



STAFF REPORT

Report To: Open Space Advisory Committee

Meeting Date: February 25, 2019

Staff Contact: Lyndsey Boyer, Senior Natural Resource Specialist

Agenda Title: For Possible Action: To approve the annual monitoring report for the Horse Creek Ranch Conservation Easement for 2018.

Staff Summary: See below

Agenda Action: Formal Action/Motion

Time Requested: 5 minutes

Proposed Motion

I move to approve the annual monitoring report for the Horse Creek Ranch Conservation Easement for 2018.

Board's Strategic Goal

Quality of Life

Previous Action

N/A

Background/Issues & Analysis

The Horsecreek Ranch Conservation Easement was purchased by Carson City in 2009 to protect the property from development. The Conservation Easement requires annual monitoring to ensure that the property is being maintained and continues in good condition. The initial assessment condition photos were taken in 2009 and each year staff has taken new photos at the same locations for comparison. The 2018 monitoring visit was conducted on October 8, 2018. The areas that require continued monitoring are the lower drainage area, the cattle loafing area, and the channel headcut as well as a new small headcut.

In 2018, Mr. Fagen applied for and was approved to receive a USDA EQIP grant to help fund irrigation improvements, including additional repair to meadow diversion boxes, culverts, and a new ditch at upper meadow for better water distribution. This work was initiated in 2018 and is estimated to be completed in 2020. In addition, weed monitoring and removal is anticipated to continue into future years. Mr. Fagen has extended his invitation to scout troops or volunteers to assist in this effort. The property continues to be in good condition and the full report is attached.

Applicable Statute, Code, Policy, Rule or Regulation

N/A

Financial Information

Is there a fiscal impact? Yes No

If yes, account name/number:

Is it currently budgeted? Yes No

Explanation of Fiscal Impact:

Carson City Open Space – Conservation Easement Monitoring

Date: October 8, 2018

Start time: 8:15 a.m. depart from office

End time: 3:30 p.m. return to office

Monitor(s): Lyndsey Boyer & Marena Disbro (Carson City)

Persons Attending Inspection (landowner or others): William Michael Fagen

Current Landowner(s): William Michael Fagen (William Michael Fagen 2005 Trust)

Mailing Address: P.O. Box 703 Zephyr Cove, 89448

Easement Address: APNs 007-051-82, 007-051-83, and 007-051-84. Located approximately 2.5 miles west of the paved terminus of Kings Canyon Road.

Easement size: 175.33 acres

Parcel size: 3 parcels, 201 acres total

On-site land use(s): Agricultural in the meadow, open sagebrush and forest in the plan.

Surrounding land uses(s): On west, north, and east, the lands are under public ownership by Carson City Open Space and the U.S. Forest Service. The land use consists of undeveloped, dispersed recreation. On the south, the lands are under private ownership and the land use continues as agricultural.

Conservation Easement, Exhibit C, Prohibited Uses and Practices

1. Impairment of Protected Values

No change. The landowner is in compliance.

2. Commercial or Industrial Use

No change. The landowner is in compliance.

3. Construction

No change. The landowner is in compliance.

4. Subdivision

No change. The landowner is in compliance.

5. Motorized Vehicles

No change. The landowner is in compliance.

Carson City Open Space – Conservation Easement Monitoring

6. Tree Cutting

No change. The landowner is in compliance.

7. Dumping

No change. The landowner is in compliance.

8. Soil Degradation

No change. The landowner is in compliance.

Near the southeast corner, one specific area is being monitored for landscape change. This low drainage area of the meadow appears to be vegetated and stable though a few isolated mounds or hummocks may be the result of cattle trampling. A qualitative assessment with the photo comparisons may be deceptive due to the time of year each photo was taken – either during the growing season or at the end of the season after grasses were grazed and/or senesced. Additionally, the new head cut observed in 2017 on the creek northeast of the cabins was monitored, and remains relatively the same size (1 - 1.5 feet) as observed last year, but it should be monitored in future years to document change in size or location, as it could increase in size or potentially migrate upstream. In conjunction with the USDA EQIP grant funding that has been awarded to repair irrigation structures and efficiency, Mr. Fagen has also applied for additional USDA EQIP grants to fund the design and repair plan for the existing headcuts. If awarded, this funding will be utilized in 2020-2021.

