



STAFF REPORT

Agenda Item: 10A

Report To: Open Space Advisory Committee

Meeting Date: February 28, 2022

Staff Contact: Gregg Berggren, Trails Coordinator, gberggren@carson.org

Agenda Title: For Discussion Only: Trails Coordinator Report - Activities related to trail projects managed by the Open Space Division, including updates on the Capital to Tahoe and Lincoln Bypass trails, Kings Canyon Trailhead, Prison Hill projects, Carson River Trails Phases II, III, and IV, and a recap of trail-related volunteer hours in 2021.

Staff Summary: See below.

Agenda Action: Other/Presentation

Time Requested: 15 minutes

Capital to Tahoe/Lincoln Bypass Trails

The four-mile Lincoln Bypass Trail was essentially completed late in 2021, and it received great reviews from hikers and mountain bikers in the last days of fall. Much of the trail was constructed by a professional trail builder, with Muscle Powered completing some significant components like major rock work through a large drainage and along a steep side-slope. Muscle Powered plans continue working on improvements to the previously existing lower portion of the trail this spring and summer.

Some work began on the Capital to Tahoe Trail in 2021, and bridge building materials were staged on-site just ahead of winter snow. Completion of the trail is anticipated for late 2022. We recently obtained an easement across private property for a preferred alignment of a segment of the trail.

Together, Lincoln Bypass and Capital to Tahoe will add over 13 miles of new trail to Carson City.



Volunteers completing rock work on Lincoln Bypass

Kings Canyon Trailhead

Construction is well underway on the new Kings Canyon Trailhead. This long-awaited and badly needed project incorporates several design changes that resulted from public and committee comments. Design element changes include one-way access through the parking lot which will reduce the overall footprint and the required excavation, reduction of the number of parking spaces to 25 vehicles (from 30), relocation of the vault toilet and trailhead to be at the south end of the parking lot where it will be furthest from homes, addition of curb and gutter as well as ‘no parking’ signs to restrict parking outside of the parking lot, and new driveway connections to adjacent properties.

The parking lot was scheduled for completion in mid-November. However, a number of issues delayed completion, and now the construction is on hold awaiting improved conditions.



Kings Canyon TH 2017



Same photo angle January 2022

Prison Hill Non-Motorized Trails

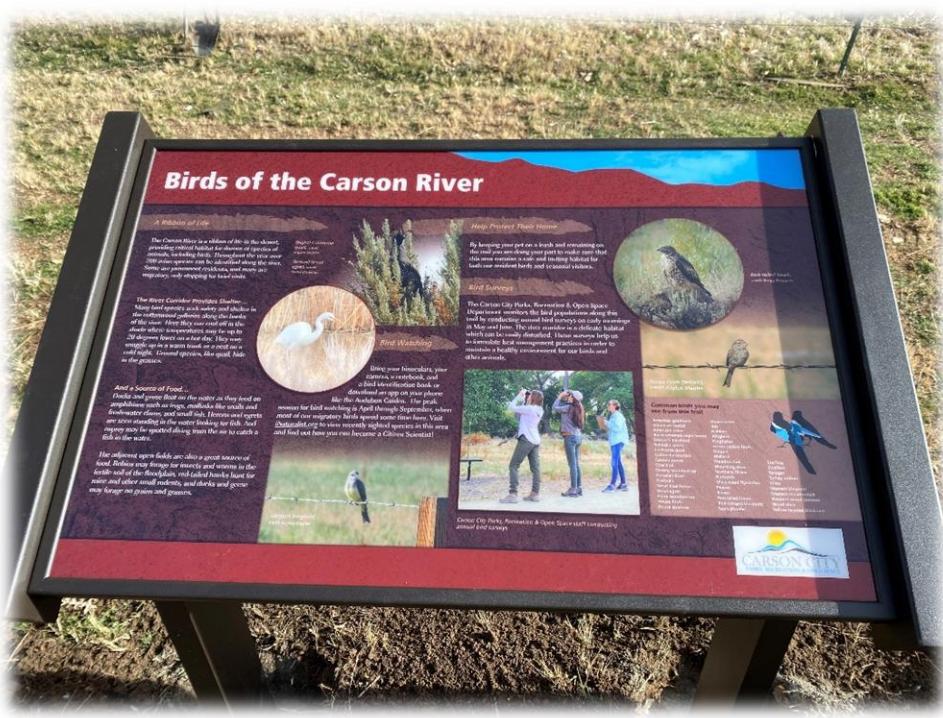
Section 106 Cultural Surveys were completed for portions of the northern part of Prison Hill, clearing the way for a number of trail improvements. Significantly, Muscle Powered volunteers will construct the “Odyssey Trail” which will create a fun, interesting, and sustainable connection from the Koontz Lane Trailhead to the North Loop and the Dead Truck Canyon Trail. Additionally, staff applied for a Recreational Trails Program grant to fund construction of the “Desert Peach Trail” which will create a scenic and sustainable connection from the 5th Street Loop Trails to the North Loop.

