EASTERN KERN COUNTY ONYX RANCH SVRA

SOIL CONSERVATION PLAN

Contents

1 Introduction

Eastern Kern County Onyx Ranch SVRA (Onyx SVRA, the Park) was acquired in 2014. The property is in a checkerboard pattern with BLM land. The Soil Conservation Plan (SCP) for Onyx SVRA describes the Best Management Practices (BMPs), monitoring, measures, and strategies used to ensure compliance with the 2020 Soil Conservation Standard (Standard) as described in the 2020 Soil Conservation Standard and Guidelines (CDPR 2020). The Standard states that "*Off-highway vehicle (OHV) recreation facilities shall be managed for sustainable long-term prescribed use without generating soil loss that exceeds restorability, and without causing erosion or sedimentation which significantly affects resource values beyond the facilities. Management of OHV facilities shall occur in accordance with Public Resources Code, Sections 5090.2, 5090.35, and 5090.53*".

1.1 Purpose

In 2017, Senate Bill 249 (Allen) directed the Off-Highway Motor Vehicle Recreation (OHMVR) Division to review and update the 2008 Soil Conservation Standard and Guidelines (Guidelines) by 2020. The updated 2020 Guidelines defines the Soil Conservation Standard (the Standard), which is the standard to which off-highway vehicle (OHV) facilities are managed with respect to soil loss. While the Standard did not change during the 2020 update, substantial revisions were made to the Guidelines. The 2020 Guidelines require Soil Conservation Plans for State Vehicular Recreation Areas (SVRA).

Public Resources Code (PRC) §5090.35 (et seq.) describes environmental requirements for the SVRAs. Specifically, PRC §5090.35(d) requires SVRA staff to monitor OHV facilities annually to ensure compliance with the Soil Conservation Standard. The Soil Conservation Plan (SCP) is the document used by SVRA staff to outline a monitoring program that describes how the park unit will meet the Soil Conservation Standard.

The Standard does not focus on the health or quality of soils at SVRAs but instead emphasizes soil retention through sustainable management practices that prevent unnatural, accelerated erosion from OHV facilities. To do this, the SCP is tailored to site-specific conditions at the SVRA. This SCP comprises three main components: 1) an assessment of existing road and/or trail conditions, 2) a description of the routine road and/or trail maintenance that occurs throughout the SVRA, and 3) a monitoring plan. To ensure compliance with the Standard, SCPs utilize Best Available Science to facilitate the adaptive management framework through setting goals and objectives, monitoring the progress towards achieving those goals, and adjusting management as necessary to make improvements.

Implementation of this SCP does not change existing SVRA management but may result in identifying potential future projects and/or management recommendations. Annual Compliance Reporting to assess compliance with the Standard through SCP monitoring activities include a Compliance Action Plan which can identify potential projects to improve soil retention and conditions. Any identified new project(s) and/or management actions resulting from this SCP implementation will be analyzed using the Department's Project Evaluation Form (PEF) and subject to CEQA review.

1.2 State and Regional Conservation Objectives

Public Resources Code Section 5090.32(g) requires that SCPs be developed in consideration of statutorily required state and regional conservation objectives (CDPR 2021). As a result, relevant state

and regional conservation objectives were reviewed and incorporated into the development of the Onyx SVRA SCP objectives (**Table 1**). The state and regional plans are purely for reference purposes when developing the SVRA's SCP and do not constitute the SVRA being subject to such plans, programs, or incidental take permits/statements.

Table 1. Summary of state and regional plans, their geographical relationship to Onyx SVRA, and whether the SCP contributes to relevant state or regional conservation objectives.

Plan Name	State or Regional Plan	Geographical Overlap with the Park	Contains Relevant Target Resources	Contributes to Conservation Objectives
California Water Resilience Portfolio	State	X		X
Safeguarding California Plan	State	X		X
Desert Renewable Energy Conservation Plan	Regional	X	X	X
West Mojave Route Network Project (WMRNP)	Regional	X	X	X

1.2.1 California Water Resilience Portfolio

In 2020, state agencies developed the California Water Resilience Portfolio in response to Executive Order N-10-19 to improve California's capacity to prepare for disruptions, withstand and recover from climate-related shocks, and adapt into the future. The portfolio embraces a broad, diversified approach shaped to provide important tools to local and regional entities building resilience and to encourage collaboration within and across these regions. Four broad approaches are identified: 1) maintain and diversify water supplies; 2) protect and enhance natural systems; 3) build connections; and 4) be prepared (State of California, 2020). While most of the document is focused on water resources on the scales of large rivers, there are a few conservation goals that align with those in the SCP, such as reducing erosion to soils from water runoff and soil management, which can help stabilize habitat and watersheds in the area.

1.2.2 2018 Safeguarding California Plan

Developed by the California Natural Resources Agency, the updated 2018 Safeguarding California Plan purpose is to lay out guidelines for how agencies can incorporate strategies necessary to address climate change into their future planning efforts. The 2018 update included a chapter specific to parks, which included the recommendation (PC-5) to incorporate climate change in all California State Parks and conservancy planning and decision-making. To meet Recommendation PC-5, the plan identifies a step (PC-5.6) to "prioritize conservation, protection, and restoration of natural resources in climate change adaptation projects and planning to ensure sustainable recreational opportunities for the public" (State of California, 2018). The SCP can contribute to this plan by conserving soils while evaluating whether recreational opportunities are sustainably managed.

1.2.3 Desert Renewable Energy Conservation Plan

United States Bureau of Land Management (BLM), along with the California Energy Commission, the California Department of Fish and Wildlife, and the U.S. Fish and Wildlife, developed the Desert

Renewable Energy Conservation Plan (DRECP) as a Land Use Plan Amendment (LUPA) that balances development by renewable energy with landscape conservation. The DRECP designates zones where renewable energy can be developed while reducing the challenges of developing in those areas (BLM 2016). It also designates areas of protected landscape as California Desert National Conservation Lands. One of the goals and objectives of the DRECP is for soil, water, and water-dependent resources. Conservation of soil and water align with goals and objectives listed in the Onyx SVRA SCP to reduce erosional effects from trail systems that could impact watersheds and soil movement.

1.2.4 West Mojave Route Network Project (WMRNP)

The WMRNP guides the management of transportation and travel for 9.4 million acres of land in Southern California, 3.1 million acres of which are managed by BLM. This project includes the designation of travel routes and the associated management plans and seven Land Use Plan Amendments (LUPA) to recreation, motor vehicle access, and livestock grazing. These LUPAs include mapping more potential designated routes for motor vehicle access. These routes are existing unofficial roads and trails with existing disturbance. Additionally, WMRNP limits stopping and camping to previously disturbed land within 50 feet of the route's centerline if within a desert tortoise Area of Critical Environmental Concern (ACEC). Outside of a desert tortoise ACEC, these activities are limited to previously disturbed land within 100 feet of the route's centerline (BLM 2019, USFWS 2019). Because Onyx SVRA is checkerboard with BLM, CDPR has previously adopted restrictions that the BLM has placed on camping and OHV access within the area of Onyx SVRA. These amendments align with the goals and objectives of the SCP, specifically regarding soil.

2 Location and Regional Context

2.1 Site Description

Onyx SVRA is a 26,403-acre off-highway vehicle (OHV) recreation area managed by the California Department of Parks and Recreation (CDPR) and located in Eastern Kern County where the Mohave Desert meets the southern end of the Sierra Nevada mountain range (**Figure 1**). Onyx SVRA acreage consists mostly of one-square mile parcels distributed in a checkerboard pattern with land managed by BLM. Most of the BLM land is also managed as OHV recreation areas. Onyx SVRA is approximately 40 miles southwest of Ridgecrest, California and 21 miles northeast of Mojave, California. The main access to Onyx SVRA is via Jawbone Canyon Road off State Route 14. Within the park boundaries, there are approximately 31 miles of California Department of Parks and Recreation (CDPR) managed trails, all of which are accessible by 4x4 vehicles. The Pacific Crest Trail (PCT) crosses a northwestern parcel of Onyx SVRA. Adjacent land use includes a wind farm to the southwest, Red Rock Canyon State Park (Red Rock SP) to the northeast, and cattle grazing to the west. In addition to BLM land, some private parcels are owned within the checkerboard land ownership pattern that includes the Onyx SVRA.