(continued on next page)

Carson City Open Space – Conservation Easement Monitoring

Photo Point: The photo of this drainage, located south of the cabins, has been included to document change and vegetation growth. N 39 07' 42.7" W 119 50' 10.2"

2010 Condition, photo taken November 1, 2010 (initial assessment – view west)



2018 Condition, photo taken October 8, 2018



Carson City Open Space – Conservation Easement Monitoring

2013 Condition, photo taken July 23, 2013 (initial assessment – view south)



2018 Condition, photo taken October 8, 2018



Carson City Open Space – Conservation Easement Monitoring

2013 Condition, photo taken July 23, 2013 (initial assessment – view south)



2018 Condition, photo taken October 8, 2018



Carson City Open Space – Conservation Easement Monitoring

Photo Point: The photo of this head cut, located northeast of the cabins, has been included to document stream channel changes and erosion. N 39 07' 51.0" W 119 50' 11.4"

2018 Condition, photo taken October 8, 2018 (view north)



Carson City Open Space – Conservation Easement Monitoring

9. Water Quality Degradation

No change. The landowner is in compliance.

It should be noted that specific measurements have never been taken to determine water quality. However, the average amount of surface water from Neal's Flume and two other springs is minimal and most of the water percolates into the ground to recharge the Carson City aquifer and/or reappear as groundwater discharge into Clear Creek. Due to these reasons, contamination from livestock grazing would be negligible.

10. Surface Alteration or Excavation

No change. The landowner is in compliance.

11. Fencing Restrictions

No change. The landowner is in compliance.

Additional Comments:

- Stewardship Account: There are no expenses to report. The account has a current balance of \$47,375.00. Additionally, it should be noted that approximately \$1,000 in out of pocket expenses was spent by Mr. Michael Fagen for irrigation system repairs; \$500 of these expenditures will be reimbursed via the USDA EQIP grant.
- The irrigation ditch known as "Neal's Flume" was dry during this field monitoring. It should be noted that the Baseline Condition Report also commented that the ditch is not used during the minimum flow periods of the north fork of Clear Creek due to significant conveyance losses on the ditch. While the upper meadow at Horsecreek Ranch was not currently receiving water from Neal's Flume, two other springs were flowing and providing water to nearby areas. In spring 2018, Mr. Fagen worked with the neighboring landowner to clean out the sediment that had accumulated in Neal's Flume, as well as to remove vegetation that was impeding the water flow along the lower portion of the Flume. This work was completed as a trade for the cattle grazing operations that took place on the property by the neighboring landowner. Upper portions of the Flume remain overgrown, but will not be cleared unless the vegetation impacts water flow and delivery.
- The Pasture Utilization and Condition Assessment was conducted by Ms. Boyer and Ms. Disbro, Senior Natural Resource Specialist and Carson City Weed Coalition Coordinator,

Carson City Open Space – Conservation Easement Monitoring

respectively. This Pasture Utilization and Condition Assessment included a visual observation of the monitoring plot as described in the Baseline Condition Report. A diversity of pasture, wetland-associated (*Juncus*), and invasive grasses (cheatgrass) exhibited various utilization levels depending on species. It should be noted that cover of invasive grasses (cheatgrass) has reduced. Overall, grazing appeared negligible and an average stubble height of 3 – 4” was recorded.

- Bull thistle remains present throughout the meadow. Mr. Fagen and staff are committed to working together towards the eradication. Mr. Fagen is receptive to volunteer projects to assist in the eradication effort; however, there is a short time frame for identification and removal (July-August). In June, a volunteer project was conducted in conjunction with the Carson City non-profit, Muscle Powered; 16 volunteers worked to remove 20 bags of Bull Thistle from the southern pastures of Horsecreek Ranch. A subsequent volunteer removal project was planned in August, but was cancelled due to air quality issues caused by California fires. In the future, staff will continue work with Mr. Fagen to implement volunteer removal projects in the spring/summer, as well as the potential to coordinate an additional fall treatment to target overwintering rosettes, and potentially avoid access issues caused by saturated soil.
- It should be noted that several photo point locations - such as the old pipeline and existing headcuts - have been revegetating naturally. Furthermore, given the successful revegetation of the old pipeline disturbance, photo point monitoring for this feature was discontinued in 2017. Lastly, healthy plant communities are being maintained throughout the property.
- The previous reports recommended the monitoring of the cattle loading area located just outside the gated entrance to the cabins with the goal to limit further expansion. The following documentation provides photo points and respective measurements. The disturbed area consists primarily of cheatgrass and foxtail barley although sagebrush is successfully re-establishing on both the north and east edge of the disturbed area. The disturbed area has shown a reduction in size over the last two monitoring cycles. Lastly, it is important to note that depending on the timing of monitoring, cheatgrass abundance and cover varies indicating that cattle are likely grazing the cheatgrass.

