed education in local schools. Programs will provide opportunities for students to learn about watersheds and how to protect streams and wetlands. Well-developed environmental education programs give young people the tools to understand natural systems, to make scientific observations, and to become educators in their own communities.

TOTAL ESTIMATED PROJECT COST: $100,000

AMOUNT REQUESTED FROM CWSD: $20,000

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.

The committed and projected matching funds are as follows:

Sierra Nevada Conservancy - pending	$30,000
American – partially committed	$20,000
Miscellaneous donations - projected	$20,000
Board of Directors' donation	$5,000
Alpine County Chamber of Commerce	$1,500

Various other grants are also being pursued.

ESTIMATED DATE PROJECT TO BEGIN: July 1, 2014

ESTIMATED TIME TO COMPLETE PROJECT: June 30, 2015

REQUIRED APPROVALS: List all permits, licenses and approvals, if any that are required to complete the project. Provide the current status of each approval required. If approval has not been requested or is in progress, provide the estimated date on which approval can be expected. Additional sheets may be attached.

Approval was received from the Alpine County Board of Supervisors at their January 21st Board meeting.

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

For over ten years the Alpine Watershed Group has served as a trusted partner in watershed planning and environmental communication for Alpine County. AWG's staff members are actively engaged and well-respected participants in the county's ongoing dialogue about water quality, watershed stewardship and how they relate to all aspects of our community.

AWG would like to express our gratitude to CWSD for its commitment to Alpine County, and its vision for a watershed-wide effort. AWG is dedicated to providing watershed coordination services in the Upper Carson River Watershed.

SIGNED: John Barr

PRINT NAME: John Barr

TITLE: Chairman, Board of Directors

DATE: 2/7/14

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

Alpine Watershed Group

Protecting the Headwaters of the California Alps

Watershed Projects – Summer 2013

Hope Valley Stream Flow Monitoring

Hope Valley Gauging Station Maintenance

Stream Bioassessment – August 6

Monitoring Day – September 9

Markleeville Creek Day – September 21

<u>Aspen Protection along Hot Springs Creek</u>

Bank Stabilization in Hope Valley

Channel Armoring on Shay Creek

Weed Removal at Grover Hot Springs

Carson Valley Conservation District
775-782-3661 ext 102
775-782-3547 FAX
USDA Service Center
1702 County Road, Suite A
Minden, NV 89423

CWSD
777E. William St. Suite 110A
Carson City, NV 89701
775-887-7450

Request for Funds
Re: Bioengineering and Vegetation Management
Request Amount: $45,000

We would like to continue with bioengineering in the Carson Valley. These projects meet the priority requirements for the CWSD. The projects repair damaged banks on the river and sloughs and provide wildlife habitat, improve water quality and increase production of the riparian environment.

The vegetation management component is necessary to provide proper water quantity for the surface conveyances. The work is done using a three person crew and a project supervisor. We do not usually use motorized equipment like backhoes or tracks. The work is done by hand to create the least amount of impact on the project sites. We harvest local willows and assemble them into mattresses, fascines and rafts that cover the eroded bank and can sprout and take root creating a living matrix for reinforcing the eroded banks and the structures by the waterline slow the velocity of the water and capture sediment to heal the banks as naturally as possible.

We have access to private property where banks have been damaged or eroded. We also have access to areas that require vegetation management to allow free flowing surface water for delivery for use in surface irrigation and to downstream users.

We have successfully assembled about 450 feet of various bioengineering techniques. We tried different techniques on different job sites to determine which practices work best in our area of the surface water conveyances. The goal is to immediately cover the eroding banks with plant material, (willows), so as to stop erosion right away and provide a living patch that can grow and

reinforce the banks. These patches also provide wildlife habitat, shade for the water and gather sediment as the water level rises and ebbs. There is also a maintenance component to the projects so we can address areas that might need additional attention. The vertical willows are soaked and then planted so that they can take root and sprout in the spring.

We have a demonstration project on the Nature Conservancy Ranch in Genoa on the west bank of the west fork of the Carson River. This project demonstrated how the use of natural materials can be effectively deployed to create patches for eroded banks. This project is already creating a bar in the river where the bank had sloughed into the channel and was washed away.

There has been a large amount of beaver activity recently. We would like to request funds to take 100 tails, $5,000. After the high water even from the storm over the weekend beavers from Alpine will wash down into our watershed and start to damage trees and restrict flow. Because we are facing the third year of a drought cycle, removing these critters will be important to maximize the efficiency of the delivery of the surface water for irrigation. In addition these animals damage the few cottonwoods that we have growing along the river and sloughs.

We are requesting $45,000 to continue the bioengineering and vegetation management in the Carson Valley. We hope you can see your way clear to fund our projects.

Pictures to follow.

We have tried several different approaches to the bank stabilization. Here is an example of dense vertical mattress planted in a trench footing with horizontal support fascines.

Here is an example of beaver girdling a cottonwood tree by the Brockliss Slough.

Here is an example of a thin pole planting with horizontal fascines at the bottom and mid-span of the willows. Some of these have already sprouted but there is quite a bit of bank still exposed compared to the dense vertical mattress technique. If time permits we will fill in some of the space with more willows that will be pole planted. Some gaps are left because the TNC biologist wanted to leave the Milk Weed planted undisturbed for Monarch Butterflies.

Hand crews do the job. We do not use heavy equipment, so we don't have a big impact on the project site. Also, crews working this close to the materials and project site pay attention to details that equipment operators might miss.

Here are some cottonwoods that have been planted in an area identified by the TNC biologist and a willow fascine at the toe follows the waterline. More cottonwoods will be added to this site. These shallow water holes have some of the most diverse biology on the site.

This is an example of the willow matting, willow poles and juniper revetment. Willows are harvested locally and the juniper comes from Sage Grouse habitat in the Pinenut.

Here is a "Manual Labor" weekend workday that TNC and a Lake Casino sponsored and our crew worked. The sponsors requested that we return the participants wet, dirty and tired at the end of the day. We did. There is tremendous outreach potential at the TNC site. Over 100 people worked on the project.

Thank you for your time and consideration.

Mike Hayes
CVCD Coordinator
Tuesday, February 11, 2014

CARSON VALLEY CONSERVATION DISTRICT

USDA Service Center
1702 County Road, Minden NV 89423

Buzzy's Ranch Streambank Rehabilitation CWSD $20,000 request

Buzzy's Ranch Streambank is the reach on the Carson River from Riverview (Lloyd) Bridge to the southern boundary of Riverview Park. The riparian corridor on the west side of the River is severely impaired due to noxious weeds (especially thistle), loss of vegetation due to predation (beavers) and river scour with a 600' reach of vertical bank as a result of past high water events.

The Carson Valley Conservation District in conjunction with Carson City Open Space (property owner) and Jarrad Ranch (property manager) would like to address these

impairments. A substantial portion of the project expense will be incurred to install willow stream barbs (Piper Spurs) in the 600' section of the bank with vertical walls. CWSD funding will be used primarily for continuing vegetation work on the stream bank as part of the over all project, both before and after construction of the stream barbs. CVCD will work with the Carson City Weed Coalition to deal with the noxious weeds through the entire reach and revegetate the treated areas based on plans to be developed with Jarrad Ranch, NRCS, Carson City Open Space and Carson City Weed Coalition.

A statement of work:

a. Revegetation of the top of bank, including dealing with decadent plant materials and removal of debris and replanting with appropriate dry land grasses and scrubs. Protecting cottonwoods with poultry fencing with a diameter greater than 2.5 inches. Otherwise reduce predation on vegetation by beavers.

b. Develop appropriate design for revegetation of 600 foot section scoured stream bank.

c. Seek additional funding for installation of above design.

Total budget: $130,000 Of which $40,000 is funding from CWSD, $20,000 in the fiscal year 2013/2014 and $20,000 is this request. $90,000 is to be awarded from NDEP, of which $50,000 has been previously matched.

