

Earthquake:

- Clark County Microzonation project – link:
http://crack.seismo.unr.edu/ftp/pub/louie/parcel/Clark_report_final.pdf
- Multihazard project completion reports - link:
http://dem.nv.gov/DEM/Division_News/
- The Great Nevada ShakeOut; The main goal of the ShakeOut is to get Nevadans prepared for major earthquakes - an opportunity to learn what to do before, during, and after an earthquake. Participants are urged to visit http://www.earthquakecountry.info/roots/seven_steps.html for tips on how to prepare, protect, and recover from a damaging earthquake.
<http://shakeout.org/nevada/>
- Preliminary Assessment of Potentially Unreinforced Masonry Buildings in Nevada, 2012, by Jonathan G. Price, Gary Johnson, Craig M. dePolo, Wayne Carlson, NBMG Report 54.

This report is a preliminary assessment of potentially unreinforced masonry buildings (URMs) in Nevada. These are the buildings that are highly susceptible to collapse or partial collapse during earthquakes and are therefore of concern for life safety and economic recovery. Data are compiled from information provided by county assessors' offices and the Public Works Division of the State of Nevada with assumptions that potential URMs are those brick, stone, or cement-block masonry buildings that were constructed before 1974. There are tens of thousands of potential URMs in Nevada. They are located in every county and nearly every community. Many URMs are historically significant, and many are concentrated in downtown business districts and along thoroughfares. It is important to note that not all Nevada URMs have been identified in this study, and some structures identified as potential URMs may not be. Risks from URMs can be reduced by removing the buildings, seismic rehabilitating them, and minimizing human occupancy.

The report is available as an online document free on the web at the following online link:
<http://www.nbmng.unr.edu/dox/r54.pdf>

FLOOD

*(*Note: since the submission of this report, the definition of Repetitive Loss and Severe Repetitive Loss Properties has changed)*

CARSON WATER SUBCONSERVANCY DISTRICT
ACTIVITIES AND ACCOMPLISHMENTS
FOR 2012

1. Continued to coordinate the Carson River Coalition (CRC) which met several times during 2012, as well as various working groups which met regularly addressing community outreach and education, river corridor, noxious weeds, aquatic invasive species, and water quality issues.
2. Grants applied for and awarded in 2012 (and provided project management for):
 - Floodplain Modeling and Mapping for the Carson River (Douglas County reach) \$375,000 FEMA funds
3. Continued to administer grant funds and provide project management for:
 - Fire fuels reduction and weed abatement projects (\$628,000) from the American Recovery and Reinvestment Act of 2009 (ARRA) as a result of the partnerships of the CRC. In 2012, CWSD distributed \$74,520 to various weed management and conservation districts throughout the entire watershed.
 - "Explore Your Watershed" Conservation Tours grant.
 - Environmental Education Program
 - Carson River Coalition (CRC) Coordinator
 - Floodplain modeling and mapping for the Carson River in the Dayton and Carson City areas - FEMA MAS 1 and 2
 - Comprehensive Regional Water Management Plan
 - Clear Creek Watershed Council Program
 - Light Detection and Ranging (LiDAR) data collection for Carson Valley
 - Best Management Practices (BMP) investigating the feasibility of a small residential BMP program
4. Provided funding for:
 - Carson River Workdays - "Conserve Carson River Workdays"
 - Alpine Watershed Group Projects
 - Carson Valley Stream Bank Restoration Project.
 - Streambank repairs located below Lloyd's Bridge.
 - Douglas County Regional Pipeline Debt Service
 - Carson City Regional Pipeline Debt Service
 - Carson City's Waterfall Fire Watershed Improvements #4

- Lyon County Ramsey Canyon Flood Control Study
 - River Restoration and Floodplain Conservation Projects in Dayton Valley
 - Churchill County Drainage Study
 - Churchill County streambank restoration and channel clearance projects
 - Watershed-Wide Water Conservation Program
 - Noxious weed treatment throughout the watershed
 - Invasive Species Program including aquatic invasives education/outreach.
5. Provided funding for the following USGS projects: :
 - Eleven Streamflow Gages - ongoing maintenance
 - Douglas County Water Level Collection
 - Dayton Valley Groundwater Level and Nitrate Study
 - East Fork Algae Study
 - Churchill County Groundwater Level and Water Quality Study.
 6. The General Manager and Watershed Coordinator gave presentations and provided display booths at various conferences and workshops on watershed issues.
 7. The General Manager gave an update to each of the county and water purveyor boards on the regional water system and watershed-wide programs and projects.
 8. Developed quarterly newsletters that were sent out to about 1,000 individuals watershed-wide.
 9. Provided facilitation for several workdays and school outreach events.
 10. Provided support for Alpine and Clear Creek Watershed Coordinators. A new Clear Creek Watershed coordination was hired.
 11. Continued FEMA Mapping Assessment Study (MAS) Phase 2 of modeling/mapping to the Carson City/Douglas County line – FEMA funds.
 12. Assisted in the coordination of the Riparian Areas Video Contest in conjunction with the CRC Education Working Group and the NEMO Program.
 13. Helped organize and participated in the 8th Annual Snapshot Day on the Carson River.
 14. Assisted Carson City and Douglas County with National Flood Insurance Program (NFIP) Community Rating System Reports.
 15. Provided report on regional outreach activities to Douglas County for their annual stormwater reporting.