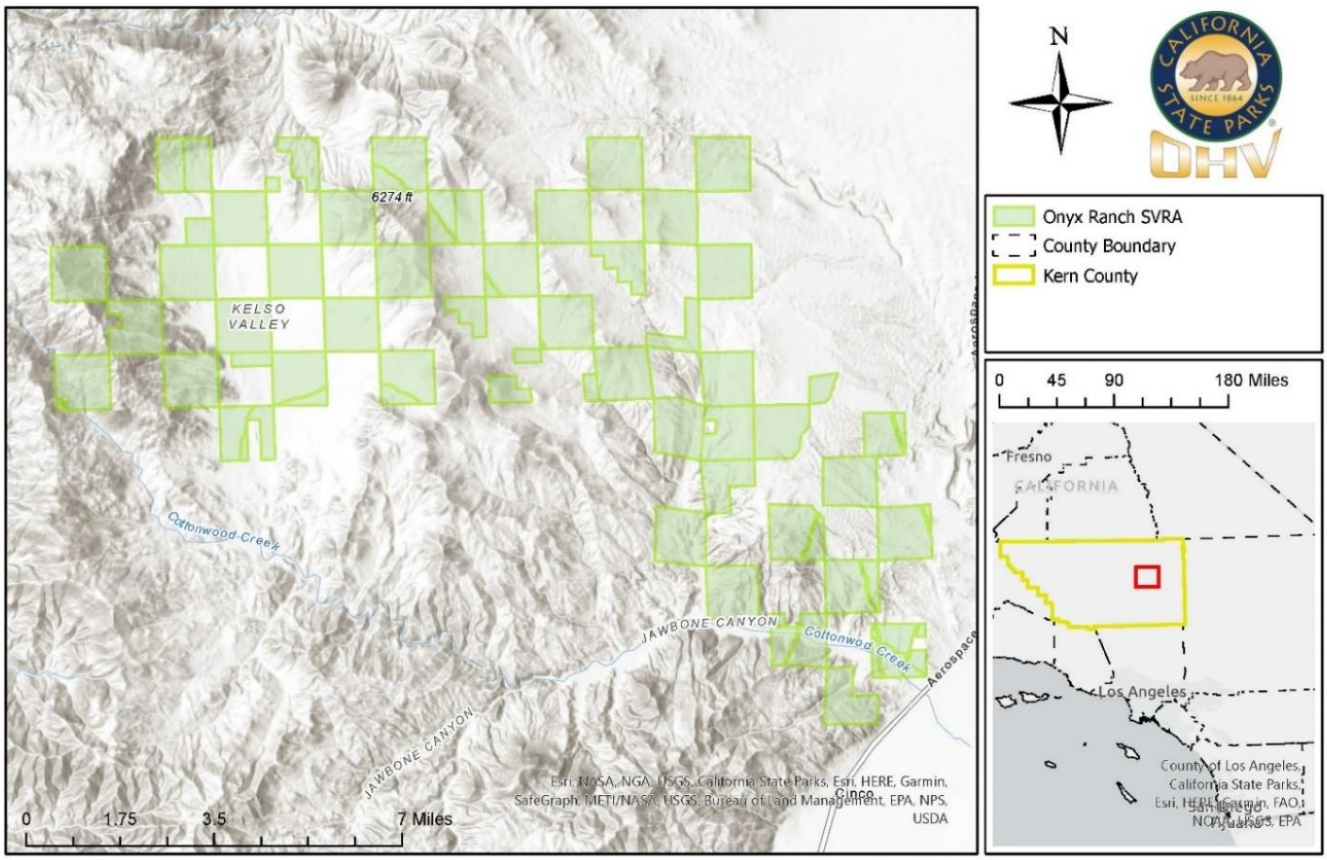


Figure 1. A map of Onyx SVRA's regional location in Southern California and Kern County.

2.2 Bureau of Land Management (BLM)

2.2.1 Areas of Critical Environmental Concern

Onyx SVRA overlaps the BLM designated Jawbone-Butterbredt Area of Critical Environmental Concern (ACEC) as well as the California Desert Conservation Area (CDCA). The ACEC was established to manage and protect cultural and wildlife values between the mountains and the northwestern Mojave Desert and comprises of 187,486 acres of land (CDPR 2013).

2.2.2 Open Areas

BLM OHV Open Areas are "intended for intensive OHV or other transportation areas where all types of motorized vehicles use is permitted at all times, anywhere in the area" on roads or cross country (BLM 2012). In areas where CDPR parcels fall within or overlap with the BLM designated Open Areas, CDPR parcels maintain the designated use standards of the Open Areas. Jawbone Canyon Open Area is over 8,500 acres of mostly BLM land, but there are 3,064 acres of CDPR parcels. Additionally, Dove Springs Open Area is approximately 3,600 acres of mostly BLM land, with a very small overlap with the northeast parcel of Onyx SVRA. While individual parcels within the Open Areas are not fenced, the

boundaries of the Open Areas are mostly fenced. Fencing is not continuous in locations where the terrain acts as a natural barrier and limits OHV activity.

2.3 Relevant History

2.3.1 Park Operations

CDPR parcels were purchased from ReNu Resources LLC (part of Renewable Resources Group, an investment group looking for underutilized assets to optimize for renewable energy) in 2014. The land was acquired with existing OHV use, which continued after the acquisition. In 2016, employees for Onyx SVRA were hired including an environmental scientist, two State Park Peace Officers, and a sector superintendent. In 2022, staff consists of two environmental scientists, one natural resource skilled laborer, and two law enforcement rangers. Onyx SVRA relies on assistance from heavy equipment operators and staff throughout the Great Basin District (District) of CDPR to meet compliance with the Standard.

2.3.2 Pipelines

Los Angeles Department of Water and Power (LADWP) has two aqueduct pipelines (first line built in 1913 and the second line in 1970), as part of the Los Angeles Aqueduct system, and overhead transmission lines crossing the park and surrounding areas. Their right-of-ways (ROW) are parceled out pieces of land approximately 200 feet in width owned by LADWP that cut through a few of the southern CDPR parcels in the Jawbone Canyon Open Area (see **Figure 2**). LADWP manages the maintenance of the roads that access their ROWs. These routes include LAP, LA-1, and LA-2. Operations of the water pipelines and transmission line does not directly impact Onyx SVRA. However, some maintenance activities do include the intentional release of water at certain sites (referred to as sand traps) and the excess water will flow onto state property which does increase erosional effects on the landscape (see **Figure 3**).

2.3.3 Agriculture and Grazing

Cattle ranching has been a common land management practice in the general area since the 19th century. The Estray Ordinance, established in 1942, declares grazing allotments within Kern County as "Open Range" (Kern County, 2020), and requires landowners within a grazing allotment to be responsible for excluding grazing on their property (e.g. installing fencing). At the time of the acquisition, Onyx SVRA was within BLM's previous Rudnick Common grazing allotment where cattle grazing had occurred regularly on a landscape level since 1864 including within some sensitive desert ecosystems. The Rudnick Common grazing allotment consisted of three grazing pastures within Onyx SVRA: Kelso Valley Pasture, Dove Spring/Jawbone Canyon Pasture, and Sheep Troughs Pasture. Grazing was authorized through a BLM grazing permit issued to ReNu, a renewable energy company. A Livestock Use Agreement was in place between the permittee and Hafenfeld Ranch, LLC., a livestock company. The Acquisition EIR for the Park noted that CDPR would not be an operator or be required to issue any permits for grazing (CDPR 2013).

In 2016, the Park entered a Prescriptive Grazing Lease with Hafenfeld Ranch for approximately 25,000 acres (CDPR 2015). This lease was executed on Feb 1, 2016, and expired on February 28, 2018. Under the leases with BLM and CDPR, Hafenfeld continued to access, graze, and maintain grazing infrastructure within the newly acquired park. In 2020, the majority of the BLM's Rudnick Common Allotment (RCA) was relinquished as mitigation for a renewable energy project. Low intensity rest-

rotation grazing continues in the Park on a month-to-month basis through the Onyx Ranch SVRA Grazing Lease's Holdover Clause.

No known significant soil erosion issues associated with cattle grazing were known to occur in the Park during the acquisition. Park staff will visually monitor each pasture to keep track of any new worsening sites of soil erosion and determine whether any management actions are needed. New or worsening sites of erosion will be addressed in the annual Compliance Report and Action Plan (see Section 6.9). To prevent new soil impacts from the concentration of cattle, mineral supplements will be placed on previously disturbed areas at least a quarter mile away from water sources. Other management practices that may be implemented include only placing new water troughs on previously disturbed land and herding cattle along roadways rather than cross-country.

For wildlife and habitat related impacts from cattle grazing, CDPR will use the terms of the BLM permit as a baseline for management to monitor and protect sensitive resources using the same standards used by the BLM, including Rangeland Health Studies that address riparian areas (CDPR 2013). Monitoring and adaptive management is needed because overgrazing can reduce habitat quality through vegetation loss and trampling, soil disturbance and compaction, streambed alteration, and increased erosion (CDPR 2013, Boarman 2002). Rangeland Health Studies and implementation of the BLM standards will safeguard habitat and soil resources in the Park during the grazing lease. More information on the Rangeland Health Studies can be found in the Onyx SVRA Wildlife and Habitat Protection Plan (WHPP).