Carson City Open Space – Conservation Easement Monitoring

2013 Condition, photo taken July 23, 2013 (initial assessment – view south):
The bare area measures 157' north to south along the sagebrush.



2018 Condition, photo taken October 8, 2018:
The bare area measures 153.6' north to south along the sagebrush.



Carson City Open Space – Conservation Easement Monitoring

2013 Condition, photo taken July 23, 2013 (initial assessment – view west):
The bare area measures 145' east to west along the gravel road.



2018 Condition, photo taken October 8, 2018:
The bare area measures 137' east to west along the gravel road.



Carson City Open Space – Conservation Easement Monitoring

- In June 2018, Mr. Fagen applied for and was approved to receive a USDA EQIP grant to help fund irrigation improvements, including additional repair to meadow diversion boxes, culverts, and a new ditch at upper meadow for better water distribution. This work was initiated in 2018 and is estimated to be completed in 2020. In fall, the main flume distribution box was recoated with concrete and sealing material to prevent additional weathering from winter precipitation. Additionally, seven new weir gates have been fabricated for the existing 20-year old original meadow boxes; these gates will be installed in the spring 2019. NRCS will continue to provide consultation as to the current condition and effectiveness of the entire pasture irrigation system, including the supply flume and distribution boxes, and make updated recommendations to the landowner via an irrigation plan.
- Additionally, in 2018, road maintenance and culvert repair was completed at several spring overflow points. Maintenance and repair will continue in 2019 with replacement of two culverts along the road at top of meadow.
- Mr. Fagen has applied for a Forest Legacy Program grant through the Nevada Division of Forestry (NDF) to fund selective thinning of tree stands on the property. Implementation of this program is pending funding release and availability of NDF field staff for site visit.
- In addition to monitoring and evaluating the current conditions related to the terms of the conservation easement, staff believes that it is important to document external factors that could potentially affect the future condition of the property. Specifically, the endemic localized infestation of non-native insects around the alpine forests. About one mile above Horsecreek Ranch, the white satin moth has caused significant defoliation to the aspen trees around Spooner Summit and bark beetles have caused significant damage to the conifers between Spooner Summit and Glenbrook.

Carson City Open Space – Conservation Easement Monitoring

Summary:

The results of the 2018 audit of the Horsecreek Ranch Conservation Easement by Carson City demonstrate that the property generally continues to be in good condition and the landowner is in full compliance with both the letter and the spirit of the Easement. The report identifies three recommendations for active measures and likely coordination between Carson City and the landowner:

- 1) Continue to work with the NRCS and USDA EQIP grant to identify and complete repairs for the flood irrigation system to be implemented in 2019-2020.
- 2) Continue to work with the NRCS and USDA EQIP grant to identify a mitigation strategy and repair plan for existing headcuts to be implemented 2020-2021.
- 3) Continued removal of bull thistle.

Landowner comments:

The landowner is cooperative about addressing, over time and in consideration of available resources, additional improvements to the conditions on the property in a joint effort with Carson City and other local agencies.

Written by: Lyndsey Boyer 12/31/18
Lyndsey Boyer Date

Reviewed by: Ann Bollinger 1/18/19
Ann Bollinger Date

Landowner: William Michael Fagen 12/31/18
William Michael Fagen Date

Carson City Open Space – Conservation Easement Monitoring

Please indicate the number of the following attachments to this report. Be sure to date and sign all materials and provide a description or map showing where on-site photos and illustrations were taken:

Aerial photos

Ground photos (digital or other)

- 15 ground photos – Within the Report
- 34 ground photos – Baseline Report Repeat Photo Documentation
- Digital photos taken, copied into a written report

Maps and illustrations

Other:

Date Inspection Report Sent To Landowner: 12/27/18 WMF

Baseline Report Repeat Photo Documentation

Photo Point 1A (view northeast): A photo point located at the edge of the shrub dominated granitic fan and the irrigated meadow. This would be used to monitor shrub invasion into the meadow area indicating irrigation problems.