16. Maintained the Watershed Learning Center at the Children's Museum in conjunction with the CRC Education Working Group.
17. Continued to work with NDEP and USGS for field work associated with the East Fork Algae Study.
18. Developed floodplain and flood community awareness display for Carson City public library which may be used at other watershed libraries and government offices.
19. Developed noxious weed identification page for CWSD website
20. Organized and facilitated the 2012 Watershed Forum discussing floodplain management issues, sustainable agriculture, open space protection, noxious weed management, water quality, and water quantity issues.
21. Continued gathering data and working with stakeholders for update of Adaptive Stewardship Plan.
22. Developed the Interim Regional Water Conservation Plan.
23. Updated the Water Rate Study for all the water purveyors in the Carson River Watershed.
24. Assisted Alpine County with its Groundwater Level Monitoring Program.
25. Conducted the annual "Get on the Bus " Watershed Tour of Alpine through Churchill Counties.
26. LiDAR data was collected for the Carson Valley area in late September.

CARSON WATER SUBCONSERVANCY DISTRICT
ACTIVITIES AND ACCOMPLISHMENTS
FOR 2011

1. Continued to coordinate the Carson River Coalition (CRC) which met several times during 2011, as well as various working groups which met monthly addressing community outreach and education, river corridor, noxious weeds, aquatic invasive species, and water quality issues.
2. Grants applied for and awarded in 2011 (and provided project management for):
 - Carson River Coalition Coordinator - \$105,113 (3 years) NDEP 319 funds

- Environmental Education Coordinator - \$97,774 (2 years) NDEP 319 funds
 - Carson River Conservation Tours \$23,653 (1.5 years) NDEP 319 funds
 - East Fork Algae Study \$43,300 (2 years) NDEP 208 funds
 - Floodplain Modeling and Mapping for the Carson River (Carson City reach) \$300,000 (for 2011/12) FEMA funds
3. Continued to administer grant funds and provide project management for:
- Fire fuels reduction and weed abatement projects (\$628,000) from the American Recovery and Reinvestment Act of 2009 (ARRA) as a result of the partnerships of the CRC. In 2011, CWSD distributed \$58,770 to various weed management and conservation districts throughout the entire watershed.
 - Environmental Education Program
 - Carson River Coalition (CRC) Coordinator
 - Floodplain modeling and mapping for the Carson River in the Dayton area
 - Development of the Hydraulic Modeling and Floodplain Mapping Guidelines for the Carson River upstream of Lahontan Reservoir
 - Carson City's pilot Residential Best Management Practices (BMP) Program
 - Comprehensive Regional Water Management Plan
 - Middle Carson River Habitat Conservation Plan
 - Clear Creek Watershed Council Program
4. Provided funding for:
- Carson River Workdays - "Conserve Carson River Workdays"
 - Alpine Watershed Group Projects
 - Carson Valley Stream Bank Restoration Project.
 - Douglas County Land Conservation Program
 - Douglas County Regional Pipeline Debt Service
 - Infiltration Characteristics in the Pine Nut Alluvial Fans Study
 - Carson City Regional Pipeline Debt Service
 - Carson City Wetland Enhancement Project (Fulstone)
 - Vehicle Removal Out of the Carson River Canyon.
 - Mosquito Abatement Along the Carson River in Carson City
 - Lyon County Regional Water Monitoring and Disinfection Project
 - Lyon County Ramsey Canyon Flood Control Study
 - Rolling A River Restoration and Floodplain Conservation Project in Dayton Valley
 - Churchill County Drainage Study
 - Watershed-Wide Water Conservation Program
 - State Engineer Groundwater Pumping Inventory
 - Noxious weed treatment throughout the watershed

5. Provided funding for the following USGS projects: :
 - Eleven Streamflow Gages - ongoing maintenance
 - Douglas County Water Level Collection
 - Carson Valley Groundwater Model
 - Dayton Valley Groundwater Level and Nitrate Study
 - Carson Valley Groundwater Nitrate Study
 - Middle Carson Groundwater Model
6. The General Manager and Watershed Program Manager gave presentations and provided display booths at various conferences and workshops on watershed issues.
7. The General Manager gave an update to each of the county and water purveyor boards on the regional water system and watershed-wide programs and projects.
8. Developed quarterly newsletters that were sent out to 550 individuals watershed-wide.
9. Provided facilitation for several workdays and school outreach events.
10. Provided support for Alpine and Clear Creek Watershed Coordinators. The CWSD Watershed Coordinator took over Clear Creek Watershed coordination function upon retirement of former coordinator.
11. Upon Genie Azad's retirement from the Watershed Program Manager position, revamped position goals and duties and hired Brenda Hunt as CWSD Watershed Coordinator.
12. Staff conducted residential irrigation surveys to help homeowners evaluate their irrigation systems for possible water conservation measures.
13. Continued to provide project management for Carson Clear Water Revival Program. Second demonstration project was completed.
14. Worked with CRC River Corridor Working Group and consultants to investigate the value of floodplain ecosystem services.
15. Completed the Dayton Valley Floodplain Physical Map Revision and began Phase 2 of modeling/mapping to the Carson City/Douglas County line – FEMA funds.
16. Assisted in the coordination of the Riparian Areas Video Contest in conjunction with the CRC Education Working Group and the NEMO Program.
17. Helped organize and participated in the Sixth Annual Snapshot Day on the Carson River.