Carson River Trails Phase II – Ranch Connections

The last component of the Southern Nevada Public Lands Management Act (SNPLMA) funded project “Carson River Trails Phase II – Ranch Connections” included the placement of three interpretive panels on the Buzzy’s Ranch Trail. Content for these signs was developed by Open Space staff and the signs were installed in January. With final completion of all three trail segments – Prison Hill Trail East, Mexican Ditch Trail Extension, and Buzzy’s Ranch Trail – this \$1.8 million grant will now be closed out.

“Come Spread Your Wings and Fly With Me”

Demonstrated here by Kaylee Maples who developed the artwork for the sign when she was working as a Recreation Intern for our Department last summer. The panel displays life-sized wingspans of various common birds seen along the Carson River.



“Birds of the Carson River”

This panel highlights the significance of the Carson River as bird habitat, discusses the annual bird surveys conducted by Open Space staff, offers suggestions for bird watching, and lists common birds that may be observed nearby.

“A History of Ranching in Eagle Valley”

This panel identifies the various historic farm implements located along the trail and discusses ranching and farming history in Eagle Valley, beginning with early cultivations by the Washoe People and concluding with preservation of some ranch lands through Carson City’s Open Space Program.



Carson River Trails Phase III - Prison Hill Trail West

The Secretary of the Interior recently signed the approval of Southern Nevada Public Lands Management Act (SNPLMA) grant for the Carson River Trails Phase III - Prison Hill Trail West. This \$2.4 million dollar project will construct a 2.5-mile segment of the planned multi-use loop trail around the base of Prison Hill. The trail will begin at the Koontz Lane Trailhead, connect with the Clearview Drive Trailhead, and terminate at the south end of Prison Hill. Additional components will include improvements to the Koontz Lane Trailhead, improvements to the trailhead access road, and safety enhancements for pedestrians, bicycles and equestrians who cross the Edmonds Drive at Koontz Lane. Grant funds are available as of February 1, 2022, and we will begin the planning and design phase this year.

Carson River Trails Phase IV – Riverview Trailhead

Staff submitted a nomination to SNPLMA for a Phase IV Carson River Trails Project which is intended to completely redesign and renovate the trailhead at Riverview Park/Korean War Veterans Memorial. The project, if funded, will include all new facilities, drainage improvements, low maintenance landscaping, enhanced accessibility, and provide for an improved location to host small events and Ranger/Naturalist led programs. We should know by the end of the year if the project is approved for funding.

Prison Hill OHV Area

In partnership with the National Off-Highway Vehicle Conservation Council, and with grant funding from the Recreational Trails Program and the Nevada Off-Highway Vehicle Program, work is continuing on several project components:

- New trail construction, reconstruction of some old trails, and closure/rehab of some erosive trails.
- Drainage improvements including creation of check dams.
- Filter (gatekeeper) installation in several rock crawler routes.
- Additional wayfinding signage.