Appropriate permitting, including Army Corps of Engineers, Nevada Division of State Lands, and Nevada Department of Environmental Protection will be obtained prior to any regulated work.

Carson Water Subconservancy District
Request for funding FY 2014

February 10, 2014

APPLICANT: Dayton Valley Conservation District

P.O. Box 1807

Dayton, Lyon, Nevada 89403

APPLICANTS AGENT: Richard Wilkinson

#34 Lakes Blvd.

Dayton, Lyon, Nevada 89403

PROJECT NAME: Middle Carson River Vegetation Management/Enhancement

PROJECT LOCATIONS: Middle Carson River Dayton, Nevada.

PROJECT DESCRIPTION: See Attached letter describing the need for the completion of these projects.

PROJECT BENEFITS: See Attached letter describing the benefits of completing these projects.

TOTAL AMOUNT OF PROJECTS: $10,000.00

AMOUNT REQUESTED FROM CWSD: $5,000.00

MATCH RATIO: 1 TO 1

ESTIMATED DATE OF PROJECT TO BEGIN: Work Will Commence March 2014 through December, 2014.

ESTIMATED DATE OF PROJECT COMPLETION: Projects should be complete December, 2014 and final reporting March, 2015.

ADDITIONAL INFORMATION: See attached letter with additional project information.

PROJECT PARTNERS:

Carson Water Subconservancy District	$5,000.00 Pending
Carson River Wranglers	$1,000.00 Approved
Lyon County	$4,000.00 Approved
	Totals: $10,000.00

Carson Water Subconservancy District
Request for funding FY 2014

February 10, 2014

APPLICANT: Dayton Valley Conservation District

P.O. Box 1807

Dayton, Lyon, Nevada 89403

APPLICANTS AGENT: Richard Wilkinson

#34 Lakes Blvd.

Dayton, Lyon, Nevada 89403

PROJECT NAME: Middle Carson River Channel Clearing, Snagging and Maintenance

PROJECT LOCATIONS: Middle Carson River Dayton, Nevada.

PROJECT DESCRIPTION: See Attached letter describing the need for the completion of these projects.

PROJECT BENEFITS: See Attached letter describing the benefits of completing these projects.

TOTAL AMOUNT OF PROJECTS: $210,000.00

AMOUNT REQUESTED FROM CWSD: $70,000.00

MATCH RATIO: 3 TO 1

ESTIMATED DATE OF PROJECT TO BEGIN: Permitting will start in March, 2014. Construction September, 2014.

ESTIMATED DATE OF PROJECT COMPLETION: Construction should be complete December, 2014 and final reporting March, 2015.

ADDITIONAL INFORMATION: See attached letter with additional project information.

PROJECT PARTNERS:

Carson Water Subconservancy District	$70,000.00 Pending
Nevada Department of Environmental Protection	$140,000.00 Approved
State of Nevada Division of Water Resources	$70,000.00 Pending
	Totals: $210,000.00

CARSON WATER SUBCONSERVANCY DISTRICT
REQUEST FOR FUNDING

APPLICANT: Lahontan Conservation District
Name
111 Sheckler Road
Address
Fallon (City) | Churchill (County) | Nevada (State) | 89406 (Zip Code)

APPLICANT'S AGENT:
Lynn Pearce – Chairman
Name
111 Sheckler Road
Address
Fallon (City) | Churchill (County) | Nevada (State) | 89406 (Zip Code)

PROJECT NAME: Lower Carson River Clearing and Snagging

PROJECT LOCATION: Lower Carson River below Diversion Dam

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

- **Continue with a long-term monitoring program on the lower Carson River.**
- **Remove dead vegetation and debris restricting channel capacity.**
- **Beaver and beaver dam removal to improve water flow in the channel.**

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

Having a steady stream flow will reduce any erosion and will help reduce the change of the water system caused by obstruction in the river. It will reduce the potential of flood, improve channel capacity, provide safety to the community in the flood zone, and improve the functionality and management of the lower Carson River.

TOTAL ESTIMATED PROJECT COST: $40,000.00
AMOUNT REQUESTED FROM CWSD: $20,000.00

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.

Grant Funding:
Churchill County Grant Funding **$ 5,000.00**

In-kind Match:	
Lahontan Conservation District Administration	$6,400.00
Landowners Equipment and Labor	$8,600.00
TOTAL:	$20,000.00

ESTIMATED DATE PROJECT TO BEGIN: July 1, 2013

ESTIMATED TIME TO COMPLETE PROJECT: June 30,2014

REQUIRED APPROVALS:List all permits, licenses and approvals, if any, that are required to complete the project. Provide the current status of each approval required. If approval has not been requested or is in progress, provide the estimated date on which approval can be expected. Additional sheets may be attached.

Permit with the Nevada Division of Environment Protection.

- Permit/Invoice#: GNV980000260006
- Permit type: General Water way
- Valid from July 1, 2013 to June 30,2014

Permit with the Nevada Department of Wildlife.

- Permit/Form #: 834886
- Permit type: Depredation Permit
- Valid from November 4,2013 to November 3, 2014

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

The Lahontan Conservation District has continued with channel clearing, snagging and debris removal projects along the Carson River. The Lahontan Conservation District hired the Nevada Division of Forestry prison crews to remove dead and fallen trees, remove beaver dams, and burn slash piles to improve river flow, along the lower Carson River.

SIGNED: _____

NAME: Lynn Pearce

TITLE: Chairman, Lahontan Conservation District

DATE: February 11, 2014

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

Crews Clearing Debris along River Near Bafford Lane Bridge

CARSON WATER SUBCONSERVANCY DISTRICT
REQUEST FOR FUNDING

APPLICANT: Lahontan Conservation District
Name
111 Sheckler Road
Address
Fallon (City) | Churchill (County) | Nevada (State) | 89406 (Zip Code)

APPLICANT'S AGENT:
Lynn Pearce – Chairman
Name
111 Sheckler Road
Address
Fallon (City) | Churchill (County) | Nevada (State) | 89406 (Zip Code)

PROJECT NAME: Lower Carson River Task Force

PROJECT LOCATION: 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.

Create a river channel that is clear of abstraction and provides for free flow at natural choke points. An example is the Reno Highway Bridge and the Bafford Lane Bridges has historically been clogged by debris during high water flooding events. Obstructions in these locations causes back up and over flow that moves into residential housing areas in both the county and City of Fallon. Six key locations have been identified and are described herein where sediment caused islands changed the flow, eroded banks or blocked flows under bridge works. Removal of sediment will provide for structures to operate within their design parameters. (See attached work locations)

PROJECT BENEFITS: Briefly describe the 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. Further maintaining a clear channel will enable the citizens to utilize the river for recreation. Creating a distinct path within the river channel will assist all recreational users. 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: $250,000.00 (6 sites identified in attachment)
AMOUNT REQUESTED FROM CWSD: $15,000.00 (rolled from the 2013-2014 funding)

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.

- **Truckee-Carson Irrigation District – Maintenance including personnel and equipment**
- **Churchill County – Engineering, administration and removal work (Road Department Crews and Equipment)**
- **City of Fallon – Heavy Equipment**
- **Churchill County Mosquito, Vector and Weed Control District – Personnel and Equipment**
- **Volunteers – Adjoining landowners along the River that have offered their time and equipment**

Dollar equivalent amounts will vary from each contributor. However, the amalgamated total will necessarily equal the remaining $225,000.00 to complete the work.

ESTIMATED DATE PROJECT TO BEGIN: Contingent on weather and water levels in the river.

ESTIMATED TIME TO COMPLETE PROJECT: 180 days after work begins (affected by weather and water) This will ultimately be a project undertaken over multiple years to positively affect the entire reach of the river below Lahontan Dam.

REQUIRED APPROVALS: List all permits, licenses and approvals, if any, that are required to complete the project. Provide the current status of each approval required. If approval has not been requested or is in progress, provide the estimated date on which approval can be expected. Additional sheets may be attached.