18. Assisted Carson City and Douglas County with National Flood Insurance Program (NFIP) Community Rating System Reports.
19. Provided report on regional outreach activities to Douglas County for their annual stormwater reporting.
20. Maintained the Watershed Learning Center at the Children's Museum in conjunction with the CRC Education Working Group.
21. Continued to work with NDEP and USGS for field work associated with the East Fork Algae Study.
22. Developed floodplain and flood community awareness display for Carson City public library which may be used at other watershed libraries and government offices.
23. Developed noxious weed identification page for CWSD website
24. Organized and facilitated the 2011 Watershed Forum discussing flooding issues, sustainable agriculture, organic farming, and noxious weed management.
25. Continued to facilitate the Hydrology and Hydraulics Flood Committee.
26. Continued gathering data and working with stakeholders for update of Adaptive Stewardship Plan.
27. Developed the Interim Regional Water Conservation Plan.
28. Updated the Water Rate Study for all the water purveyors in the Carson River Watershed.
29. Assisted Alpine County with its Groundwater Level Monitoring Program.

CARSON WATER SUBCONSERVANCY DISTRICT
ACTIVITIES AND ACCOMPLISHMENTS
FOR 2010

1. Continued to coordinate the Carson River Coalition (CRC) which met quarterly throughout 2010, as well as various working groups which met monthly addressing community outreach and education, river corridor, noxious weeds, aquatic invasive species, and water quality issues.

2. Grants applied for and awarded in 2010 (and provide project management for):

- Carson River Coalition Coordinator - \$54,270 (2 years) NDEP 319 funds
- Environmental Education Coordinator - \$42,080 (2 years) NDEP 319 funds
- Middle Carson River Habitat Conservation Plan - \$150,000 (2 years) Q1 funds
- Carson River Conservation Tours \$19,874 (1.5 years) NDEP 319 funds
- East Fork Algae Study \$43,221 (2 years) NDEP 208 funds
- Comprehensive Regional Water Management Plan \$50,000 (2 years) BOR funds
- Clear Creek Watershed Council Coordinator \$45,958 (3 years) – has not been awarded yet.
- Floodplain Modeling and Mapping \$300,000 (for 2011) FEMA

3. Continued to administer grant funds and provide project management for:

- Fire fuels reduction and weed abatement projects (\$628,000) from the American Recovery and Reinvestment Act of 2009 (ARRA) as a result of the partnerships of the CRC. In 2010, CWSD distributed \$269,000 to various weed management and conservation districts throughout the entire watershed.
- Environmental Education Program
- Carson River Coalition (CRC) Coordinator
- Floodplain modeling and mapping \$300,000 FEMA
- Floodplain modeling assistance \$50,000 (2 year) NDEP 319
- Carson City pilot Residential Best Management Practices (BMP) Program called “Carson Clear Water Revival” \$28,000 (1 year)
- Comprehensive Regional Water Management \$50,000 (1 year) BOR

4. Provided funding for:

- Rolling A River Restoration and Floodplain Conservation Project in Dayton Valley
- Carson River Workdays
- Carson Valley Golf Course River Restoration Project.
- Carson City Fuji Park Fish Pond BMP and Water Quality Monitoring Program
- Douglas County Land Conservation Program
- Churchill County Drainage Study
- Watershed-Wide Water Conservation Program
- Alpine Watershed Group’s Watershed Coordinator
- State Engineer Groundwater Pumping Inventory