2.3.4 Mining

Mining for gold and pumicite occurred in the area from the late nineteenth century to early twentieth century. Roads and trails developed during this time that are still used within the park include SC99, SC123, SC124, SC171, SC175, Kelso Valley Road, and portions of SC103. No mines within park boundaries are still operating and the park is currently working with the California Department of Conservation, Division of Mine Reclamation, Abandoned Mines Land Unit on closing them to mitigate potential hazards. A 2018 inventory by the Abandoned Mines Land Unit found 45 mine features within park boundaries. Nine of those were given a hazardous rating and may require closure (CDPR 2018). As of 2023, a project to remediate the hazardous mines is in review.

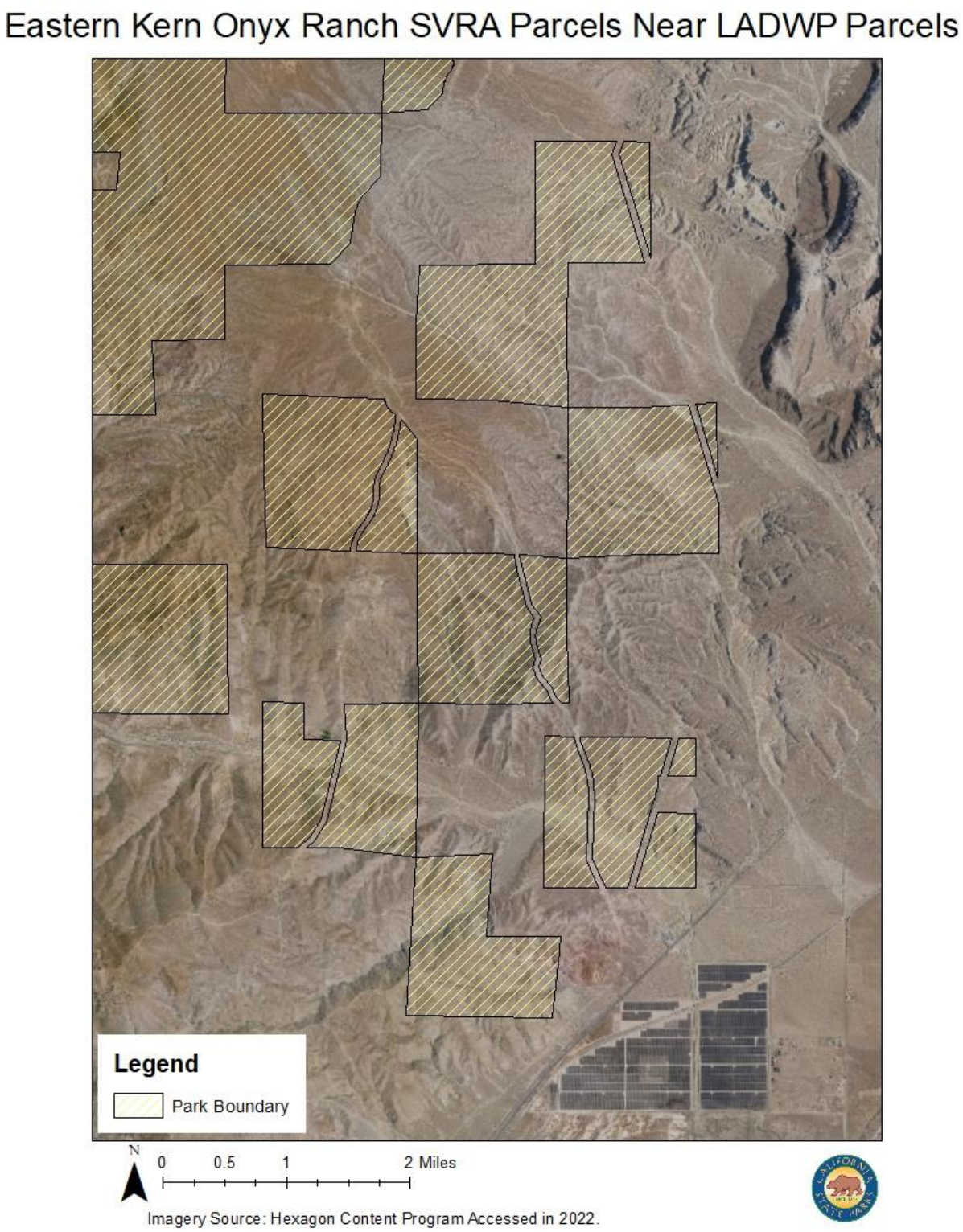


Figure 2. Aerial map showing CDPR parcels adjacent to LADWP parcels. The linear gaps within the park boundary show where LADWP owns property (parcels) for the ROWs of pipelines and powerlines.

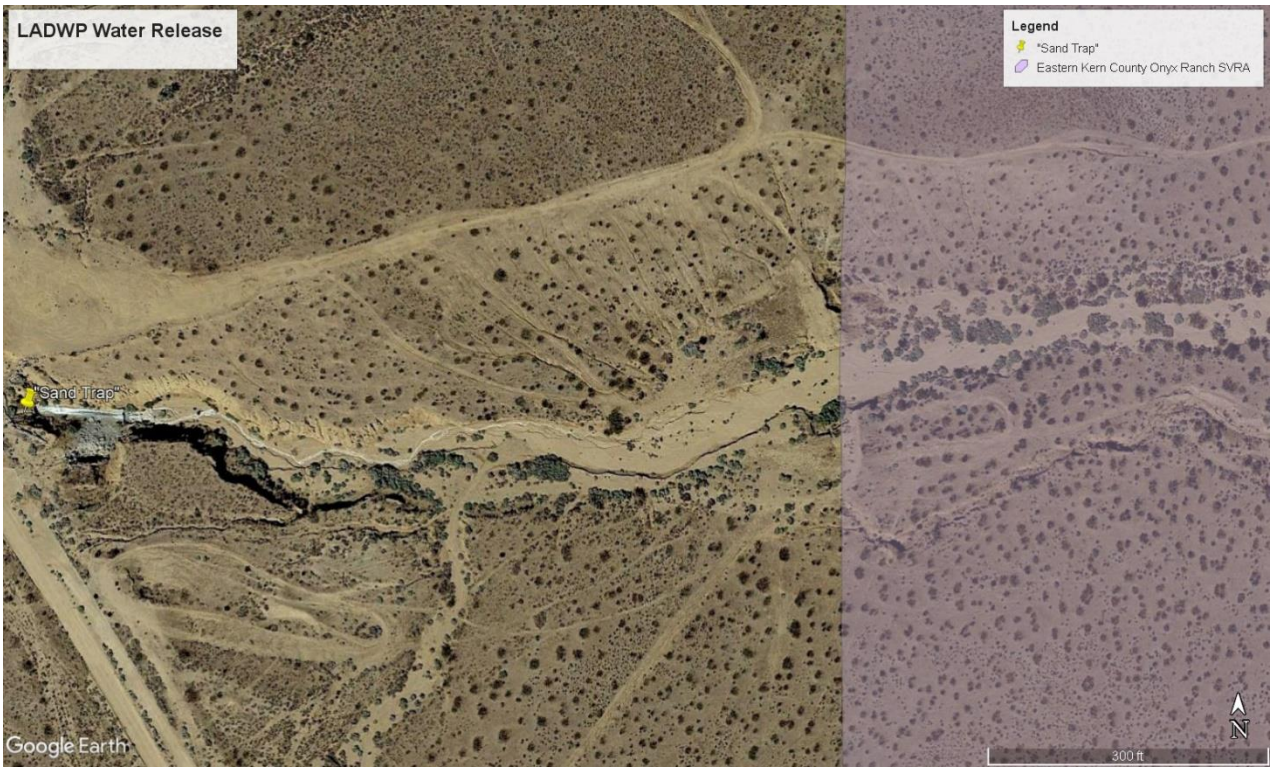


Figure 3. Aerial image showing LADWP water release site and proximity to Onyx SVRA.

2.4 Neighboring Land Management Agencies

Due to the checkerboard land ownership pattern and easements throughout the park, there are various agencies besides CDPR that perform road and trail maintenance in the park's vicinity. A map of the layout of land ownership and management is below in **Figure 4**.