1. An application for a permit to move/remove sediment and allow equipment into the river was filed in January 2014 with the US Corps of Engineers. A 90 day approval is anticipated. Thus, permit should be issued in April.

2. Right of Entry Authorization –Nevada Division of State lands – issued 12-20-2012

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

The work requested here compliments and furthers the work normally accomplished by the Lahontan Conservation District. It takes a combination of debris, foliage, beaver dam and sediment removal to maintain a clear channel. This unified 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:

a. **Ancillary or downstream benefits to improve the Carson River Watershed.**
b. **Minimize stream bank erosion, improve water quality, and re-establish native vegetation.**
c. **Reduce flooding risk along the Carson River, particularly to residential and commercial development.**
d. **Reduce flood damage risk to water and sewage infrastructure installed in Churchill**

County.

e. **Improve the administration and management of the river and stream system.**
f. **Improve the opportunities for citizens to use the river for recreational purposes.**
g. **Maintaining a clean/clear river channel will improve water quality and aid the overall stewardship plan for the Carson River.**

SIGNED: _____

NAME: Lynn Pearce
TITLE: Chairman, Lahontan Conservation District
DATE: February 11.2013

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

CARSON WATER SUBCONSERVANCY DISTRICT
REQUEST FOR FUNDING

APPLICANT: Churchill County Planning
Name
155 N. Taylor St. Suite 194
Address

Fallon	Churchill	NV	89406
City	County	State	Zip Code

planning-tp@churchillcounty.org — 775-423-7627
Email — Telephone #

APPLICANT'S AGENT (if different from Applicant):
Stanka Consulting LTD
Name
3032 Silver Sage Drive, Suite 101
Address

Carson City	Carson City	NV	89701
City	County	State	Zip Code

david@stankaconsulting.com — 775-885-9283
Email — Telephone #

PROJECT NAME: **Development of Dedication Tracking Database**

PROJECT LOCATION/ADDRESS: Churchill County

PROJECT DESCRIPTION: Briefly describe the project. Provide maps, drawings, photographs or other information. Additional sheets may be attached.
Since the Churchill County water right dedication ordinance was passed in 2000 by the Board of County Commissioners, the Planning Department has been accumulating surface water deeds, maps, and associated paperwork. The paper files are stored in the Planning Department after the deed is recorded. The water is currently available on a temporary basis to agricultural producers who are in need of additional water. In the future, the water rights may be transferred to a number of possible uses including County-owned land. The first step in any transfer is to determine what water rights the County owns and the status of those rights. In addition, the transfer paperwork will involve a chain of title or report of conveyance for each serial number involved and an associated map.
Stanka Consulting, LTD submitted a proposal to Churchill County Planning to develop a database that would include the information that will be required to be presented when the water is transferred (see attached proposal from Stanka Consulting).

PROJECT GOALS AND BENEFITS: Briefly describe the project goals and benefits to be realized if the project is implemented. Additional sheets may be attached.
The goal is to develop a database so that there is a digital ownership record of each dedicated water right. The benefit is to the County and State Engineer's Office. If the water rights can be cleanly transferred to the County water system in the future it will avoid a lot of staff time from the County, TCID and the State Engineer's Office.

TOTAL ESTIMATED PROJECT COST: $ 26,840
AMOUNT REQUESTED FROM CWSD: $ 16,840

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-$5000 was requested in two annual payments of $2500 each-budget not finalized yet
Truckee-Carson Irrigation District-approved for $5000 in two annual payments of $2500 each
In-kind match of Churchill County employee, Churchill County Recorder's office and TCID employee

ESTIMATED DATE PROJECT TO BEGIN: July 1, 2014

ESTIMATED TIME TO COMPLETE PROJECT: two years
(If completion date is greater than a year, please indicate how much funding is needed in each fiscal year.)
The funding is requested in two equal disbursements.

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.
No permits required.

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

SIGNED: Eleanor Lockwood

NAME: Eleanor Lockwood

TITLE: County Manager

DATE: February 10, 2014

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

Stanka Consulting, LTD

A Professional Engineering Company

3032 Silver Sage Drive, Suite 101
Carson City, Nevada 89701
david@stankaconsulting.com
(775) 885-9283

Michael Johnson
Planning Director - Churchill County
155 N. Taylor, Suite 194
Fallon, Nevada 89406

June 20, 2013

Based on our previous discussions, Stanka Consulting, Ltd. has prepared the following cost estimate. The scope of the project is to develop an access-based database to track water rights that have been dedicated to the County. For this estimate, it is assumed that there will be approximately 300 records, and that hard copies (or digital) are readily available. The date base will be developed to be user friendly and will include hyperlinked .pdfs of all the record. A brief operation guide and on-site training of staff is also included in this estimate.

Tasks:

1. Develop data base requirements and obtain raw data.
2. Develop prototype Database and meet with Churchill Staff for Review and input.
3. Update Database with based on results from task 2 and populate database – assume 300 records.
4. Meet with Churchill staff to review final Draft Database.
5. Prepare brief training / input guide and train Churchill staff.
6. Finalize and delivery database to Churchill County.

Estimated Stanka Consulting, Ltd Fees

Line Item	Engineer Intern Hours	Engineer Intern @ $40 / Hour	Tech Analysis Hours	Tech Analysis @ $75/ hour	Associate Engineer Hours	Associate Engineer @ $110/hour	Senior Engineer Hours	Senior Engineer @ $150/hour	Total
1	0.00	$ -	0.00	$ -	8.00	$ 880.00	4.00	$ 600.00	
2	0.00	$ -	0.00	$ -	40.00	$ 4,400.00	0.00	$ -	
3	220.00	$ 8,800.00	40.00	$ 4,800.00	20.00	$ 2,200.00	0.00	$ -	
4	0.00	$ -	0.00	$ -	4.00	$ 440.00	4.00	$ 600.00	
5	0.00	$ -	22.00	$ 2,640.00	4.00	$ 440.00	0.00	$ -	
6	0.00	$ -	0.00	$ -	4.00	$ 440.00	4.00	$ 600.00	
Total		$8,800.00		$7,440 .00		$8,800 .00		$1,800.00	$26,840.00

Stanka Consulting LLC is a Professional Engineering Corporation. This is only an estimate, and actual charges will be based on time and materials

If you have any questions, please contact me at the above address, email or phone number.

David G, Hillis, Jr., P.E., WRS

Stanka Consulting, LTD

CARSON WATER SUBCONSERVANCY DISTRICT
REQUEST FOR FUNDING

APPLICANT: U.S. Geological Survey / David W. Smith
Name
2730 N. Deer Run Road
Address

Carson City	Carson City	Nevada	89701
City	County	State	Zip Code

dwsmith@usgs.gov — Email
775-887-7616 — Telephone #

APPLICANT'S AGENT (if different from Applicant):

_____
Name

_____
Address

_____	_____	_____	_____
City	County	State	Zip Code

_____ _____
Email Telephone #

PROJECT NAME: Groundwater Level and Water-Quality Data Collection in the Newlands Project Area, Churchill County, NV