5. Provided funding for the following USGS projects: :

- Eleven Streamflow Gages - ongoing maintenance

- Douglas County Water Level Collection
 - Carson Valley Groundwater Model
 - Dayton Valley Groundwater Level and Nitrate Study
 - Carson Valley Nitrate Study
 - Middle Carson Groundwater Model
6. The General Manager and Watershed Program Manager gave presentations at various conferences and workshops on watershed issues.
 7. The General Manager and Watershed Program Manager gave an update to each of the county and water purveyor boards on the regional water system and watershed-wide programs and projects.
 8. Developed quarterly newsletters that were sent out to 550 individuals watershed-wide.
 9. Provided facilitation for several workdays and school outreach events.
 10. Provided support for Alpine and Clear Creek Watershed Coordinators.
 11. The Senior Clerk became a Certified Water Use Efficiency Practitioner through the “American Water Works Association” Program.
 12. Staff conducted residential irrigation surveys to help homeowners evaluate their irrigation systems for possible water conservation measures.
 13. Continued to provide project management for Carson Clear Water Revival Program. First demonstration project was completed.
 14. Worked with CRC River Corridor Working Group and consultants to investigate the value of floodplain ecosystem services.
 15. Completed validation of the 2004 LiDAR dataset to ensure that the data met FEMA's requirements for use in floodplain mapping.
 16. Hired HDR Engineering for Dayton Valley Floodplain Physical Map Revision (modeling and re-mapping) – FEMA funds.
 17. Coordinated the Riparian Areas Video Contest in conjunction with the CRC Education Working Group and the NEMO Program.
 18. Helped organize and participated in the Fifth Annual Snapshot Day on the Carson River.

19. Assisted Carson City and Douglas County with National Flood Insurance Program (NFIP) Community Rating System Reports.
 20. Provided report on regional outreach activities to Douglas County for their annual stormwater reporting.
 21. Maintained the Watershed Learning Center at the Children's Museum in conjunction with the CRC Education Working Group.
 22. Worked with NDEP and USGS for field work associated with the East Fork Algae Study.
 23. Began development of floodplain and flood community awareness campaigns. Posted 100 flood awareness posters throughout watershed and distributed flyers regarding being flood prepared to all fifth grade classes.
 24. Developed flood safety page for CWSD website
 25. Organized and facilitated the 2010 Annual Noxious Weed Management Forum
 26. Organized and facilitated Hydrology and Hydraulics Flood Committee
 27. Continued gathering data and working with stakeholders for update of Adaptive Stewardship Plan
 28. Continued implementation of Regional Floodplain Management Plan
- For more information, please see the Carson Water Subconservancy District's website at: <http://www.cwsd.org/newcms/Userpages/index.aspx>
Projects page: <http://www.cwsd.org/newcms/userpages/Project.aspx>

Truckee River Flood Management Authority **Accomplishments as of April 2013**

- Acquired Twelve properties (126 acres) located in the FEMA Flood Zone & Flood Way
- Relocated over 40 tenants from flood project owned properties
- ***Completed demolition on six repetitive loss structures**
- *Worked with the City of Reno on the Virginia Street Bridge public visioning workshops, bridge type selection and design.
- SB 175 was signed by Governor Gibbons on June 8, 2009. SB 175 amends existing law to make sure we can build and operate the Truckee River Flood Management Project in the way our community has envisioned it.

- *AB 54 was signed by the Governor May 29, 2009. The bill authorizes the County to establish financing programs to assist individual homeowners and businesses with flood proofing and elevation of homes, and with water and wastewater hookups
- Received \$4.75 M in funding from the 2009 Nevada Legislature for restoration projects
- Produced an annual Flood Awareness Campaign to reach out to the community regarding flood safety, awareness and preparedness
- Transferred the Flood Warning System from Washoe County Water Resources Dept. to the Flood Project
- Formed the Truckee River Flood Management Authority in 2012 through a Joint Powers Authority with Reno, Sparks and Washoe County
- Completed the first Ecosystem Restoration TRAction Project at Lockwood
- Completed construction of the Reno-Sparks Indian Colony Levee/Floodwall (\$5.8M). Won two awards for project – American Public Works Association – Project of the Year for the Environment for the State of Nevada and the American Society of Civil Engineers Project of the Year for the Environment for Northern Nevada
- Completed construction of the 102 Ranch Ecosystem Restoration TRAction project
- Completed construction of the Lower Mustang Ranch Ecosystem Restoration TRAction project
- Tracy Power Plant Ecosystem Restoration Project set to begin construction in August 2013
- Completed Phase I of the Regional Hydrologic Model – Sun Valley Pilot Project.
- Currently in Phase II of the Regional Hydrologic Community model
- Assisted City of Reno and Washoe County with the adoption of the community-wide Flood Hazard Mitigation Ordinance

For more projects of Truckee River Flood Management Authority: see website at this link: <http://truckeeflood.us/>

REGIONAL FLOOD CONTROL DISTRICT



Projects Completed 2010 to 2013

44 projects completed totaling approximately \$225.3 million

Construction Costs include construction and construction management

Clark County

Annie Oakley Drive at Rawhide Channel Storm Drain

This project consists of local drainage improvements with the channelizing of the dirt shoulder along the south side of Rawhide Street. This project will convey flows entering the southeast corner of the intersection into an existing 36 inch reinforced concrete pipe to a proposed field inlet on the southeast corner of Annie Oakley Drive and Rawhide Street.

Construction Cost: \$58,000

Estimated Completion Date: February 2013

Blue Diamond Wash Wigwam, UPRR to Rainbow Blvd

Construction of approximately 1.3 miles of concrete box culvert within Wigwam Avenue between Rainbow Boulevard and the Union Pacific Railroad, east of Jones Boulevard.