Below is an example of rehab work on an impacted site:



Before (Jan 13, 2022)



After (Jan 28, 2022)

An additional progress report is attached from NOHVCC's consultant, Reconnect:
“Progress on the Hill #3”

Trail-Related Volunteer Projects and Hours in 2021

Event or Project	Activities	Group	Hours	\$ Value
National Trails Day	Foothill Trail and V&T Trail Maintenance	Nevada Conservation Corp; Muscle Powered	233.5	\$5,944.91
National Public Lands Day	Trash clean-up near Sand Canyon	Muscle Powered; individual volunteers	37.5	\$954.75
Trash Mob	Clean-up, various	Muscle Powered	125	\$3,182.50
Prison Hill OHV Area Event	Clean-up, fencing	Friends of Prison Hill	45	\$1,284.30
Adopt-a-Trail	Buzzy's Ranch Trail	Target Carson City	9	\$229.14
Adopt-a-Trail	East Silver Saddle Ranch	Moose Lodge	24	\$611.04
Adopt-a-Trail	Empire Ranch Trail	Click Bond	16	\$407.36
Adopt-a-Trail	River Trail	Kiwanis	7.5	\$190.95
River Wranglers	Plantings on Buzzy's Ranch Trail and Moffat Trail	River Wranglers; individual volunteers; Empire Elementary	228.5	\$6,046.75
V&T Trail Bench/Sign Project	Place benches and interpretive signs	Individual volunteers	12	\$305.52
Muscle Powered Trail Crews	Trail planning, building, maintenance	Muscle Powered	2921.25	\$74,375.25
Total Hours and Value:			3659.25	\$93,532.47

Muscle Powered using a grip hoist to position large rocks on a portion of the new Lincoln Bypass Trail.





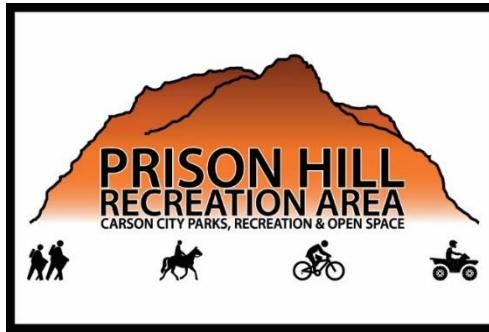
Click Bond doing a clean-up on their adopted Empire Ranch Trail.



Open Space Manager, Lyndsey Boyer and Sr. Natural Resource Specialist, Georgia Vasey working with kids from Empire Elementary School on a planting project.



Nevada Conservation Corps and Muscle Powered provided over 50 volunteers on National Trails Day.



Progress on the Hill #3

By the Numbers

Since November 11, 2021, Horizon Construction, LLC has been working on the Prison Hill OHV West Basin Project Change Order #1. This contract was modified slightly to address additional drainage needs and route adjustments necessitated by the record rain event on October 25. Horizon Construction and Carson City Parks, Recreation & Open Space staff have done an excellent job implementing the goals and vision for this project. As a result, there have been significant, positive changes to the look, feel, and function of Prison Hill.

Project Goals:

- Increase OHV riding opportunities and experiences by constructing new routes that connect existing routes and features together in logical loops.
- Replace non-sustainable fall line routes with serpentine routes that have grade reversals, are self-maintaining, and provide a higher riding experience.
- Start addressing the significant and historic erosion issues at the site by installing drainage structures, erosion control structures, adding sustainable routes, and closing non-sustainable routes.
- Increase aesthetics by closing severely eroded routes and/or heavily impacted areas, and narrowing over-width areas on routes to remain open.
- Decrease potential impacts to washes by installing filters on the most difficult wheeler routes that only allow passage by adequately equipped vehicles and/or adequately skilled drivers.

Project Achievements:

- Erosion occurs when water volume and velocity increase to the level where soil particles can be dislodged and displaced. Erosion is a natural process that can never be stopped, but it can be managed by implementing methods that reduce water volume and/or water velocity. There is still much to do, but this project has taken some major steps in reducing erosion potential.

- Rock check dams are installed below route drainage points and in feeder washes. They are designed so that water flows through them, but they significantly reduce the volume and velocity of the water so that sediment gets deposited above the check dam while decreasing the risk of particle displacement below the check dam. This project will have installed 34 check dams.



- Rock containment dams have the same function and are placed in larger washes. As such, they are larger and utilize larger, heavier rock. Five containment dams have been constructed.