- Bureau of Land Management (BLM) manages federal land throughout the Mojave Desert and specifically in and around Onyx SVRA. OHV use on these lands has occurred for over 30 years and the Friends of Jawbone was formed in 1998 to improve, protect and maintain existing trails along with education and cooperation of users of public lands. CDPR and BLM have a Memorandum of Understanding (MOU) executed in 2015 that states that the two entities will collaborate on management for the intermingled ownership area of the Park and that CDPR will comply with the 2008 Soil Conservation Standard on CDPR parcels (MOU).
    - Friends of Jawbone is a nonprofit organization that has a MOU with the BLM to maintain the roads and trails on BLM parcels within Onyx SVRA's vicinity. Friends of Jawbone and the BLM Ridgecrest Field Office receive grant funding from the Off-Highway Motor Vehicle Recreation Division's Grants and Cooperative Agreements program and are therefore required to have their own SCP with the corresponding planning and reporting documents. BLM areas adjacent and interspersed with CDPR parcels include trail only areas, Jawbone Canyon Open Area, and Dove Springs Open Area. In trail only areas, OHV recreation is limited to designated routes. In Open Areas, OHV recreation is largely unrestricted and occurs cross country. Park staff work with Friends of Jawbone and BLM

to address unauthorized user-created trails and OHV trespass that cross both the BLM and park boundaries. Friends of Jawbone has monthly meetings that are usually attended by the district's Peace Officer staff. Collaboration between the Park's natural resource staff, BLM, and Friends of Jawbone is mainly through email correspondence, but resource staff can attend the meetings as needed and when feasible.

- Los Angeles Department of Water and Power (LADWP) maintains three roads that cross the Park, including LA1, LA2, and LAP. The majority of all three roads are within LADWP parcels, but a portion of them do cross into the Park. LA1 and LA2 are used to access the water pipelines and are graded routinely. LAP is used to access the power lines and is maintained less frequently but remains passable. LADWP maintains trail drainages and culverts associated with these routes. If an issue arises that impacts resources on Onyx SVRA, Park staff will contact LADWP to collaborate on a solution.
- Kern County Public Works maintains the county roads in the area, including Jawbone Canyon Road and Kelso Valley Road.
- U.S. Forest Service maintains road 29S04 that crosses the western CDPR parcels. Additionally, while the Department of Agriculture and the Department of Interior are responsible for maintaining the PCT, the responsibility has been delegated to the Pacific Southwest Regional Forester within the U.S. Forest Service. The PCT crosses the northwest section of Onyx SVRA.
- Red Rock SP is also adjacent to Onyx SVRA with limited use trails that are not monitored by Onyx SVRA staff. The operation and/or maintenance of such trails are at the discretion of the Great Basin District staff and changes to the use of or type of trails may be altered.

2.5 Regulatory Agencies

The following regulatory agencies may have jurisdiction over the Onyx SVRA area. These include but are not limited to:

- Lahontan Regional Water Quality Control Board
- Eastern Kern Air Pollution Control District
- California Department of Fish and Wildlife Region 4
- US Fish and Wildlife Pacific Southwest Region Palm Springs (Carlsbad) Office
- US Army Corps of Engineers Los Angeles District

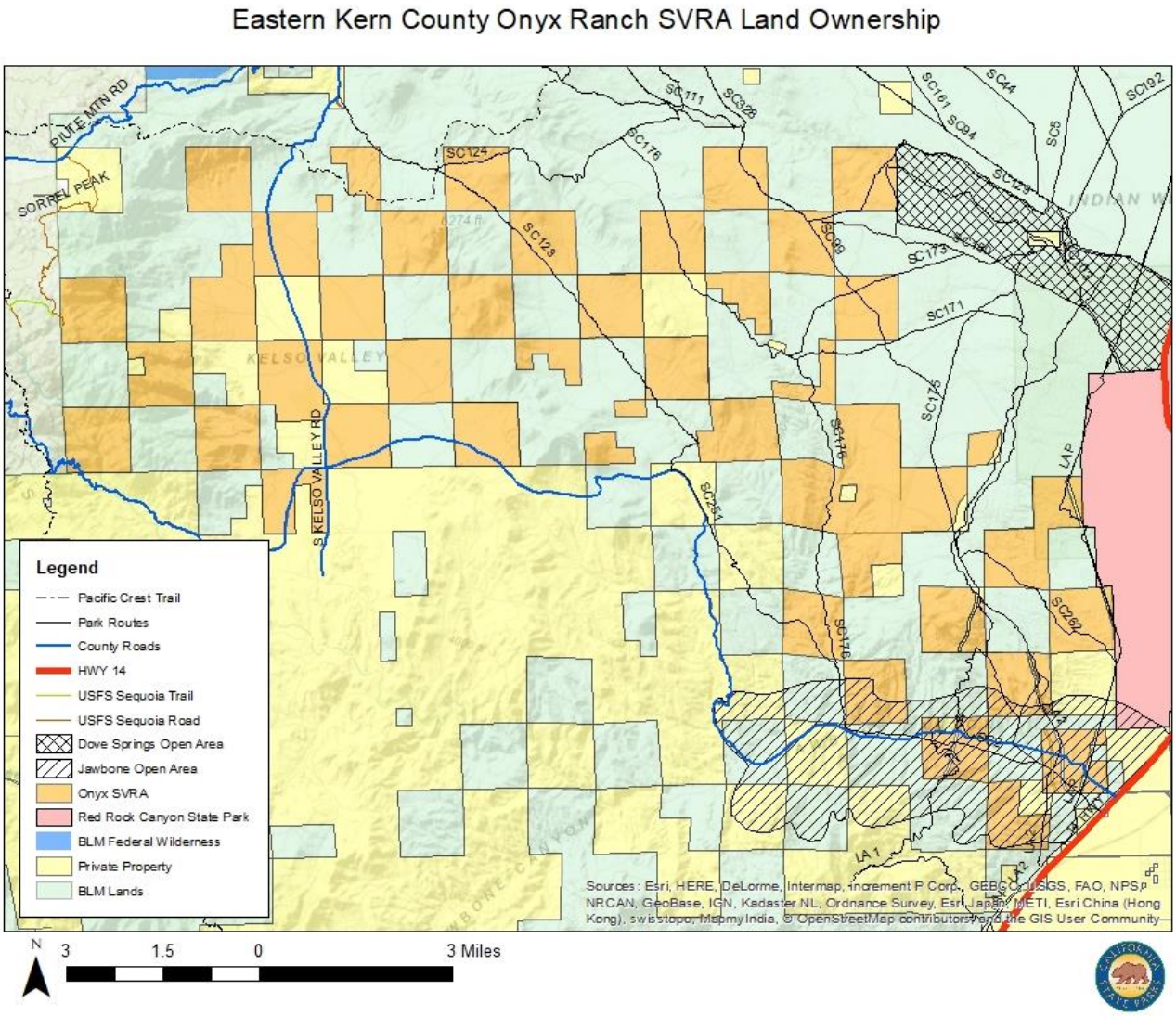


Figure 4. Map of various land ownership and management entities in and around Onyx SVRA
Assessment of Existing Conditions

3 Assessment of Existing Conditions

In absence of existing baseline trail condition data for the soil conditions in Onyx SVRA, this section discusses current and historical site conditions of the park and surrounding areas. Previous land use along with geologic, hydrologic, and erosional information will inform the maintenance plan and will serve as baseline data for the park moving forward.

3.1 Physiographic Data

3.1.1 Climate / Air Quality

Onyx SVRA follows the arid-Mediterranean climate pattern of cold and wet winters with hot and dry summers. Mean maximum temperatures exceed 100 degrees Fahrenheit in the summer. In the winter, the mean maximum temperature is in the 60s and the mean minimum is in the 30s. Average annual precipitation as determined from 2003 to 2013 precipitation records at Jawbone Station was eight

inches. The majority of rainfall occurs from October to April, but heavy summer storms do take place, causing flash floods.

3.1.2 Hydrology / Watersheds

Onyx SVRA is within two hydrologic regions including the Tulare Lake Hydrologic Region and the South Lahontan Hydrologic Region. Local watersheds of the Park include Upper Kelso Creek, Upper Cottonwood Creek, Kelso Valley, Dove Spring Canyon, Alphie Canyon, Red Rock Canyon, Town of Cantil, Lower Jawbone Canyon, and Town of Rancho Seco (**Figure 5**). Intense summer storms can cause flash flooding in ephemeral streams and drainages. The three perennial streams in the area include Caliente Creek, Cottonwood Creek, and Landers Creek. Additionally, there are several springs in Onyx SVRA and surrounding area including Butterbredt Spring, Alphie Spring, Dove Spring, Green Spring, and Quail Spring. Existing trails intersect seasonal creeks and streams as seen below in the map of potential wetlands and trails in Onyx SVRA (**Figure 6**) and the map of watershed flowline and roadway intersections (**Figure 7**).