Construction Cost: \$5.6 million

Completion Date: January 2011

Duck Creek, Mountain Vista Street to Green Valley Parkway

The improvements to this segment of Duck Creek included 3,900 feet of 60 foot wide rectangular concrete channel with flows ranging from 6,074 cfs to 6,195 cfs.

Construction Cost: \$8.4 million (RFCD share)

Completion Date: February 2012

Duck Creek, Railroad Detention Basin

This project includes an 868 acre-foot detention basin located just north of Cactus Avenue between Rainbow Boulevard and the Union Pacific Railroad along with approximately 4,000 feet of concrete collector channel.

Construction Cost: \$13.5 million (RFCD Share)

Completion Date: February 2011

Duck Creek, Robindale to I-215

(CLA14W11) DCWA 0967

Improvements included construction of approximately 650 feet of concrete channel bottom, and removal and replacement of failing concrete channel slope paving.

Construction Cost: \$846,000

Completion Date: February 2012

Flamingo Diversion – South Buffalo Branch, Flamingo Wash to Sunset Rd

This project consists of 1.6 miles of reinforced concrete box and pipe in Buffalo Road from Sunset Road to the existing Flamingo Diversion Channel.

Construction Cost: \$7.6 million

Completion Date: March 2013

Flamingo Wash, Desert Inn to Eastern Avenue

Project includes channel improvements for the Flamingo Wash between Eastern Avenue and Desert Inn Road. The improvements will stabilize the banks of 4,900 feet of the wash. A segment of the Flamingo Arroyo Trail will be constructed with the project. The trail enhancements will be funded with money from the Southern Nevada Public Lands Management Act (SNPLMA).

Construction Cost: \$7 million (RFCD Share)

Completion Date: December 2010

Flamingo Wash, Nellis Blvd to I-515

These improvements included 1.2 miles of rectangular concrete lined channel along the Flamingo Wash between Nellis Blvd and I-515.

Construction Cost: \$11.2 million

Completion Date: February 2012

Las Vegas Boulevard / Serene Avenue Storm Drain

Construction of a concrete pipe storm drain within Serene Avenue between I-15 and Las Vegas Boulevard.

Construction Cost: \$164,000 (RFCD Share)

Completion Date: June 2011

Lower Blue Diamond Detention Basin

Construction includes a 461 acre-foot detention basin and associated drainage facilities near Windmill Lane and the Union Pacific Railroad. Also included in the project is the Robindale inflow structure and collection facilities.

Construction Cost: \$2.8 million

Completion Date: January 2011

Lower Flamingo Detention Basin

This project included a 222 acre-foot detention basin located at the intersection of Tropicana and Decatur. Stormwater flow rate into the basin is 3,101 cfs and flow out is 909 cfs, a reduction of 71 percent. The basin will also include multiuse park facilities funded by the Southern Nevada Public Lands Management Act for an additional \$10.8 million.

Construction Cost: \$3.4 million (RFCD share)

Completion Date: July 2012

Olive Street Storm Drain, US-95 to Palm St.

This project consists of local drainage improvements and approximately 2,540 feet of reinforced concrete box and pipe in Olive Street between US 95 and Palm Street. This storm drain will connect to the existing Colorado Avenue System storm drain.

Construction Cost: \$818,000 (RFCD share)

Completion Date: February 2013

Sunrise Ave Storm Drain, Fogg St to Clayton St (local drainage)

This is a local drainage project to minimize flooding of Sunrise Avenue between Clayton Street and Lailani Street. It includes one drop inlet and 1940 ft of 24 inch reinforced concrete pipe.

Construction Cost: \$177,000 (RFCD Share)

Completion Date: July 2011

Tropicana North Branch Detention Basin

Construction of a 54 acre-foot detention basin just north of Hacienda Avenue between Arville Street and the Union Pacific Railroad. Approximately 700 feet of concrete collector channel is also included in the project.

Construction Cost: \$1 million (RFCD Share)

Completion Date: July 2011

Tunis Ave and Karvel St Storm Drain (local drainage)

This local drainage project will alleviate flooding in the intersection of Karvel Street and Tunis Avenue. The project consists of a concrete open channel and earthen channel which will connect with Duck Creek Channel.

Construction Cost: \$182,400

Completion Date: June 2011

Twain at Pecos – McLeod Storm Drain

Local drainage improvements include a new storm drain system to connect to the existing 48 inch storm drain at Twain Avenue and head south along the original Mojave Road alignment then turning east on Twain Avenue to the Van Buskirk Channel on Pecos Road.

Construction Cost: \$555,000 (RFCD Share)

Completion Date: October 2010

City of Las Vegas

Alta Parallel

Construction includes 3,600 feet of 6 foot by 4 foot to 7 foot by 6 foot box culvert and concrete channel, a 31 acre foot detention basin expansion as well as 1,400 feet of reinforced concrete pipe within Lorenzi between Alta and US-95.