2009 Baseline Condition, photo taken February 4, 2009:
(GPS coordinate: N39° 08' 02.3" W119° 50' 11.8")



2018 Condition, photo taken October 8, 2018



Baseline Report Repeat Photo Documentation

Photo Point 1B (view northwest): A photo point located at the edge of the shrub dominated granitic fan and the irrigated meadow. This would be used to monitor shrub invasion into the meadow area indicating irrigation problems.

2009 Baseline Condition, photo taken February 4, 2009:
(Photo possibly taken from the upper meadow, near the new GPS coordinate for Photo Point 2 updated in 2010: N39 07' 54.9" W119 50' 11.3")



2018 Condition, photo taken October 8, 2018



Baseline Report Repeat Photo Documentation

Photo Point 2 (view south): A photo point located in bottom of the active stable drainage channel to the southeast of the house to monitor side slope stability.

2009 Baseline Condition, photo taken February 4, 2009:
(GPS coordinate updated in 2010: N39 07' 54.9" W119 50' 11.3")



2018 Condition, photo taken October 8, 2018



Photo Point 3 (view south): A photo point located immediately east of the house in the active channel where rip-rap has been placed for stabilization.

2009 Baseline Condition, photo taken February 4, 2009



2018 Condition, photo taken October 8, 2018



Baseline Report Repeat Photo Documentation

Photo Point 4A (view north): A photo point located at the most northern active headcut after required stabilization to monitor effectiveness.

2009 Baseline Condition, photo taken February 4, 2009



2018 Condition, photo taken October 8, 2018



Baseline Report Repeat Photo Documentation

Photo Point 4B (detail): A photo point located at the most northern active headcut after required stabilization to monitor effectiveness.

2009 Baseline Condition, photo taken February 4, 2009



2018 Condition, photo taken October 8, 2018



Baseline Report Repeat Photo Documentation

Photo Point 4C (detail): A photo point located at the most northern active headcut after required stabilization to monitor effectiveness.

2009 Baseline Condition, photo taken February 4, 2009



2018 Condition, photo taken October 8, 2018



Baseline Report Repeat Photo Documentation

Photo Point 5 (view east): A photo point on the hillside conveyance ditch at a location where a previous washout has occurred to monitor ditch maintenance.

2009 Baseline Condition, photo taken February 4, 2009



2018 Condition, photo taken October 8, 2018



Baseline Report Repeat Photo Documentation

Photo Point 6A (view north): A photo point from the Kings Canyon Road that would provide panoramic views of the ranch from a west to east perspective.

2009 Baseline Condition, photo taken February 4, 2009



2018 Condition, photo taken October 8, 2018



Baseline Report Repeat Photo Documentation

Photo Point 6B (view center): A photo point from the Kings Canyon Road that would provide panoramic views of the ranch from a west to east perspective.

2009 Baseline Condition, photo taken February 4, 2009



2018 Condition, photo taken October 8, 2018



Baseline Report Repeat Photo Documentation

Photo Point 6C (view south): A photo point from the Kings Canyon Road that would provide panoramic views of the ranch from a west to east perspective.