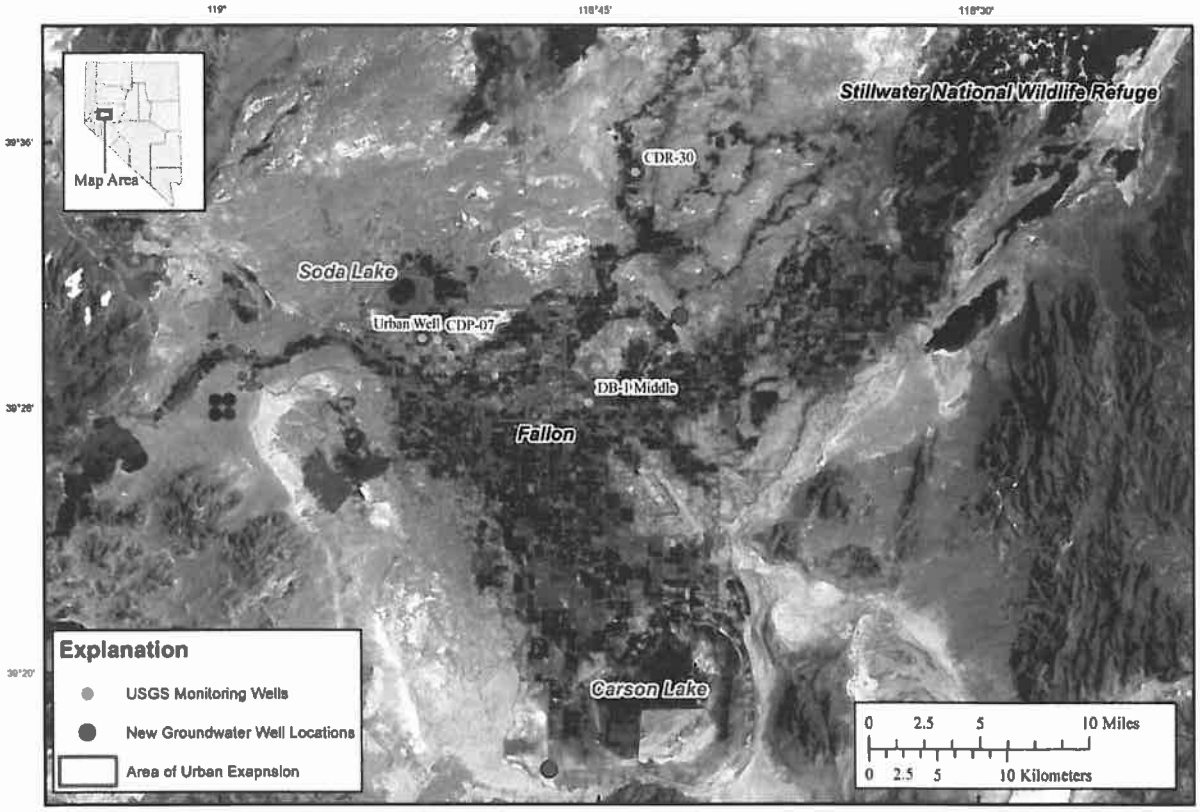
PROJECT LOCATION/ADDRESS: Churchill County, NV

PROJECT DESCRIPTION:

Problem Statement

Churchill County residents depend on drinking water withdrawn from multiple groundwater sources including the shallow, intermediate, and basalt aquifers within the Carson Desert (Glancy, 1986). The USGS has monitored groundwater-levels and water-quality (1992-2013) focused mainly on the shallow aquifer beneath the Carson Desert (Seiler and Allander, 1993; Lico and Seiler, 1994; Maurer, 2004). Since the early 1990's, the Newlands monitoring network has been adjusted to address water-resources issues identified by local and federal agencies. In addition, future population expansion and related water resource needs to the west of Fallon has prompted a restructuring of the network to examine groundwater-quality in this area.

From 2012-2013, the monitoring network was redesigned to focus on adding measurements from the shallow aquifer west of Fallon, and increase the monitoring frequency and locations to define groundwater-level trends. Water-quality sampling was updated to collect synoptic samples of the intermediate aquifer due to the increased domestic demand from that aquifer. Preliminary results from the ongoing project suggest: (1) groundwater network monitoring in areas of land-use and land-management change is capturing further declines in the shallow aquifer, (2) water-quality of the intermediate aquifer can be reduced, pending results from 2014 sampling (3) the installation or re-drilling of monitoring wells in areas where groundwater-levels have dropped or are expected to drop below well depths (figure 1).



Base from ESRI ArcGIS Online Map service
http://services.arcgisonline.com/arcgis/services:
ESRI_World_Imagery, 2014
Wells from U.S. Geological Survey
National Water Information Service (NWIS), 2014
Area of Urban Expansion, Vpoint, Mahannah, 2007
Universal Transverse Mercator Projection, Zone 11 N
NAD 83

Figure 1. USGS monitoring wells and locations of well installation.

The current monitoring network focuses on the shallow aquifer, from 0 to 50 feet below land surface (Glancy, 1986), in areas of land-use and land-management change. Land-use change includes the conversion of irrigated fields to urban development, and management change includes the removal of

irrigation creating fallow fields. These areas are monitored based on model results of Herrera and others (1999), which concluded the largest groundwater-level declines are potentially associated with abandonment of irrigation canals. Data from a USGS monitoring well, near an area of urban development, suggest declines similar to observed declines in fallow agriculture fields defined by the CDR-30 well, where water rights have been transferred (figures 1, 2). Groundwater-levels from 2012 have declined approximately 1 foot per year beneath the area of urban development, one of the largest declines in the shallow aquifer. Additionally, groundwater-level declines may have the potential to impact domestic wells downgradient from land-use change. Impacts may include declining water-levels, decreased water-quality due to changing groundwater oxygen concentrations, and septic tank influence (Lico, 1992, Rosen and Kropf, 2006).

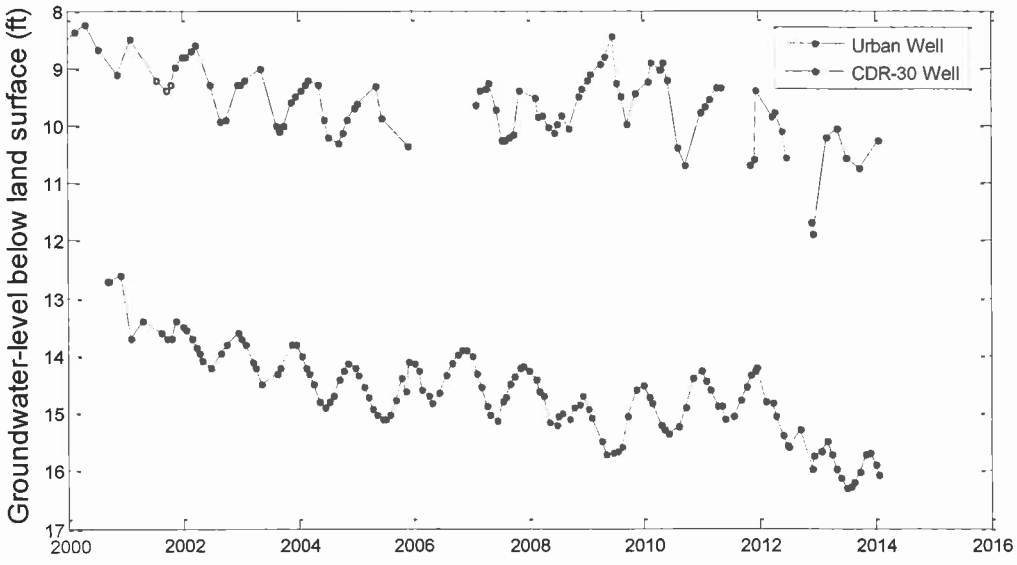


Figure 2. Shallow aquifer groundwater-level comparison between urbanized (Davis) and water-right transfer affected areas (CDR-30).

The shallow aquifer near beneath the area of urban expansion is also monitored for water-quality changes. Hydraulic gradients indicate groundwater flow from west to east in the Carson Desert (Seiler and Allander, 1993), and water-quality samples were collected downgradient from the urban subdivision at well CDP-07 (figure 1). Water-quality sample collection was redesigned to include a domestic well with historical water-quality samples to observe changes in water-chemistry from 1988-2013. Results indicate total arsenic has increased from an average of 1,300 parts per billion (ppb) in 1988, to 2,400 ppb in 2013

(figure 3). The groundwater arsenic concentration has increased to 240 times the EPA maximum contaminate level (MCL) of 10 ppb. Network monitoring of water-quality will include this area to evaluate trends of arsenic with declining water-levels, and one additional sample to examine the efficiency of domestic filters on elevated concentrations of arsenic.