Construction Cost: \$8.6 million

Completion Date: July 2010

Elkhorn Springs & Buffalo Storm Drain

This project includes the construction of a concrete pipe within Buffalo Drive from Farm Road south to the Elkhorn Springs Detention Basin.

Construction Cost: \$1.4 million

Completion Date: May 2011

Gilmore Ave – Decatur Blvd to Thom Blvd Storm Drain (local drainage)

This local drainage project consists of a 36-inch reinforced concrete pipe storm drain that will help reduce flooding in the neighborhood between Decatur Boulevard and Thom Boulevard along Gilmore Avenue.

Construction Cost: \$409,600 (RFCD Share)

Completion Date: May 2011

Gowan Outfall – Lone Mountain Branch (Rancho Dr to Decatur Blvd.)

This project consisted of almost two miles of reinforced concrete boxes ranging in size from 6 feet by 6 feet to 14 feet by 7 feet in Lone Mountain Road.

Construction Cost: \$10 million (RFCD Share)

Completion Date: June 2012

Grand Teton Overpass

Construction includes 2,400 feet of 10 foot by 5 foot box culvert over Grand Teton.

Construction Cost: \$1.9 million

Completion Date: April 2010

Horse Drive Interchange

Construction of approximately a mile of channel and storm drain facilities along the west side of US-95 north of Grand Teton Drive. This project is being constructed in conjunction with Nevada Department of Transportation's Horse Drive Interchange project.

Construction Cost: \$5 million (RFCD Share)

Completion Date: December 2010

Langtry Channel – Bonanza Rd to Washington Ave

The improvements consisted of lining 1,360 feet of existing walls and lining and/or replacing the existing invert slab with an 8-inch thick reinforced concrete lining along with an 18-inch reinforced concrete pipe beneath the new channel slab.

Construction Cost: \$1.2 million

Completion Date: November 2011

Las Vegas Wash – Decatur & Elkhorn, CC 215

This project included construction of nearly three miles of concrete box culvert in the northwest part of the Valley. The facility conveys flows from another facility at Elkhorn Road and Torrey Pines Drive east to Decatur Boulevard, then south to Centennial Parkway where the system connects into a facility at the Beltway.

Construction Cost: \$26.8 million (RFCD Share)

Completion Date: June 2012

Las Vegas Wash – Rainbow (Elkhorn Rd to Grand Teton Dr)

Construction includes 5,100 feet of 24 foot by 8 foot box culvert and concrete channel within Rainbow Boulevard between Elkhorn Road and Grand Teton Drive.

Construction Cost: \$7.9 million

Completion Date: March 2011

North and South Environmental Enhancement Areas – Floyd Lamb Park

This project included a 165 acre detention basin, a 50 acre detention basin and 1 mile of concrete pipe near Floyd Lamb Park. The enhancement areas are part of the Floyd Lamb Park Master Plan. Together the basins and park improvements include nearly 200 acres of passive recreational improvements, picnic areas and hiking trails.

Construction Cost: \$23.3 million (RFCD Share)

Completion Date: April 2012

Oakey Drain – Cahlan to Barnard

This project includes approximately 3,350 feet of reinforced concrete box and pipes, with associated lateral facilities, in Oakey Street extending from Cahlan Drive to Barnard Drive.

Construction Cost: \$5.5 million (RFCD share)

Completion Date: January 2013

Oakey – Meadows Storm Drain, Phase I

Construction of approximately 5,500 feet of concrete channel and box culvert extending along Valley View Boulevard from Charleston Boulevard to the Meadows Detention Basin.

Construction Cost: \$12.1 million

Completion Date: January 2011

Oakey Meadows Storm Drain – Phase 2A

This project included construction of 3,900 feet of underground storm drain in Charleston from Hinson Street west to Decatur Blvd.

Construction Cost: \$7.5 million

Completion Date: April 2012

Oakey Meadows Storm Drain – Phase 2B

This project includes construction of 2,000 ft of underground storm drain within Hinson Street from Charleston Blvd. to Del Rey Ave..

Construction Cost: \$1.8 million (RFCD Share)

Completion Date: March 2013

City of North Las Vegas

Las Vegas Wash – Las Vegas Boulevard to Cheyenne Avenue

The project involves construction of flood control facilities along the Las Vegas Wash between Las Vegas Boulevard and Cheyenne Ave, connecting to existing improvements at both locations. Facilities are designed to convey up to 8,065 cfs in a 100-year storm event. Rectangular channel sizes range from 70 feet wide by 8 feet deep to 90 feet wide by 9.5 feet deep.

Construction Cost: \$6.9 million (RFCD share)

Completion Date: April 2013

Simmons Street Drainage Improvements – Gowan Outfall

This project includes construction of confluence and transition structures and a bridge over Gowan Outfall Channel at Simmons Street near Red Coach Avenue.

Construction Cost: \$2.6 million (RFCD Share)

Completion Date: June 2011

Tropical Parkway Channel East

This project includes construction of approximately one mile of box culvert within Tropical Parkway from North 5th Street to the Upper Las Vegas Wash.