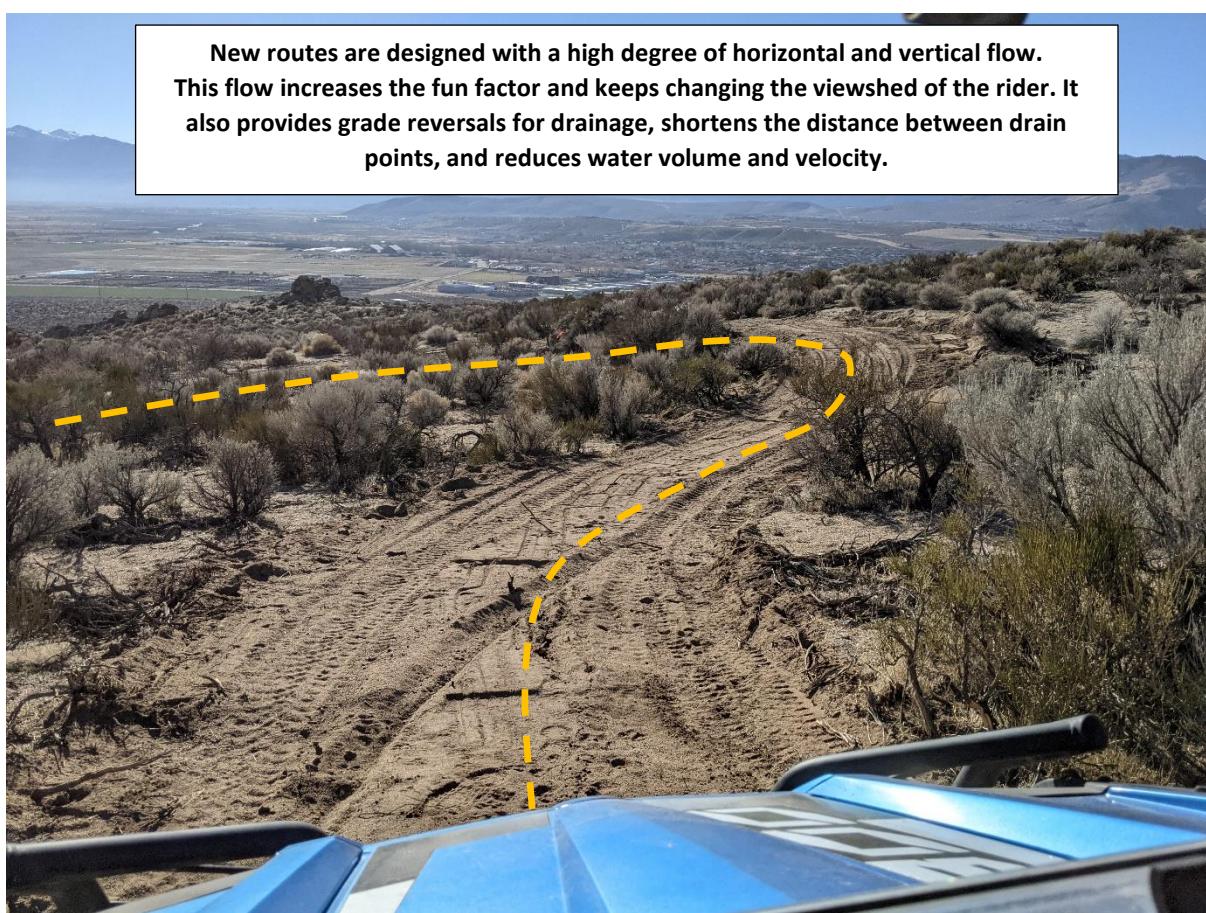


- Rolling dips and drains are installed generally on existing routes. By getting water off the route at regular intervals, we are again reducing the volume and velocity of the water running down the route. The effect is increased by reducing the interval between drain points. About 40 drains will have been installed with this contract.