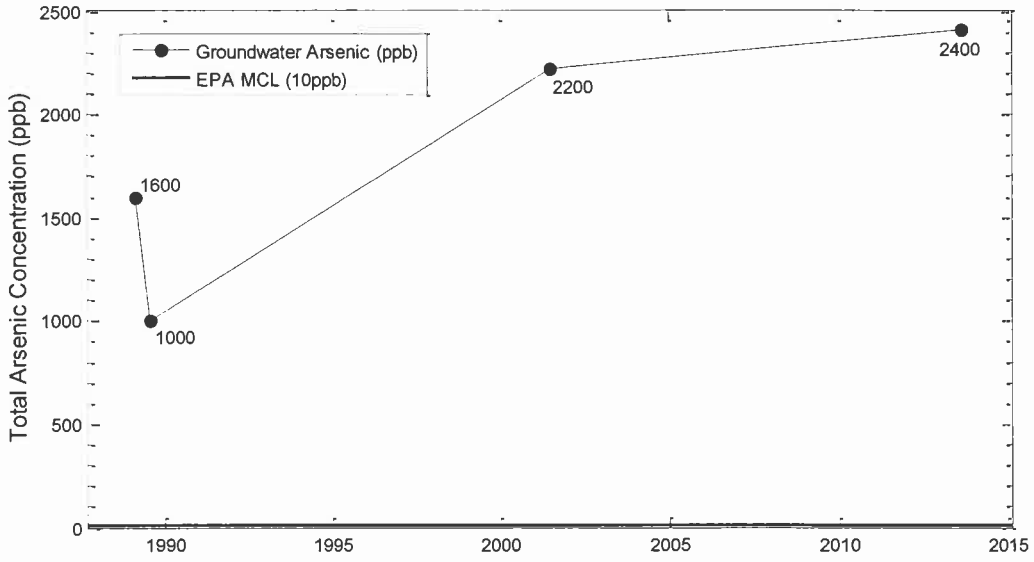


Figure 3. Total arsenic domestic well trends for well CDP-07, located downgradient from the area of urban development.

Water-quality and groundwater-levels were collected from the basalt aquifer in 2012 and 2013. Basalt aquifer groundwater-level trends indicate declines may have flattened to stable groundwater-levels at 44 feet below lands surface (figure 3a) although, a period of record groundwater decline was observed in 2012. Seasonal groundwater pumping from the basalt aquifer produces groundwater-level decline in the winter and rebound in summer months of approximately 2 feet. Water-quality data suggest a similar trend for total arsenic and chloride concentrations (figure 3b). The basalt aquifer may have reached an equilibrium with pumping demand and recharge from the shallow and intermediate aquifers over this period additionally, the population in Fallon has decreased 1.8 percent from 2010 to 2012 (US Census Bureau, 2014). The historical increase of chloride and arsenic in the basalt aquifer is believed to correspond with the recharge of poor water-quality from the shallow aquifer and deep (>1000 feet) water within the basalt aquifer (Maurer and Welch, 2001). Additional basalt aquifer water-quality data is needed to examine trends during a potential period of stable groundwater demand for the aquifer.

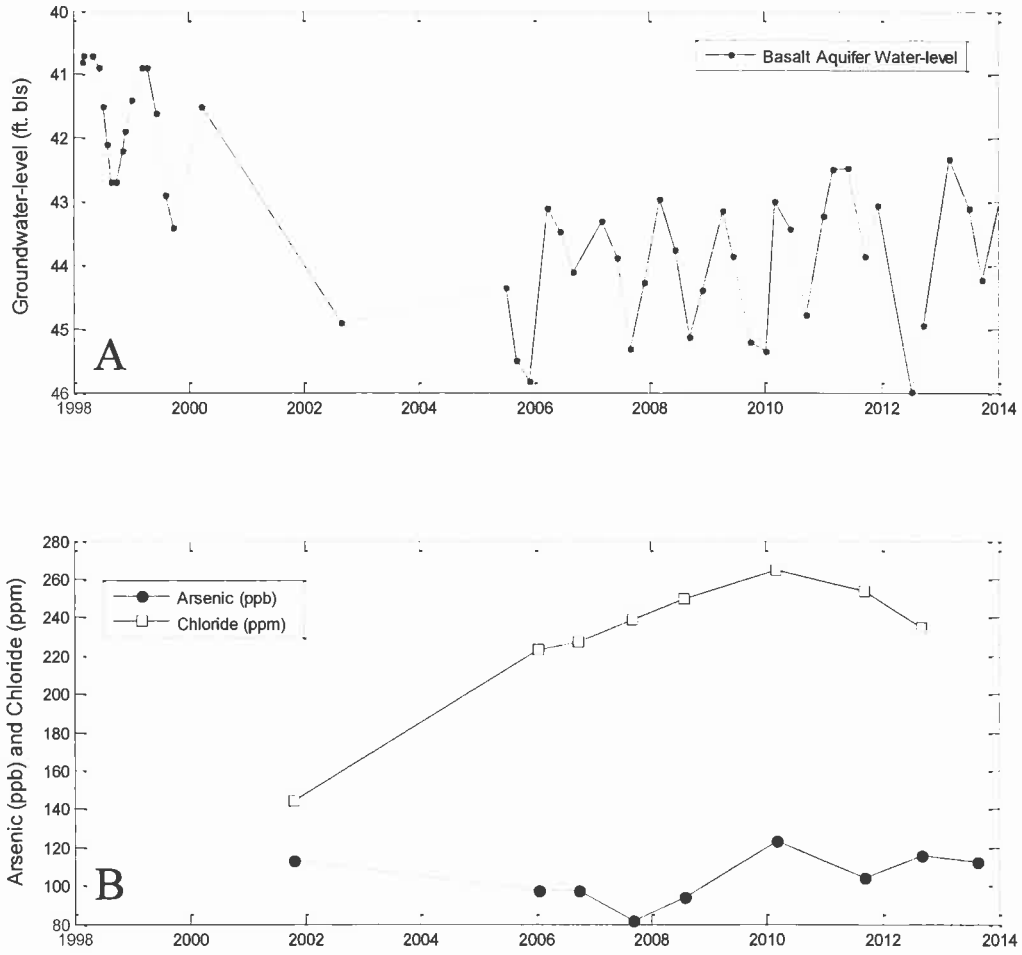


Figure 4 (A) Groundwater-level hydrograph for the basalt aquifer. (B) Water-quality trends of Total Arsenic (ppb) and Chloride (ppm) of the Basalt Aquifer.

The current network has multiple wells where groundwater-level declines are at or near the total depth of the monitoring wells. These wells include the Urban and CDR-30 wells, and two additional wells were shallow aquifer level declines have exceeded well total depth (figure 1). The installation of at least 4 monitoring wells will capture further water-level declines in these areas.

Approach

The current groundwater monitoring network will continue to be monitored on a monthly, quarterly, and annual frequency. Annual water-quality sampling will be decreased from 8 to 5-4 samples and provide a cost savings to the project, pending results of 2014 monitoring. Water-quality sampling will include basalt aquifer, three shallow aquifer wells within the area of urban expansion, and one field to monitor the impacts of water-right transfers on water-quality.

The USGS will develop a monitoring plan for the basalt aquifer at the end of the project. Four wells will be installed by the USGS, pending permit and location approval by the Nevada Division of Water Resources, and project objectives are outlined in table 1.

Table 1. USGS project outline for Nevada State fiscal year.

NV State Fiscal Year	FY15			FY16				FY17			
Well Installation	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
State Approval Well Installation	X	X	X	X							
Installation of Monitoring Wells			X	X							
Site Creation of Wells			X	X							
Data Collection											
Water Level	X	X	X	X	X	X	X	X	X	X	X
Water Quality				X				X			
Data Management											
Water Level Data Processing and Quality Control	X	X	X	X	X	X	X	X	X	X	X
Water Quality Data Processing and Quality Control		X				X				X	
Summary Project Write-up											X

References

Glancy, P.A., 1986. Geohydrology of the basalt and unconsolidated sedimentary aquifers in the Fallon Area, Churchill County, Nevada: U.S. Geological Survey Water-Supply Paper 2263.