2009 Baseline Condition, photo taken February 4, 2009

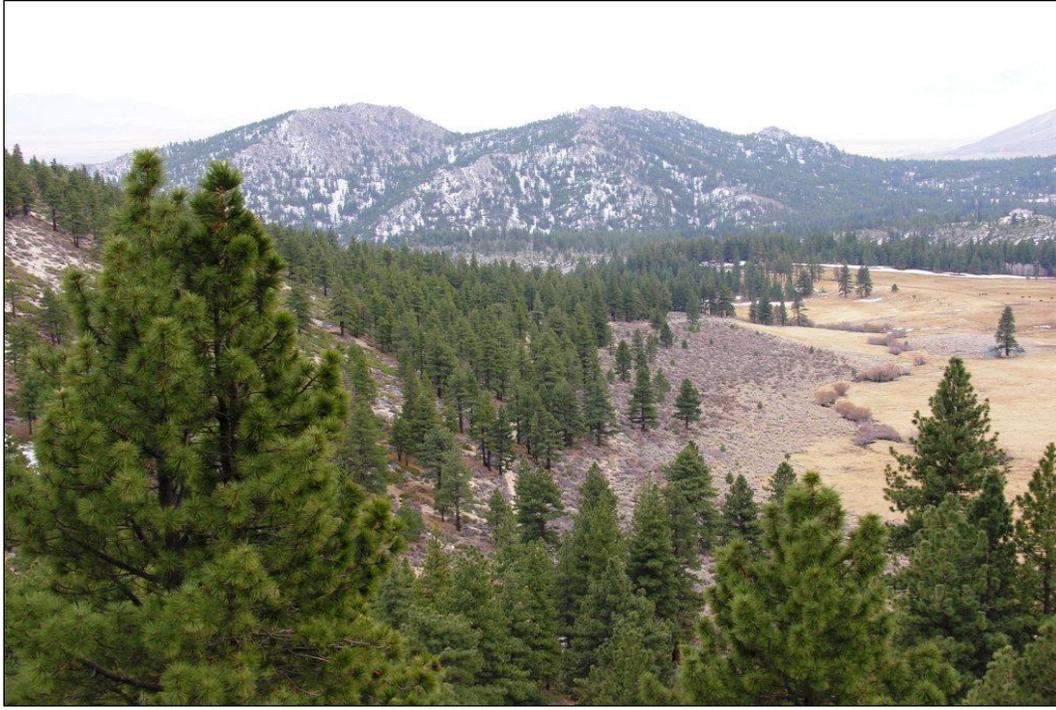


2018 Condition, photo taken October 8, 2018



Photo Point 7A (view southeast): A photo point from Kings Canyon Road that would provide panoramic views of the ranch from a north to south perspective.

2009 Baseline Condition, photo taken February 4, 2009



2018 Condition, photo taken October 8, 2018

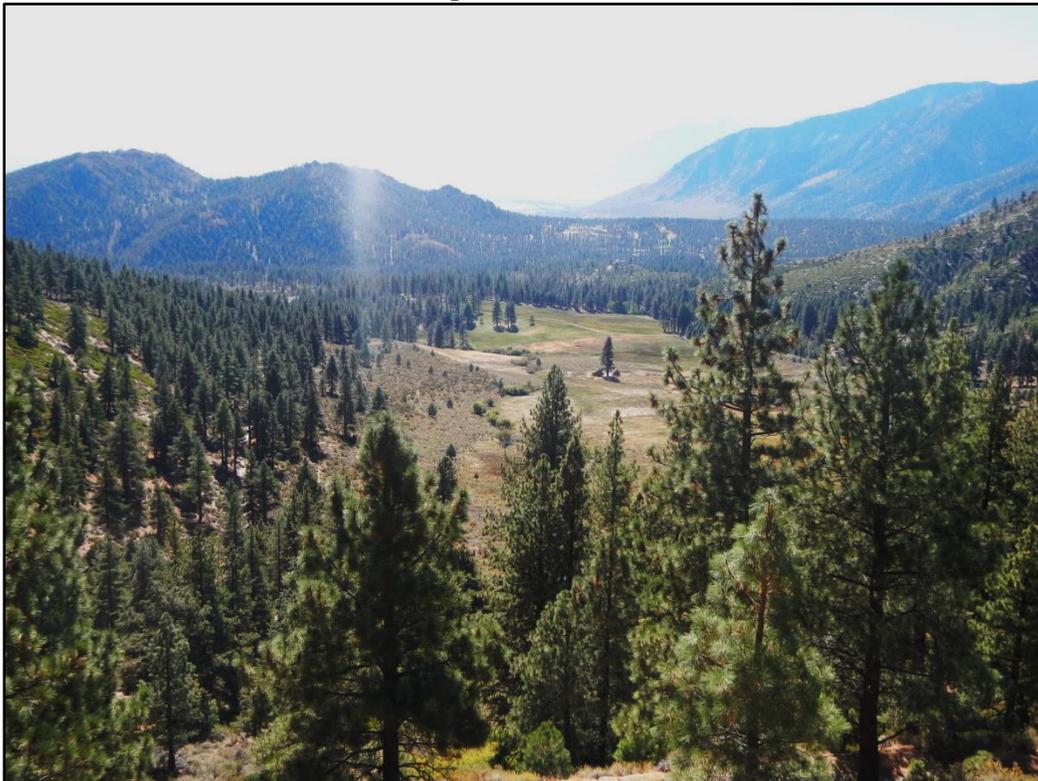


Photo Point 7B (view south): A photo point from Kings Canyon Road that would provide panoramic views of the ranch from a north to south perspective.