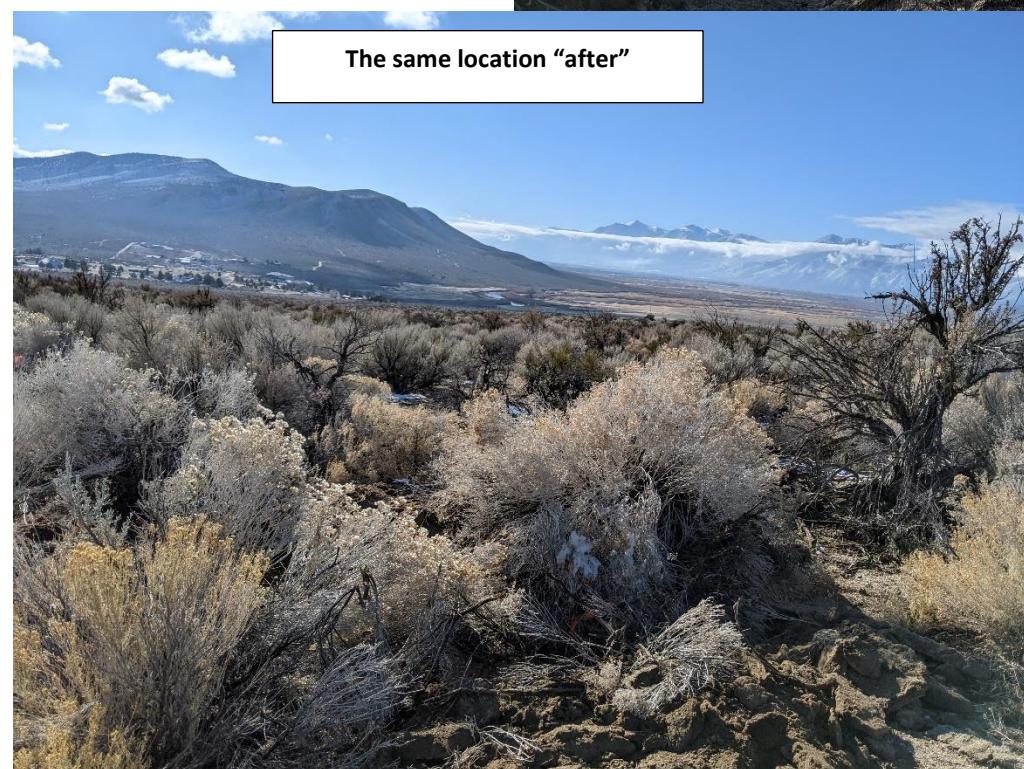
- In total, 79 drainage/erosion control structures will have been installed.
- There have been 16 segments, or 1.7 miles of new routes constructed. These provide connectivity, sustainability, and high fun factor while reducing high impacts elsewhere.



New routes are designed with a high degree of horizontal and vertical flow. This flow increases the fun factor and keeps changing the viewshed of the rider. It also provides grade reversals for drainage, shortens the distance between drain points, and reduces water volume and velocity.



- There have been 13 segments, or 2.2 miles of routes reconstructed. These routes have had drainage structures added, donikers (protruding rocks) reduced and, in some cases, have been narrowed to increase aesthetics.
- About 13 route segments, or 0.7 miles, have been closed and rehabilitated. This includes ripping, scarifying, installing waterbars or other drainage structures, placing boulders to deter access and enhance the natural appearance of the closure, placing brush and debris, “planting” suitable brushy debris which is called vertical mulching, and seeding with an approved native seed mix. Brush that was cleared during route construction was saved, stockpiled, and hauled to the sites to be rehabbed. This extra effort has dramatically improved our rehab efforts.



2/4/2022

- The West Summit Loop Road had three areas slated for route narrowing. Here, excess width was ripped, scarified, and boulders imbedded. This is still a drainage point, so a rock containment dam was constructed. Work like this enhances the visual appearance of the route and Prison Hill.

Before



Containment Dam

After



- Enhancing the quality of the rider experience is a key objective. Technical features add challenge and fun, but they also increase the length of the ride time by offering slow speeds and opportunities for spectating and socializing. The Toad Rock Loop provides 15 of these technical sections.



The east side of the Toad Rock Loop had terrain suitable for a rollercoaster. Fun and flowy, this is about one-third of it.