Lico, M.S., and Seiler, R.L, 1994. Ground-water quality and geochemistry, Carson Desert, Western Nevada: U.S. Geological Survey Open-File Report 94-31.

Maurer, D.K., Seiler, R.L., Watkins, S.W. 2004. Evaluation of U.S. Geological Survey Monitoring-Well Network and Potential Effects of Changes in Water Use, Newlands Project, Churchill County, Nevada. U.S. Geological Survey Scientific Investigations Report 2004-5246.

Maurer, D.M., Welch, A.H., 2001. Hydrogeology and Geochemistry of the Fallon Basalt and Adjacent Aquifers, and Potential Sources of Basalt Recharge, in Churchill County, Nevada. U.S. Geological Survey Water-Resources Investigations Report 93-4118.

Rosen, M.R., Kropf, C., 2006. Quantification of the Contribution of Nitrogen from Septic Tanks to GroundWater in Spanish Springs Valley, Nevada. U.S. Geological Survey Scientific Investigations Report 2006-5206.

Seiler, R.L., Allander, K.K. 1993. Water-Level Changes and Directions of Ground-Water Flow in the Shallow Aquifer, Fallon Area, Churchill County, Nevada. U.S. Geological Survey Water-Resources Investigations Report 01-4130.

Welch, A.H., Maurer, D.K., Lico, M.S., McCormack, J.K. 2005. Characterization of Surface-Water Quality in the S-Line Canal and Potential Geochemical Reactions from Storage of Surface Water in the Basalt Aquifer near Fallon, Nevada.

U.S. Census Bureau. 2014. State and County QuickFacts: Web Interface. Available from <http://quickfacts.census.gov/qfd/states/32/32001.html>

U.S. Geological Survey. 2014. National Water Information System: Web Interface. Available from <http://waterdata.usgs.gov/nwis>

PROJECT GOALS AND BENEFITS:

The project benefits include:

1. Monitoring of groundwater-levels in the shallow, intermediate, and basalt aquifers.
2. Installation of 4 shallow aquifer monitoring wells in areas of water-right transfers, urban development, and lack of groundwater-level data.
3. Evaluate shallow aquifer water-quality data for major ions and nutrient trends with changing water-levels.
4. The collection of major ion and arsenic concentrations for trend evaluation of the basalt aquifer.
5. Publish and maintain data online for public use in the USGS NWIS database.

The funding and continued support of the Newlands network will maintain and improve on monitoring of basic groundwater quality and water levels in the shallow, intermediate, and basalt aquifers. Monitoring water levels and water quality will provide data needed to observe effects of land-use change, contribute to further understanding of groundwater impacts of water rights transfers, water-quality changes, and aid in water-resource management.

TOTAL ESTIMATED PROJECT COST: $111,600
AMOUNT REQUESTED FROM CWSD: FY15 $8,900, FY16 $10,200, FY17 $8,800

SOURCE OF OTHER FUNDS:

Total cost for the project is $111,600, with a total of $26,300 requested from the Carson Water Subconservecy District (CWSD) over the project duration. Funds would be augmented with an agreement from Churchill County, to achieve the stated objectives. Pending the availability of federal matching funds, it is anticipated that funds provided by the CWSD and Churchill County will be matched by the USGS.

ESTIMATED DATE PROJECT TO BEGIN: October 1st, 2014

ESTIMATED TIME TO COMPLETE PROJECT: 2.5 years

PERMIT REQUIREMENTS: Well drilling waivers will be submitted to the State of Nevada Division of Water Resources for approval of groundwater well locations. Applications will be filed upon approval of the project, and drilled in the fourth quarter of FY2015.

SIGNED: _____

NAME: David W. Smith

TITLE: U.S. Geological Survey Hydrologist

DATE: 2/10/2014

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

Simulating Shifts in the Snowmelt Pulse and its Effects on Water Resources in the Carson River Basin

By Eric Morway and Richard Niswonger

Project Description

Snowmelt-generated runoff is the largest component of streamflow to the Carson River. Snowmelt from the 1,150 km^2 (Figure 1) upper Carson River catchment flows to the east and west forks of the Carson River, and subsequently flows to the main stem of the Carson River. Water flowing in the Carson River is a vital resource for adjacent urbanized regions, supplying both domestic and agricultural needs. Agricultural use makes up a large component of water allocation from the Carson River and water needs for agriculture are extremely sensitive to the timing of the snowmelt pulse that generates enough streamflow to support agricultural diversions. Recent studies have shown that the onset of the snowmelt pulse has shifted backward by 1-4 weeks over the last 40 years due to temperature increases across western North America, including the eastern slopes of the Sierra Nevada (Stewart et al., 2005, Huntington and Niswonger, 2010). This backward shift in the snowmelt pulse has dramatic implications on water resources in the Carson River because it affects both runoff generated high flows and groundwater generated low flows (Huntington and Niswonger, 2012).

Seasonally earlier snowmelt and drainage from the upper catchment of the Carson River basin results in decreased streamflow in the Carson River in the late spring and summer when water needs for agriculture are greatest. We propose to analyze past and future shifts in the snowmelt pulse and the resulting effects on peak streamflow timing and amounts along the Carson River corridor. This project will consist of modifying and extending a watershed runoff model of the upper catchment that was previously developed by the USGS and combining it with a groundwater model to simulate runoff and groundwater derived streamflow flowing from the east and west forks of the Carson River (Jeton et al., 1996. Dettinger et al., 2004). The watershed runoff model previously developed for the East Fork of the Carson River will be extended to include both the East and West Forks down to the East Fork by Gardnerville and Woodfords streamflow gages, respectively. (Figure 1). The integrated Groundwater Surface water FLOW model, GSFLOW, will be used to simultaneously simulate watershed runoff, streamflow, and groundwater flow (Markstrom et al., 2008).

Simulated streamflow draining the upper catchment will be used to specify streamflow entering the Carson Valley and Middle Carson River regions of the river through modification of the appropriate model input files. In this way, a sense of the impact future climate may have on downstream water users is gained. Future projections of streamflow in the middle and lower sections of the Carson River will be explored by taking the simulated streamflow at the outlet of the Carson Valley Model as an input to the Middle Carson River model. These models also serve as a necessary platform for exploring how

anticipated "calls" on the river may impact junior water right holders. Precipitation and temperature data sets required by GSFLOW will come from the new CMIP5 climate projections (Taylor et al., 2012).

Project Benefits

The proposed project will be consistent with the Carson River Stewardship Plan and points 1, 5, and 6 of this funding request. Specifically, this project will provide regional benefits within the Carson River Watershed by providing projections of streamflow in the Carson River for the period 2014-2099 that can be used for water resources planning and management. In light of strong evidence that changes in the timing of the snowmelt pulse will result in lower flows during critical periods of the year (Huntington and Niswonger, 2012), estimates of future streamflow in the Carson River will be especially useful to water managers and stakeholders. This project will improve administration and management of river and stream systems by providing estimates of future stream and river conditions that can be used for making future decisions regarding water use and stream restoration in the basin.

Streamflow is a key indicator of ecosystem health and the model being developed for this project would provide streamflow estimates for all of the small streams in the upper Catchment and the main stem of the Carson River for periods of low and high flow. This project will assist water users and/or the general public in understanding current water issues by bringing attention to the potential harmful effects that increased atmospheric temperatures will have on water resources in the region.

Simulated streamflow in the Caron River will reflect the combined effects of natural climate variability and long-term trends in temperature. Thus, these results will be useful for considering how earlier snowmelt runoff combined with droughts will effect water availability in the Carson River basin. Furthermore, the development of a GSFLOW model of the upper Catchment of the Carson River will be a useful next step toward modeling the entire Carson River basin by leveraging pre-existing models developed by the USGS (Jeton et al., 1996; Yager et al., 2012 and Morway et al., in prep.).

Total Estimated Project Cost: $100,000

Amount Requested from CWSD: $50,000

Depending on availability, federal matching funds for this project could be provided by the Federal-State Cooperative Program.