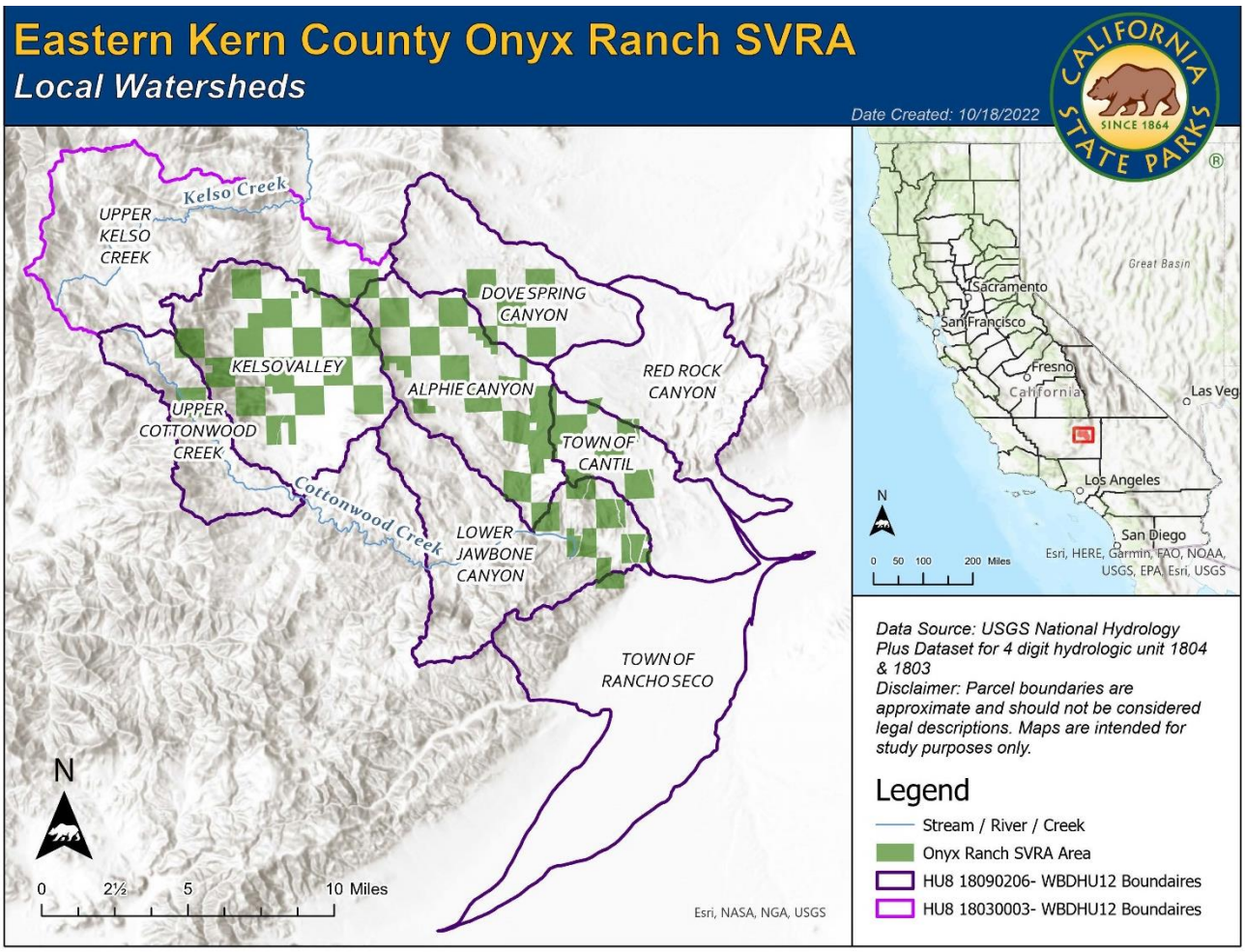


Figure 5. A map of the local watersheds for Onyx SVRA.

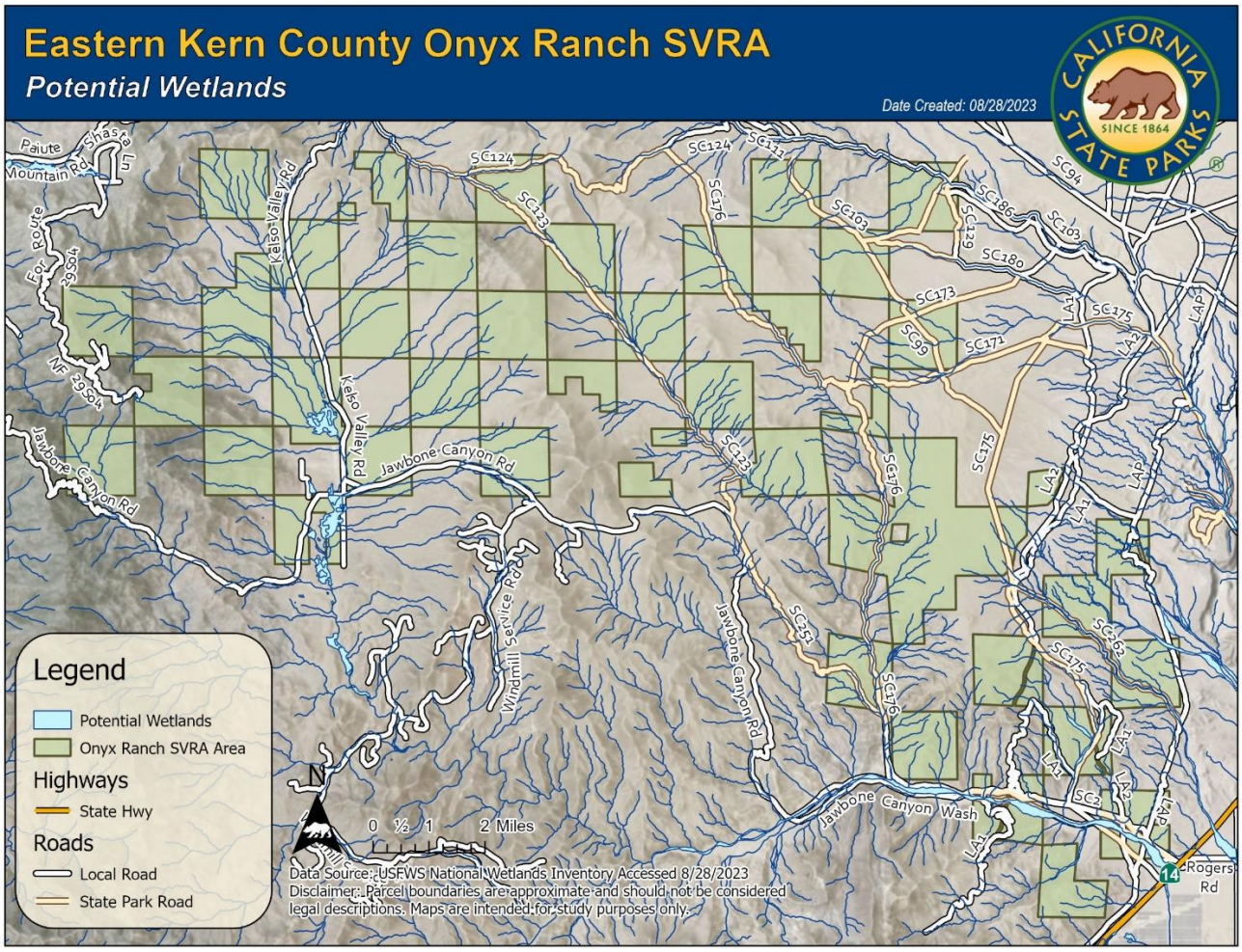


Figure 6. A map of potential wetlands in Onyx SVRA from the USFWS National Wetlands Inventory.

