



# **CRADLEBAUGH BRIDGE STREAMBANK RESTORATION**

CARSON VALLEY  
CONSERVATION DISTRICT





## BEFORE



The stream bank has eroded due to the high water levels of the past years and has left a stretch of 600' with a 10'-15' vertical bank in its wake. This project was designed to minimize erosion, improve water quality, re-establish desirable vegetation, and improve river function within the project reach.









## TEAMWORK

A team of dedicated heavy equipment operators, this district's bioengineering crew, and staff worked together to complete this project.





# BEST MANAGEMENT PRACTICES

- Dust Control
- Fencing around sensitive resources
- Working in the channel during driest period
- Drill seeding disturbed areas
- Coir Fabric Mats & Logs
- Silt fencing & filtration waddles
- De-watering





# DURING CONSTRUCTION

This project relies upon the success of structural based treatment, streambank shaping, as well as plant based treatments.

CARSON VALLEY CONSERVATION DISTRICT









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# DURING CONSTRUCTION

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# BIOENGINEERING

- Stone Toe Trench
- Willow Poles
- Willow Fascines
- Willow Bundles
- Streambank Sloping
- Seeding
- Willow Stakes
- Coir Fabric Mats & Logs
- Live Plants







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# PROJECT QUANTITIES

CARSON VALLEY CONSERVATION DISTRICT

- Native soil materials cut and filled cut materials = 2,232 CY fill materials = 1,644
- 1152 CY of net fill exported materials removed to mound house
- Upstream refusal trench installed
- 500' of rock toe trench installed
- 1006 CY of class 300 through class 700 rocks placed
- Two swales installed and shaped
- 1000' of 9.6' COIR fabric installed
- 1000' of 6.6' COIR fabric installed
- 1000' of willow mats installed
- 75' of 9.6' COIR fabric installed
- 575' of 6.6' COIR fabric installed
- 1000' of willow mats to installed
- 500' @ 4 willow & bio fascines installed
- Approximately 2500 willow poles installed
- 7,723 Coyote Willows
- 10 Yellow Willows
- 8 Golden Willows
- 16 Red Twig Dogwood
- 13 Wild Rose
- 7 Fremont Cottonwoods
- 20 Basin Wildrye
- 13 Creeping Wildrye
- 10 Western Wheatgrass
- 2 acres of upland floodplain drill seeded
- 1 acre of riverbank broadcast seeded



# ANNUAL MONITORING

Annual photo monitoring using GPS  
photo way-points.















NEVADA DIVISION OF  
**ENVIRONMENTAL  
PROTECTION**



## PROJECT PARTNERS

- CWSD
- CTWCD
- NDEP
- NDOW
- CVCD





# THANK YOU

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