References

Dettinger, M.D.; Cayan, D.R.; Meyer, M.K.; Jeton, A., 2004, Simulated hydrologic responses to climate variations and change in the Merced, Carson, and American River basins, Sierra Nevada, California, 1900-2099, Climatic Change, 62: 283 – 317.

Huntington, J. L., & Niswonger, R. G. (2010, December). Climate Change Impacts to Watershed Hydrology using an Integrated Hydrologic Model. In AGU Fall Meeting Abstracts (Vol. 1, p. 04).

Huntington, J. L., & Niswonger, R. G., 2012, Role of surface-water and groundwater interactions on projected summertime streamflow in snow dominated regions: An integrated modeling approach. Water Resources Research, 48(11).

Leton. A.E.: Dettinger, M.D.; Smith, J.L., 1996, Potential effects of climate change on streamflow, eastern and western slopes of the Sierra Nevada. California and Nevada. USGS Water-Resources Investigations Report: 95-4260.

Markstrom. S.L.. Niswonger, R.G., Regan, R.S., Prudic, D.E., and Barlow, P.M., 2008, GSFLOW—Coupled ground-water and surface-water flow model based on the integration of the Precipitation-Runoff Modeling System (PRMS) and the Modular Ground-Water Flow Model (MODFLOW-2005): U.S. Geological Survey Techniques and Methods 6-D1. 240 p.

Morway, E. D., Buto, S.G., Niswonger, R. G., Huntington, J.H. in prep., Calibration of a Flow Model for Appraisal of Present and Future Pumping Effects in the Middle Carson River Basin, Eagle, Dayton, and Churchill Valleys, West-Central Nevada.

Maurer. D.K.. 2011. Geologic framework and hydrogeology of the middle Carson River Basin, Eagle, Dayton. and Churchill Valleys, West-Central Nevada: U.S. Geological Survey Scientific Investigations Report 2011–5055, 62 p.

Stewart. I. T.. Cayan, D. R., & Dettinger, M. D., 2005, Changes toward earlier streamflow timing across western North America. Journal of Climate, 18(8), 1136-1155.

Taylor, K. E., Stouffer, R. J., & Meehl, G. A., 2012, An overview of CMIP5 and the experiment design. Bulletin of the American Meteorological Society, 93(4), 485.

Yager. R.M. Maurer, D.K. and C.J. Mayers, 2012, Assessing Potential Effects of Changes in Water Use With a Numerical Groundwater-Flow Model of Carson Valley. Douglas County. Nevada. and Alpine County. California.

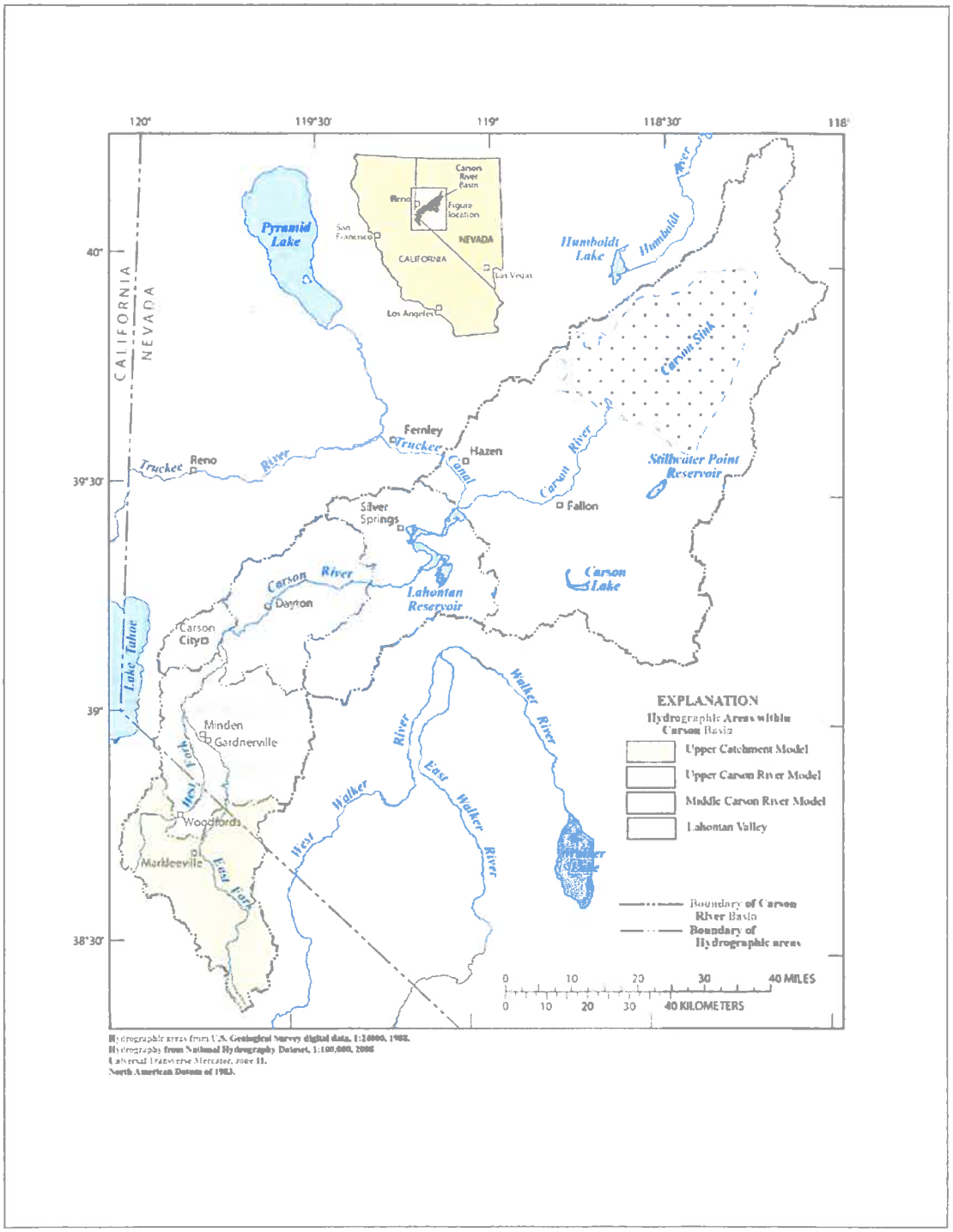


Figure 1: Map of the Carson River Basin showing the model domains for the upper catchment, upper Carson River, and middle Carson River. Modified from Maurer et al., 2011.

Signed: Eric D Morway

Name: Eric D. Morway

Title: Hydrologist (Modeler)

Date: 2/10/14

CARSON WATER SUBCONSERVANCY DISTRICT
REQUEST FOR FUNDING

APPLICANT: Erik Nilssen
Name
1594 Esmeralda Ave (P.O. Box 218)
Address
Minden | Douglas | NV | 89423
City | County | State | Zip Code
enilssen@co.douglas.nv.us | (775-782-9063)
Email | Telephone #

APPLICANT'S AGENT (If different from Applicant):

Name

Address

City | County | State | Zip Code

Email | Telephone #

PROJECT NAME: East Fork Channel Restoration and Irrigation Improvements

PROJECT LOCATION/ADDRESS: Northeast Corner of T 12N R20E Section 15
2,700 feet south of the Riverview Drive Bridge

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

As can be seen on the attached Exhibit A, the East Fork of the Carson River has migrated from its historic channel to the east. This meander has occurred just south of the diversion structure for the Rocky Slough and the Allerman/Virginia Canal Irrigation Canals. While it is expected that the channel in the East Fork will meander over time it is the location of this meander that is particularly worrisome. A low point exits which is labeled as "potential future channel avulsion" on Exhibit A. It is anticipated that during a future flood event he East Fork may cut a permanent channel at this location. If this channel continues to migrate, the diversion structure for the Rocky Slough and Allerman/Virginia Canal will be bypassed leaving hundreds of irrigation users without irrigation water.