Construction Cost: \$6.9 million (RFCD Share)

Completion Date: May 2011

City of Henderson

C-1 Equestrian Tributary

The project includes 2,300 feet of concrete channel and an energy dissipater structure at the corner of Magic Way and Equestrian Drive. The project will reduce flows in the existing C-1 Channel by collecting and diverting flows into the existing Equestrian Detention Basin.

Construction Cost: \$2 million

Completion Date: July 2010

Equestrian Tributary – Phase I

The project includes 2,300 feet of concrete channel that begins at the Equestrian Detention Basin and runs parallel to Equestrian Drive.

Construction Cost: \$1.9 million

Completion Date: March 2010

MacDonald Ranch Channel

The project includes 2,400 feet of concrete channel between Arroyo Grande Boulevard and the 215.

Construction Cost: \$1.9 million

Completion Date: April 2010

Northeast C-1 Detention Basin and Outfall

The project includes 350 acre-foot detention basin near Magic Way with 1.5 miles of concrete channel and 1.2 miles of outfall pipe.

Construction Cost: \$12.9 million

Completion Date: March 2010

NV Energy Relocation Equestrian Tributary Phase I

This project includes the relocation of NV Energy lines and installation of reinforced concrete box (RCB) through the intersection of Equestrian Drive and Appaloosa Road.

Construction Cost: \$259,000

Completion Date: October 2012

Pittman Railroad East Conveyance

This project consists of a concrete box culvert located east of Arroyo Grande Boulevard between Union Pacific Railroad spur tracks and the Pittman Wash near I-215 and Stephanie Street. City of Henderson Parks and Recreation will build underground crossings below American Pacific Drive and the railroad and pave the access road for a trail.

Construction Cost: \$8.5 million (RFCD Share)

Completion Date: December 2010

Pittman Wash, UPRR to Santiago Phase I

The project includes modification to the spillway for Pitman Park Peaking Basin and reconstruction of the outfall pipe.

Construction Cost: \$260,000 (RFCD Share)

Completion Date: August 2012

City of Mesquite

Town Wash Conveyance, I-15 to Virgin River

Project included construction of approximately 1.1 miles of concrete channel along the Town Wash alignment from I-15 to the Virgin River.

Construction Costs: \$2.4 million (RFCD Share)

Completion Date: July 2011

City of Boulder City

Bootleg Canyon Detention Basin

This project included construction of a detention basin structure with 24-inch outfall pipe.

Construction Cost: \$383,100

Completion Date: February 2012

Yucca Debris Basin, Collection and Outfall

This project included construction of a 1,250 feet trapezoidal concrete channel and a sediment basin.

Construction Cost: \$1.7 million

Completion Date: February 2012

For more projects of the Clark County Regional Flood Control District see website at the following link:

<http://www.ccrfcd.org/>

Wildfire:

- Report to Nevada State Legislature-AB75; Fire-Fuels-Forest Restoration Activities and Accomplishment at Lake Tahoe – link: http://forestry.nv.gov/wp-content/uploads/2012/04/AB_75_report_2011.pdf
- Community Wildfire Protection Plan (CWPP) on-line: <http://www.livingwithfire.info/cwpp>
- Nevada’s Annual Wildland-Urban Interface (WUI) Fire Summit Meeting – link to website: <http://www.iafc.org/wui>

Summary of Round 12 Round 12 KyleCyn-LeeCyn Funding Requests and Rationale (end 2012)

Kyle Canyon and Lee Canyon:

Previous Funding: SNPLMA Round 8 and SNPLMA Round 10

Progress: Round 8 & 10 Funding: 84 properties treated and 90 tons of chipped materials sent to Moapa Paiute Indian Reservation for use as soil amendment. Many of the treated properties tie into the USDA USFS shaded fuel break. Two major curbside events, 16 educational and outreach events, participation by community members in the 2009 and 2010 Wildland Urban Interface (WUI) Summit. Events held during the 2009 and 2010 Nevada Wildfire Awareness Week. Three door to door outreach campaigns.

Round 12 Request: \$275,000

Deliverables: Treatment of 65 residential lots. Plan and execute one major curbside/outreach event, community participation in the 2011 WUI Summit event, and participation in a Nevada Wildfire Awareness Week event. Two door to door outreach campaigns.

Match: \$90,000 in-kind match

Biomass Utilization: Biomass generated will be sent to a recycling center for processing to be used as the carbon component in soil amendments. Biomass will also be used on site for erosion and weed control.

Cold Creek:

Previous Funding: SNPLMA Round 8 and SNPLMA Round 10

Progress: SNPLMA Round 8 & 10 Funding: 10 properties treated to date, one curbside event, four educational/outreach events, participation by community members in the 2009 and 2010 Nevada's WUI Summit. Events held during the 2009, 2010 Wildfire Awareness Week.

Round 12 Request: \$50,000

Deliverables: Treatment of 12 properties (1-and 2-acre lots). Plan and execute one major curbside/outreach event, community participation in the 2011 WUI Summit and participation in a Nevada Wildfire Awareness Week event.