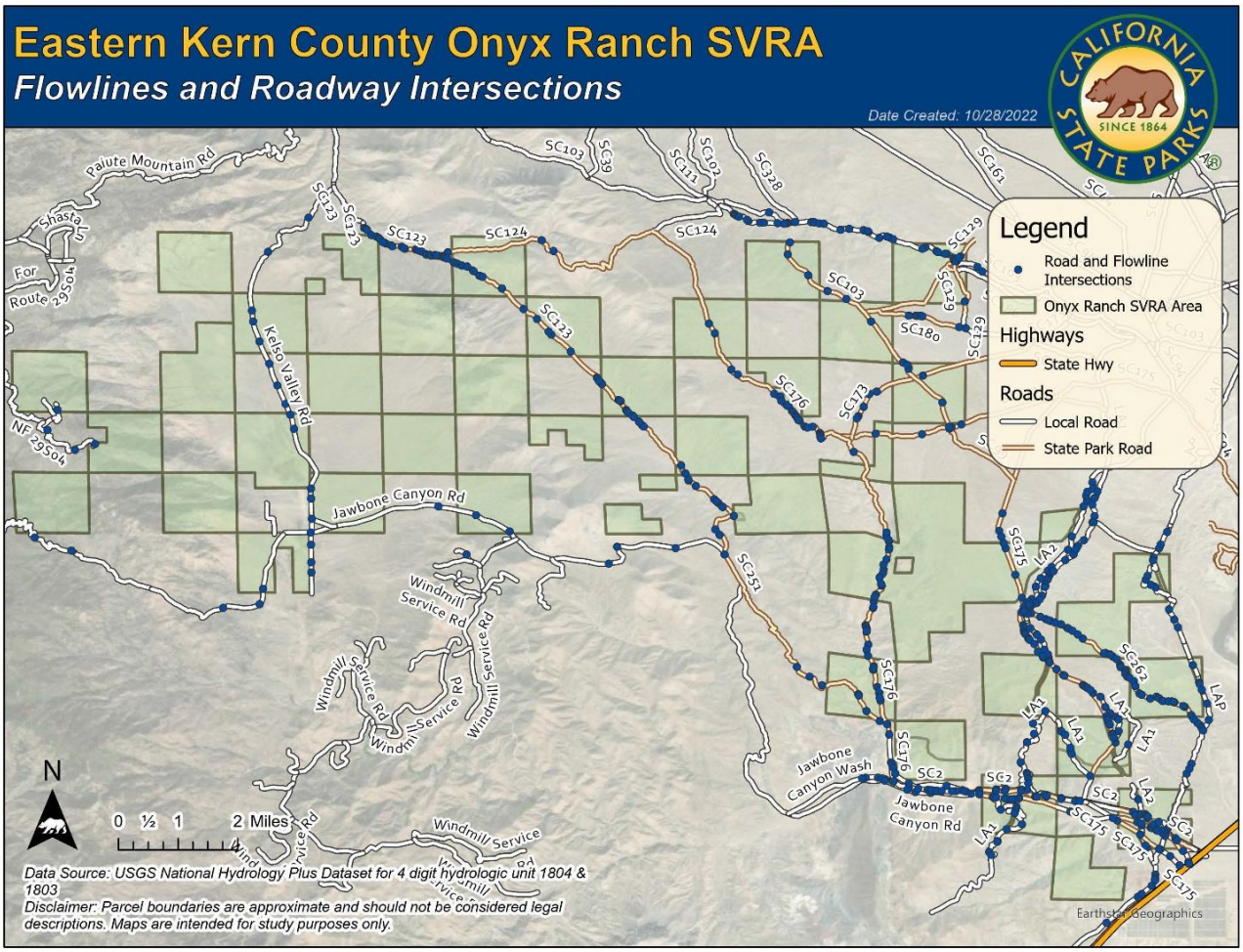


Figure 7. A map locations where hydraulic flowlines of streams and creeks intersect roads and trails in and around Onyx SVRA. A flowline is the drainage path water takes in a stream, creek, or river within the watershed. This map outlines where flowlines intersect roads and trails.

3.1.3 Geology and Soils

Onyx SVRA is located in the Basin and Range geomorphic province east of the Sierra Nevada geomorphic province. The Mojave Desert geomorphic province is situated to the south of the park, separated by the active, east-west trending, left-lateral Garlock Fault. Rocks and features from the adjacent geomorphic provinces can be found in Onyx SVRA. The area is characterized by subparallel, north-south trending fault-bounded mountain ranges and elevated basins that have resulted from extensional processes over the past 40 million years. Major faults that run through Onyx SVRA include the northwest-southeast trending, right-lateral San Andreas Fault and the north-southwest trending, high angle normal Sierra Nevada fault. Fault activity can cause fault rupture, geologic hazards, shaking, and liquefaction.

In general, the soils within the Onyx SVRA consist of Quaternary alluvial and fluvial sediments distributed and deposited by the desert washes, which mostly drain southward and southeastward within Onyx SVRA. These soils range from clays to sandy loams to coarse sands with gravel, cobbles, and boulders. These materials are derived mostly from underlying granitic rock and from metamorphic rock.

Pleistocene non-marine sediments and deposits eroded from granitic bedrock near the surface lie beneath Onyx SVRA. At deeper depths there is granite bedrock and older alluvium. Surface soils vary from clayey to sandy loam. The sandy areas are more susceptible to wind erosion as well as erosion on slopes where vegetation cover is minimal.

Higher elevations are underlain by Mesozoic granite rocks, Pre-Cenozoic granitic and metamorphic rocks, or Pre-Cretaceous metamorphic rocks. The steepest slopes are also concentrated in these high elevation areas and are more susceptible to erosion. Areas with the lowest erosion potential have either Quaternary alluvium, are derived from granite bedrock, or have Pleistocene non-marine units and gentle slopes. See **Figure 8** and **Figure 9** below for a map and legend of the geologic features and soil types within Onyx SVRA.

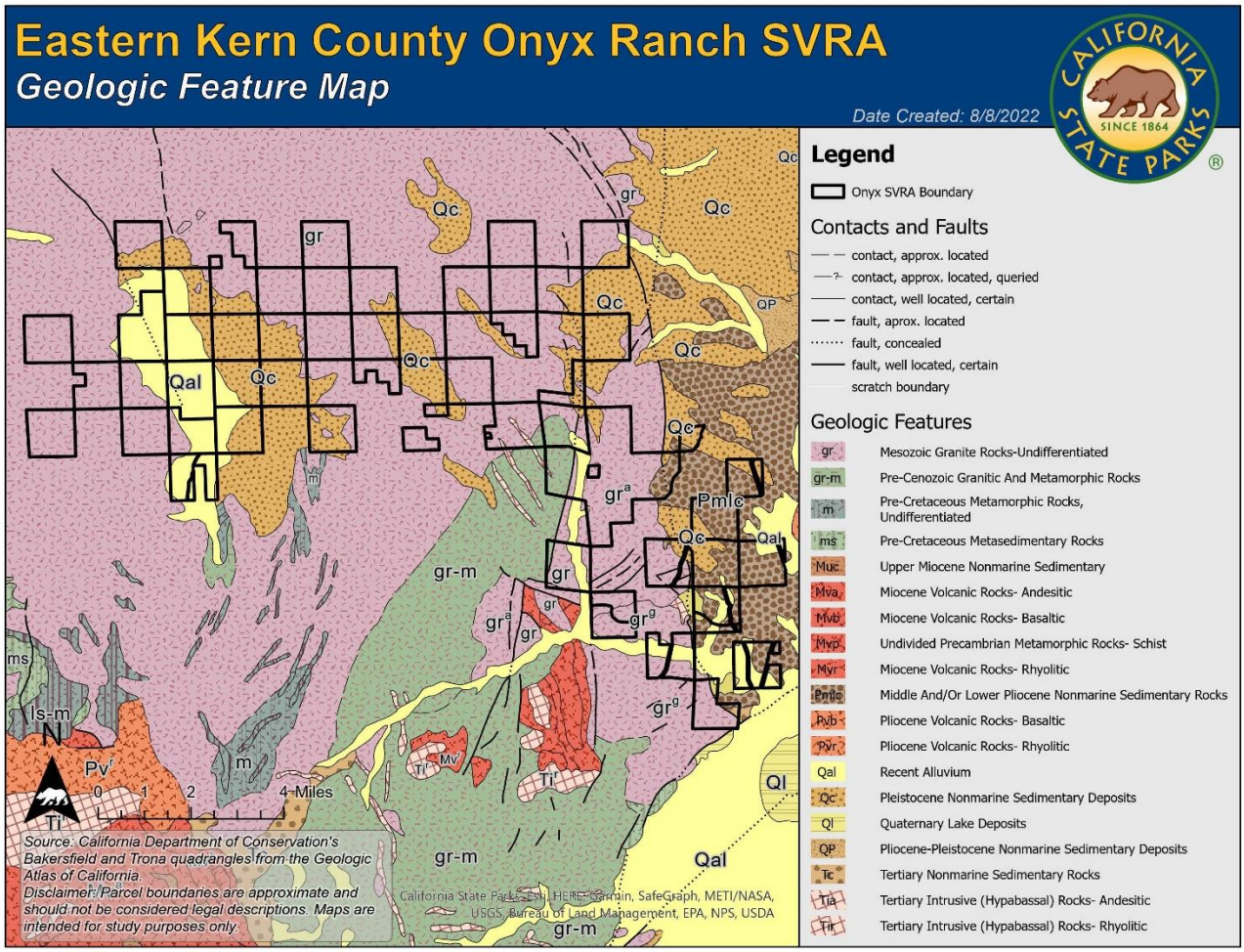
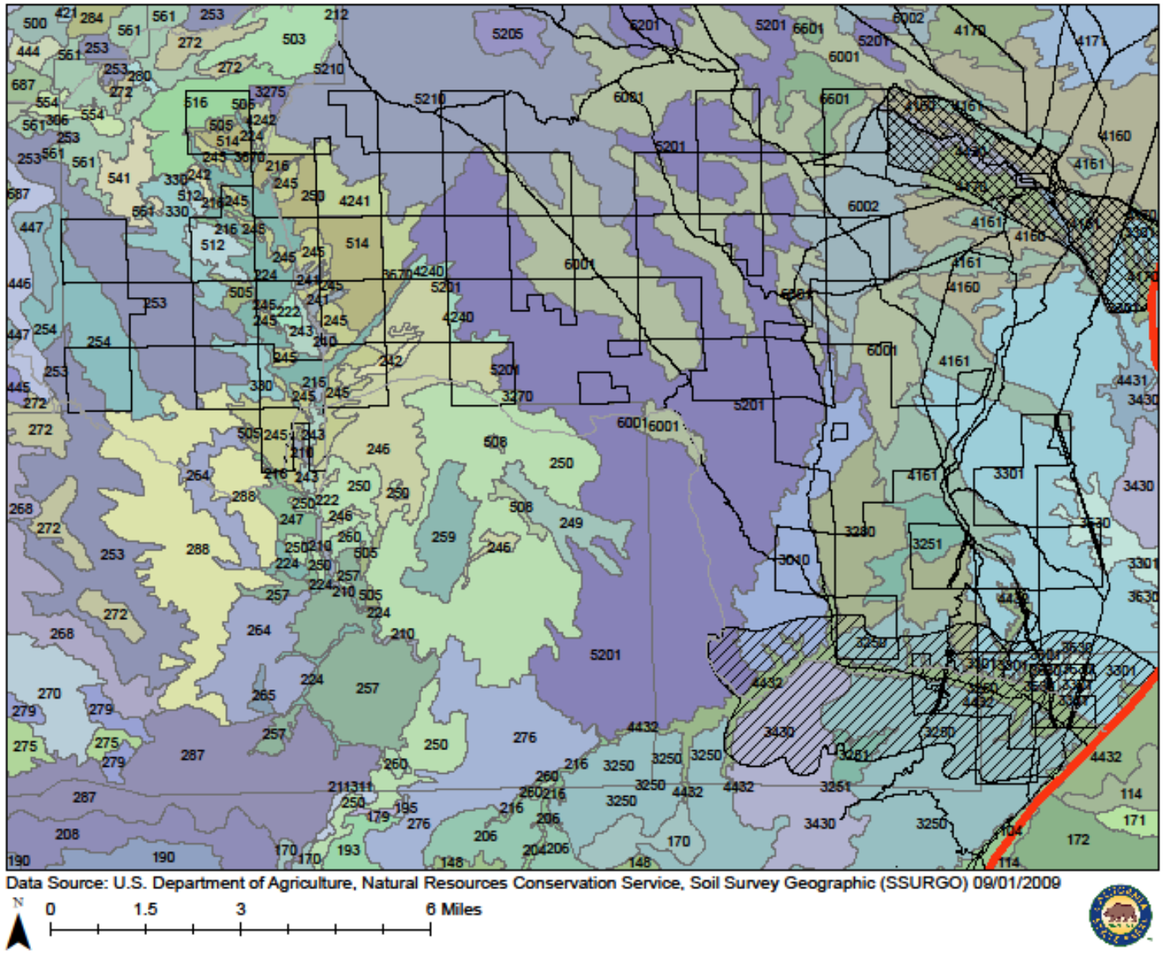