The meander is causing erosion problems on BIA property and has the potential to cause damage to the Carson Valley Golf and Country Club. By restoring the channel to its historic location, future erosion can be mitigated and the golf course protected.

This project will be completed in two steps. The first step will involve the survey, design, and floodplain study as well as securing all required permits. The second step will be the actual construction. The funding request for this cycle is for design and permitting only.

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

The goal of the project will be to return the channel to its historic location, halt the east trending meander, and secure the approach of the East Fork to the diversion structure for the irrigation users of the Rocky Slough and Allerman/ Virginia Canal.

I believe that this project supports items 1, 3, and 4 of the Carson River Stewardship Plan. Item #1 regional benefits include continued irrigation to the Allerman & Virginia and Rocky Slough irrigation users. This includes a large amount of irrigated farmland. The project will eliminate a current meander that may alter the course of the river and increase flood potential downstream to major commercial facility (Wal-Mart) and the Carson Valley Medical Center.

TOTAL ESTIMATED PROJECT COST: $125,000 (Design Only)
AMOUNT REQUESTED FROM CWSD: $125,000

The future cost estimate for construction is estimated to be between 60k and 100k. A more precise construction estimate will be completed during the design phase

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.

The 125k estimate for design includes the survey, design, permitting, and LOMAR application. Douglas County will manage the project and offers in kind match only.

The Allerman/Virginia Irrigation Company recently reconstructed their irrigation structure and is over extended on their finances due to this construction. They are unable to offer a match this fiscal year, but may offer a match for construction.

The Washoe Tribe is unable to offer a cash match for this project, but they are supportive of the project.

ESTIMATED DATE PROJECT TO BEGIN: September 1, 2014

ESTIMATED TIME TO COMPLETE PROJECT: 9 months
(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.

No permits applications have been submitted. After design, but prior to construction the following permits are expected to be required

Army Corps of Engineers 404 Permit
Douglas County Site Improvement Permit
State of Nevada Working in the Waterways Permit
FEMA Floodplain CLMR

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

SIGNED: Erik Nilssen

NAME: Erik Nilssen

TITLE: County Engineer

DATE: 2-5-14

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

1994

(Resolution: ***1.5 Meter***)

(Source: US Geological Survey)

East Fork of the Carson River

Fairway Drive & 5th Green Court

2012

(Resolution: ***0.5 Meter***)

(Source: Google)

Exhibit A

N

0 3,500 7,000 ft

15 d

CARSON WATER SUBCONSERVANCY DISTRICT
REQUEST FOR FUNDING

APPLICANT: John Cobourn and Steve Lewis
Name
Cooperative Extension, 4955 Energy Way
Address
Reno, NV 89502
City County State Zip Code

APPLICANT'S AGENT:
Board of Regents of Nevada System of Higher Education
Name
Same
Address
City County State Zip Code

PROJECT NAME: Printing of Floodplain Protection Progress Map for the Carson River

PROJECT LOCATION: Douglas, Carson City and Lyon County Floodplains

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

This project will print out 500-1000 copies of the Floodplain Protection Progress Map, which shows graphically what parcels in the floodplain have been permanently protected from development. This will serve as an educational tool for the CRC and its partner agencies to show progress on Suggested Action-SA-7 "Retention of floodplain lands for flood storage," of the Carson River Watershed Regional Floodplain Management Plan (RFMP) of the CWSD. We will print enough copies to distribute to decision makers, county boards and commissions, elected officials, conservation organizations, conservation districts, the general public and other Carson River stakeholders. The UNCE peer-reviewed publication will feature three full color 11 X 17" maps which show Douglas, Carson City and Lyon County floodplains respectively. Protected parcels in the blue floodplain will be colored green.The maps are in draft form now, and have been enthusiastically received by the CRC River Corridor Working Group at its recent meeting on February 11, 2014. The front and back covers of this publication will explain the Main Message of the CRC, the basic goals of the RFMP, the floodplain goal of the Watershed Stewardship Plan, the functions and values of floodplains, and the programs currently active in creating parks, conservation easements and purchases of floodplains for open space in the watershed.

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

The benefits of this project will be to act as an evaluation tool or "report card" for a goal that has been set by the CRC and by the RFMP to keep floodplains undeveloped, so they provide their flood attenuation benefits for the people of Carson River towns, cities and ranches. It will also act as an educational tool, illustrating the nature and value of this goal as a community project that will benefit present and future generations. As climate change progresses, scientists warn that extreme weather events such as floods will become more frequent and intense. This makes floodplain protection all the more critical. This project will help educate community leaders in the public and private sectors about the importance and challenge which this goal represents. Every 3 to 5 years, as new data is made available, we will revise the publication and print again to show our progress toward our goal of retaining floodplain lands in their functional state.

TOTAL ESTIMATED PROJECT COST: ___$2500_____
AMOUNT REQUESTED FROM CWSD: ____$500_____

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.

Several members of the CRC have already spent a great deal of time working on the development of these maps and this publication. We have received information on protected parcels from Eric Neilson and Mimi Moss of Douglas County, Ann Bollinger and Juan Guzman of Carson City, Rob Loveberg of Lyon County, Duane Petite of The Nature Conservancy, and Dominique Etchegoyen of Legacy Land and Water. Eric Schmitt, GIS specialist for Douglas County has already spent many hours developing the maps, and Steve Lewis and John Cobourn of UNCE continue to spend many hours coordinating the collaborative effort to produce this publication. We estimate the value of the time already donated to this project to be over $2000.

ESTIMATED DATE PROJECT TO BEGIN: __March 15, 2014_____

ESTIMATED TIME TO COMPLETE PROJECT: __July 30, 2014_____

REQUIRED APPROVALS: List all permits, licenses and approvals, if any, that are required to complete the project. Provide the current status of each approval required. If approval has not been requested or is in progress, provide the estimated date on which approval can be expected. Additional sheets may be attached.

No permits or licenses are needed. We will put the map publication out to formal peer review during the spring of 2014. CWSD and other partner agencies will be able to comment and suggest revisions. After revisions are made and approved by UNCE, the publication will be ready to print.

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

Please see attached DRAFT version of the Floodplain Protection Map. The publication will show landmarks such as roads and neighborhoods, and the maps will be enlarged to show more detail.

SIGNED: John Coboun
NAME: JOHN COBOURN
TITLE: SPECIALIST, UNCE
DATE: FEBRUARY 10, 2014

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

Hi Ed,

Here is a short write-up on the Costco connection in which we had requested $180K in regional funding. We are advertising this project for bid next week. Let me know if you would like further.

Project Explanation

The Costco Connection Project will mitigate the issues created by the current dead-end layout. This is accomplished by providing a second water supply interconnection between Carson City and Douglas County, which will ultimately result in a more robust, higher capacity water system in both counties. The Costco Connection Project is a multiphase project. The Phase One of the project entails construction of a pipeline which will connect the water main in Old Clear Creek Road in Carson City to a Douglas County water main in Vista Grande Blvd. Because Douglas Counties system operates at higher pressures, a pressure regulator will be installed at the intersection of Vista Grande Blvd. and Old Clear Creek Road, allowing the systems to function properly. This phase of the project will allow the Old Clear Creek Road area to be supplied with water from Douglas County in the event that the supply from the east is disconnected due to system maintenance or failure. Phase One of this project will also allow the Douglas County system to augment the Carson City system to meet the higher flow demands experienced during a fire suppression operation.

Phase Two of this project involves the construction of a water main between Voltaire Tank in Voltaire Canyon and the intersection of Old Clear Creek Road and Vista Grande Blvd, as well as the addition of additional pressure regulators. This connection would allow the Carson City system to supply the Topsy Lane area should the need arise. This two way transfer ability would increase the robustness of both systems.

Conclusion

The Costco Connection Project will mitigate the issues resulting from limited mains supplying water to Old Clear Creek Road. This is accomplished by providing a secondary water supply to the area via an interconnection between Carson City and Douglas County, which will result in a more robust, higher capacity water system in both counties.

Darren