2009 Baseline Condition, photo taken February 4, 2009



2018 Condition, photo taken October 8, 2018



Baseline Report Repeat Photo Documentation

Photo Point 7C (view southwest): A photo point from Kings Canyon Road that would provide panoramic views of the ranch from a north to south perspective.

2009 Baseline Condition, photo taken February 4, 2009



2018 Condition, photo taken October 8, 2018



Baseline Report Repeat Photo Documentation

Photo Point 8A (view northwest): A photo point overlooking the meadow from the east to the west located next to the property corner along the new road.

2009 Baseline Condition, photo taken February 4, 2009



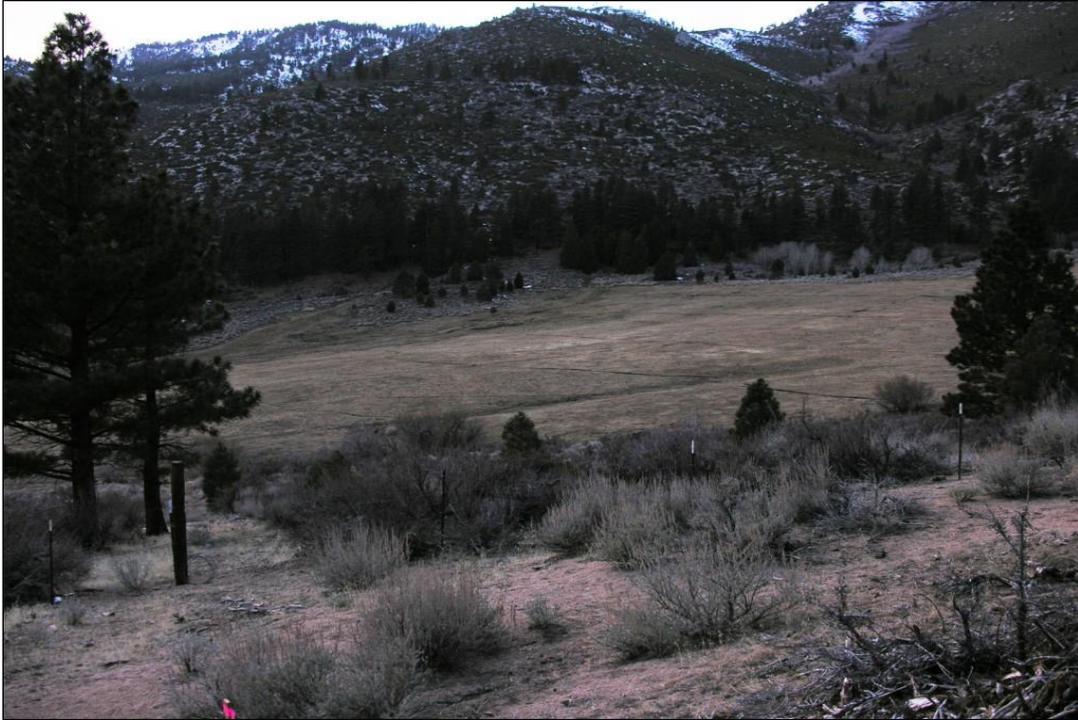
2018 Condition, photo taken October 8, 2018



Baseline Report Repeat Photo Documentation

Photo Point 8B (view west): A photo point overlooking the meadow from the east to the west located next to the property corner along the new road.

2009 Baseline Condition, photo taken February 4, 2009



2018 Condition, photo taken October 8, 2018



Baseline Report Repeat Photo Documentation

Photo Point 9: A permanently marked 100' x 100' area to monitor pasture condition. This annual inventory will be used to monitor not only pasture condition but irrigation efficiency, vegetative response to drought and appropriate livestock utilization.

2009 Baseline Condition, photo taken February 4, 2009



2018 Condition, photo taken October 8, 2018