Figure 8. Map of the geological features in Onyx SVRA.

Eastern Kern County Onyx Ranch SVRA Soil Types



Legend

- County Roads
- HWY 14
- Park Routes
- Park Boundary
- Dove Springs Open Area
- Jawbone Open Area

Soil Types

- 104 Arizo gravelly loamy sand, 2 to 9 percent slopes
- 114 Cajon loamy sand, 0 to 5 percent slopes
- 148 Jawbone gravelly loamy sand, 15 to 75 percent slopes
- 170 Rock outcrop
- 171 Rosamond clay loam
- 172 Rosamond clay loam, saline-alkali
- 179 Tehachapi sandy loam, 2 to 15 percent slopes
- 190 Tweedy sandy loam, 50 to 75 percent slopes
- 193 Walong sandy loam, 15 to 30 percent slopes
- 195 Walong-Arujo sandy loams, 15 to 30 percent slopes
- 204 Whitewolf loamy sand, cool, 2 to 5 percent slopes
- 206 Xeric Torriorthents, very steep
- 208 Xerolls-Rock outcrop complex, very steep
- 210 Kernfork fine sandy loam, 0 to 2 percent slopes, occasionally flooded
- 211 Xerorthents-Rock outcrop complex, very steep
- 212 Kernfork fine sandy loam, 0 to 2 percent slopes, frequently flooded
- 215 Kelval loamy sand, 0 to 2 percent slopes, occasionally flooded
- 216 Inyo-Riverwash complex, 0 to 5 percent slopes, frequently flooded
- 222 Kelval fine sandy loam, 0 to 2 percent slopes, occasionally flooded
- 224 Inyo gravelly loamy coarse sand, 0 to 9 percent slopes, occasionally flooded
- 241 Inyo gravelly loamy coarse sand, 0 to 5 percent slopes
- 242 Inyo gravelly loamy coarse sand, 5 to 15 percent slopes
- 243 Kernfork loam, saline-sodic, 0 to 2 percent slopes, occasionally flooded
- 245 Chollawell gravelly loamy coarse sand, 2 to 5 percent slopes
- 246 Chollawell gravelly loamy coarse sand, 5 to 15 percent slopes
- 247 Inyo-Tips-Rock outcrop complex, 5 to 30 percent slopes
- 249 Hoffman-Rock outcrop complex, 30 to 50 percent slopes
- 250 Hoffman-Tips-Pilotwell association, 15 to 50 percent slopes
- 253 Sorrell-Martee-Rock outcrop complex, 30 to 60 percent slopes
- 254 Martee-Rock outcrop complex, 30 to 60 percent slopes
- 257 Hoffman-Tips-Rock outcrop association, 20 to 45 percent slopes
- 259 Cowspring gravelly loamy coarse sand, 15 to 50 percent slopes
- 260 Cowspring-Tips-Rock outcrop complex, 30 to 50 percent slopes
- 264 Arujo-Walong-Tunis association, 9 to 30 percent slopes
- 265 Arujo sandy loam, 9 to 15 percent slopes
- 268 Tunis-Tollhouse-Sorrell association, 30 to 75 percent slopes
- 270 Locobill-Backcanyon-Sesame complex, 20 to 60 percent slopes
- 272 Tollhouse-Edmundston-Sorrell association, 15 to 50 percent slopes
- 275 Strahle-Sesame-Tweedy association, 30 to 75 percent slopes
- 276 Tips-Hoffman-Cinco association, 30 to 60 percent slopes
- 279 Strahle-Rock outcrop-Sesame association, 30 to 60 percent slopes
- 280 Tollhouse-Martee-Edmundston association, 30 to 50 percent slopes
- 284 Tollhouse-Rock outcrop complex, 30 to 60 percent slopes
- 287 Tweedy-Strahle association, 40 to 75 percent slopes
- 288 Sorrell-Arujo-Rock outcrop association, 9 to 50 percent slopes
- 3010 Jawbone-Typic Haplargids-Rock outcrop association, 30 to 60 percent slopes
- 306 Monache variant, drained, warm-Junipero family association, gently sloping
- 311 Xerorthents-Rock outcrop complex, 30 to 75 percent slopes
- 3250 Jawbone association, 30 to 60 percent slopes
- 3251 Jawbone association, 8 to 50 percent slopes
- 3270 Hoffman-Tips-Pilotwell association, 15 to 50 percent slopes
- 3275 Xyno-Rock outcrop-Canebrake association, 30 to 60 percent slopes
- 3280 Typic Torriorthents-Rock outcrop association, 30 to 60 percent slopes
- 330 Kernville-Fayecreek-Rock outcrop complex, 30 to 75 percent slopes
- 3301 Cutterbank association, 15 to 60 percent slopes
- 3430 Pasopeak-Rock outcrop association, 30 to 75 percent slopes
- 3630 Koehn coarse sand, 2 to 8 percent slopes
- 3670 Inyo gravelly loamy coarse sand, 0 to 9 percent slopes, occasionally flooded
- 4160 Dovecanyon-Cutterbank association, 4 to 50 percent slopes
- 4161 Dovecanyon loamy sand, 2 to 8 percent slopes
- 4170 Dovecanyon association, 2 to 8 percent slopes
- 4171 Dovecanyon-Koehn association, 2 to 8 percent slopes
- 421 Rock outcrop-Tollhouse complex, 15 to 30 percent slopes
- 4240 Chollawell gravelly sandy loam, 5 to 15 percent slopes
- 4241 Chollawell-Inyo complex, 5 to 15 percent slopes
- 4242 Chollawell gravelly loamy coarse sand, 5 to 20 percent slopes
- 4430 Koehn sand, 2 to 8 percent slopes
- 4431 Koehn sand, 2 to 4 percent slopes, frequently flooded
- 4432 Koehn association, 2 to 4 percent slopes
- 444 Rock outcrop-Brader-Siskiyou families complex, 20 to 60 percent slopes
- 445 Rock outcrop-Cieneba-Brader family complex, 50 to 75 percent slopes
- 446 Siskiyou-Brader families-Rock outcrop complex, 5 to 30 percent slopes
- 447 Siskiyou family-Rock outcrop-Brader family complex, 30 to 75 percent slopes
- 500 Tollhouse-Rock outcrop complex, 10 to 30 percent slopes
- 503 Tips-Erskine-Rock outcrop association, 30 to 60 percent slopes
- 505 Chollawell gravelly loamy coarse sand, 5 to 20 percent slopes
- 508 Pilotwell-Xyno-Rock outcrop association, 30 to 60 percent slopes
- 512 Chollawell gravelly sandy loam, cobbly substratum, 5 to 15 percent slopes
- 514 Chollawell-Inyo complex, 5 to 15 percent slopes
- 516 Xyno-Rock outcrop-Canebrake association, 30 to 60 percent slopes
- 5201 Wingap-Pinyonpeak association, 8 to 30 percent slopes
- 5205 Scodie-Grandora association, 15 to 60 percent slopes
- 5210 Grandora-Pinyonpeak association, 8 to 60 percent slopes
- 541 Canebrake-Lachim-Rock outcrop complex, 30 to 60 percent slopes
- 554 Deerspring fine sandy loam, 0 to 5 percent slopes
- 561 Scodie-Sacatar-Canebrake complex, 5 to 30 percent slopes
- 6001 Goldpeak-Pinyonpeak-Wingap complex, 2 to 30 percent slopes
- 6002 Goldpeak gravelly loamy sand, 2 to 8 percent slopes
- 6601 Pinyonpeak-Wingap-Rock outcrop association, 8 to 30 percent slopes
- 687 Wind River family-Dome-Rock outcrop association, moderately steep
- NOTCOM Mapping incomplete