Match: \$16,000 in-kind match

Biomass Utilization: Biomass generated will be sent to a recycling center for processing to be used as the carbon component in soil amendments. Biomass will also be used on site for erosion and weed control.

Mtn Springs continuation

Previous Funding: SNPLMA Round 8 and SNPLMA Round 10

Progress: SNPLMA Round 8 & 10 Funding: Four acres treated, one curbside event, four educational/outreach events, participation by community members in the 2009 and 2010 Nevada's WUI Summit. Events held during the 2009, 2010 Wildfire Awareness Week.

Round 12 Request : \$50,000

Deliverables: 12 properties (1-and 2-acre lots) Plan and execute one major curbside/outreach event, community participation in the 2011 WUI Summit and participation in a Nevada Wildfire Awareness Week event.

Match: \$12,000 in-kind match

Biomass Utilization: Biomass generated will be sent to a recycling center for processing to be used as the carbon component in soil amendments. Biomass will also be used on site for erosion and weed control.

Trout Canyon Continuation:

Previous Funding: SNPLMA Round 8 and SNPLMA Round 10

Progress: SNPLMA Round 8 & 10 Funding: Eight acres of steep slope private property treated to tie into USFS shaded fuel break utilizing USFS prescription. Community member participation in the 2009 WUI Summit.

APPENDIX P

Completed Mitigation Activities

Round 12 Request \$50,000
Deliverables: **Eight** properties (1/2-to 2 acres each), community member participation in the 2011 WUI Summit.
Match: \$16,000 in-kind match
Biomass Utilization: Biomass generated will be sent to a recycling center for processing to be used as the carbon component in soil amendments. Biomass will also be used on site for erosion and weed control.

Project Management and Oversight:

Management: \$65,000 is requested for one FTE to oversee implementation of Round 12 funds. This includes travel and benefits.

Administration: \$10,000 is requested for administrative support. This includes accounting, bookkeeping, office space, and supplies.

Spring Mountains Accomplishment Report

December 27, 2011

Grant # L11AC20348-0001-6900 (Spring Mountain SNPLMA Round 10)

This grant was funded at 81% of the original request. The deliverables as stated in the Assistance Agreement have been adjusted accordingly.

On November 28, 2011 the Nevada Fire Safe Council's Acting Executive Director; Mr. Butch Hayes received a memorandum from BLM's Chief of Acquisitions, Kenda Tucker informing him that the above referenced grant had been terminated. As of the effective date of termination, 45% of the original allocation of \$589,340.00 had been spent.

	Original Deliverable	Adjusted Deliverable	Accomplishment
1.	Complete defensible space prescriptions and complete work on approximately 55 private properties.	Complete work on 44 to 55 private properties.	Nearly 200 lots were inspected and treated to implement defensible space principles. Worked closely with the Nevada Division of Forestry and the US forest Service.
2.	Complete work on Camp Stimpson property.	Treat 32 to 40 acres	Cooperated with the Nevada Division of Forestry to complete hazardous fuel treatment on this property. A total of acres were treated with final removal by prescribed fire on 12/22/2011.
3.	Explore possibility of multi-chapter organizational structure for the Spring Mountains National Recreation Area.	No adjustment	Chapter leaders were engaged in discussions about the development of a regional component to the administrative structure. Their reaction was that time could be better spent developing the effectiveness of the local chapters and a regional level would not be of assistance.
4.	Conduct eight educational programs and increase membership in each	Conduct 6 to 8 educational programs and increase	Conducted 12 educational programs connected to actual community clean-up and fuel reduction

APPENDIX P

Completed Mitigation Activities

	community chapter.	membership.	projects.
5	Improve communication and directed project planning with increased coordination between all partners.	No adjustment	Regularly scheduled chapter leader meetings with attendance from numerous cooperators. Agency partner involvement in community projects such as pine needle collection and curbside chipping. Collaborative efforts to achieve defensible space and fuel break project completion.
6.	Implement curb side chipping program and pine needle pick up program.	No adjustment	2010 : 87 properties, 10 cooperating agencies and 22 tons of hazardous fuel collected. 2011: 183 properties 10 agency partners and 180 cubic yards of hazardous fuel collected.

Other mitigation projects completed were fuels reduction projects completed by Nevada Division of Forestry under a Southern Nevada Public Lands Management Act (SNPLMA) grant totaling 59.22 acres in the Mount Charleston area in the following subdivisions: Echo, Rainbow Canyon, Mountain Springs, Trout Canyon, Old Town, Cathedral Rock, Cold Creek, and Mt. Charleston Baptist Church. The effectiveness of these projects was demonstrated by the fact that no occupied buildings were lost during the extensive Carpenter 1 wildfire that erupted in the Mount Charleston area and lasted nearly two weeks later on the summer of 2013.

Another mitigation fuels reduction project was completed by North Lake Tahoe Fire Protection District of Washoe County totaling 860 acres in the North Lake Tahoe Basin.

Completed Mitigation Activities