Figure 9. Map of soil types in Onyx SVRA.

3.1.3.1 Erosion Hazard Rating

The following information about the erosion hazard in the Park is from *the Eastern Kern County Acquisition Final EIR, Volume 1* from October 2013. The majority of Onyx SVRA has a low to moderate erosion hazard rating (**Figure 10**). Areas of low erosion hazard rating include Kelso Valley, Butterbredt Canyon, and the northeastern portion of the Park. The mountain sides have higher erosion ratings.

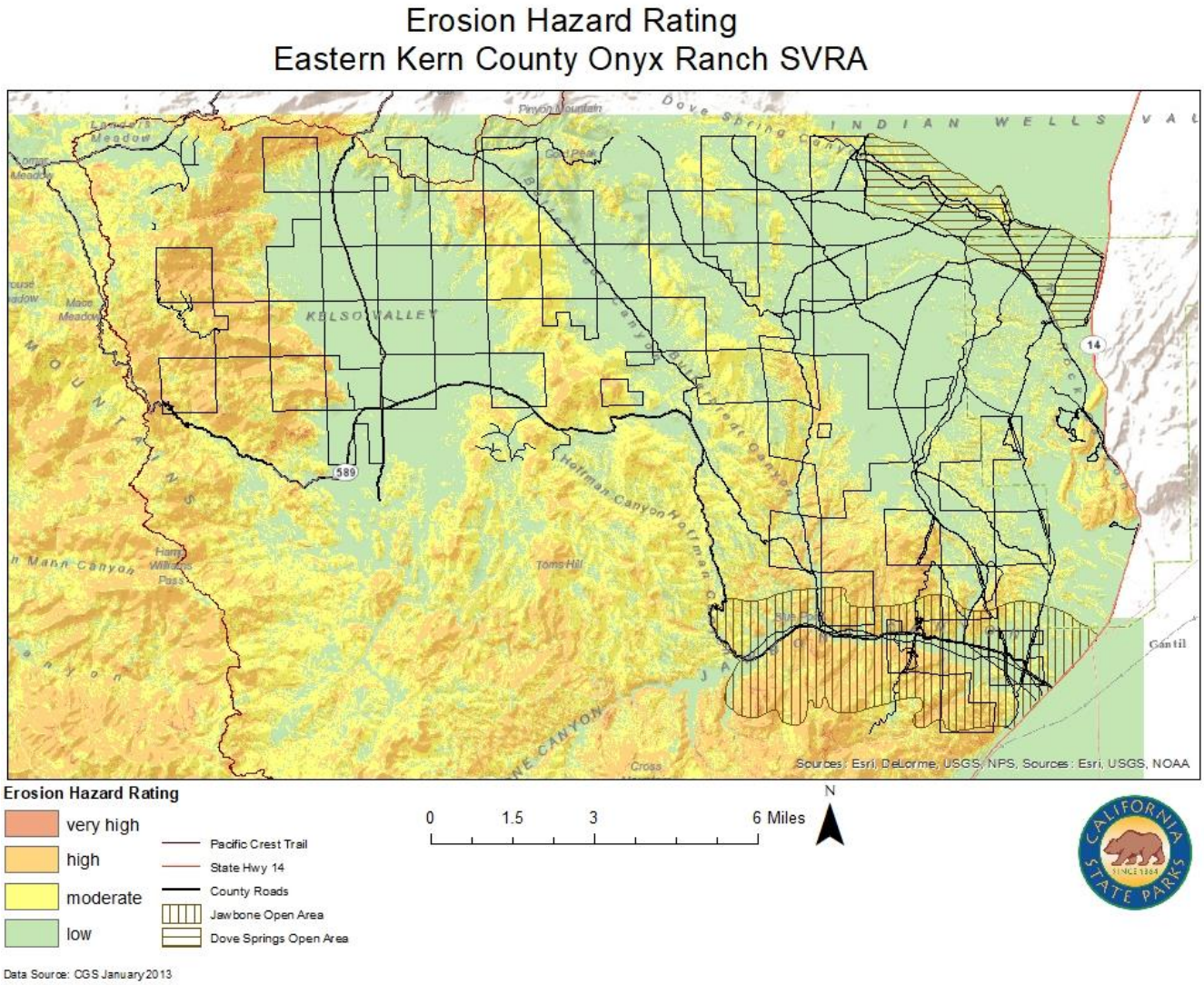


Figure 10. Map of the erosion hazard rating in Onyx SVRA.

3.2 VegCAMP and Sensitive Vegetation Communities

Onyx SVRA trails cross various vegetation communities. The state's current standard for vegetation classification and mapping is known as the Vegetation Classification and Mapping Program (VegCAMP) and is administered by the California Department of Fish and Wildlife (CDFW). VegCAMP classifies vegetation according to the National Vegetation Classification System standards, which is a hierarchal classification of vegetation types, distinguishing alliance and association at the finest scale. An association is a characteristic range of species composition, while an alliance is composed of one or more associations and is usually named after the dominant species of the highest strata, for example, the blue oak woodland alliance. Field surveys identify vegetation alliances and/or associations, and mappers delineate landcover into vegetation type polygons (most commonly at the alliance level) based on information from field surveys and interpretation of aerial imagery. The resulting maps and data provide a foundation for understanding ecosystems and habitats. Currently, 60% of the state is mapped according to VegCAMP standards (CDFW n.d. 2, CDFW 2020).

VegCAMP further evaluates associations to assign them global and state rarity ranks. These alliances, also known as natural communities, are ranked at the state level from one (very rare) to five (stable). Alliances with a state rank one, two, or three are Sensitive Natural Communities that should be addressed in environmental review. More information about alliances is available in the Manual of California Vegetation online (CNPS 2022).

The footprint of Onyx SVRA is covered by recent VegCAMP vegetation maps, completed in 2020, 2021 and 2013. (Reyes et al. 2020, Reyes et al. 2021, Menke et al. 2013). The maps and data were downloaded in Spring 2022 from the BIOS viewer (CDFW n.d. 1), clipped to the Onyx Ranch boundary, and used to generate a list of vegetation types and their associated state ranks. State Parks staff conducted surveys in April 2022 to validate the map and survey additional herbaceous alliances. A map showing the Sensitive Natural Communities displayed by their state rank in Onyx SVRA is below in **Figure 11**. See Appendix A for maps of the Sensitive Natural Communities which display specific alliances.

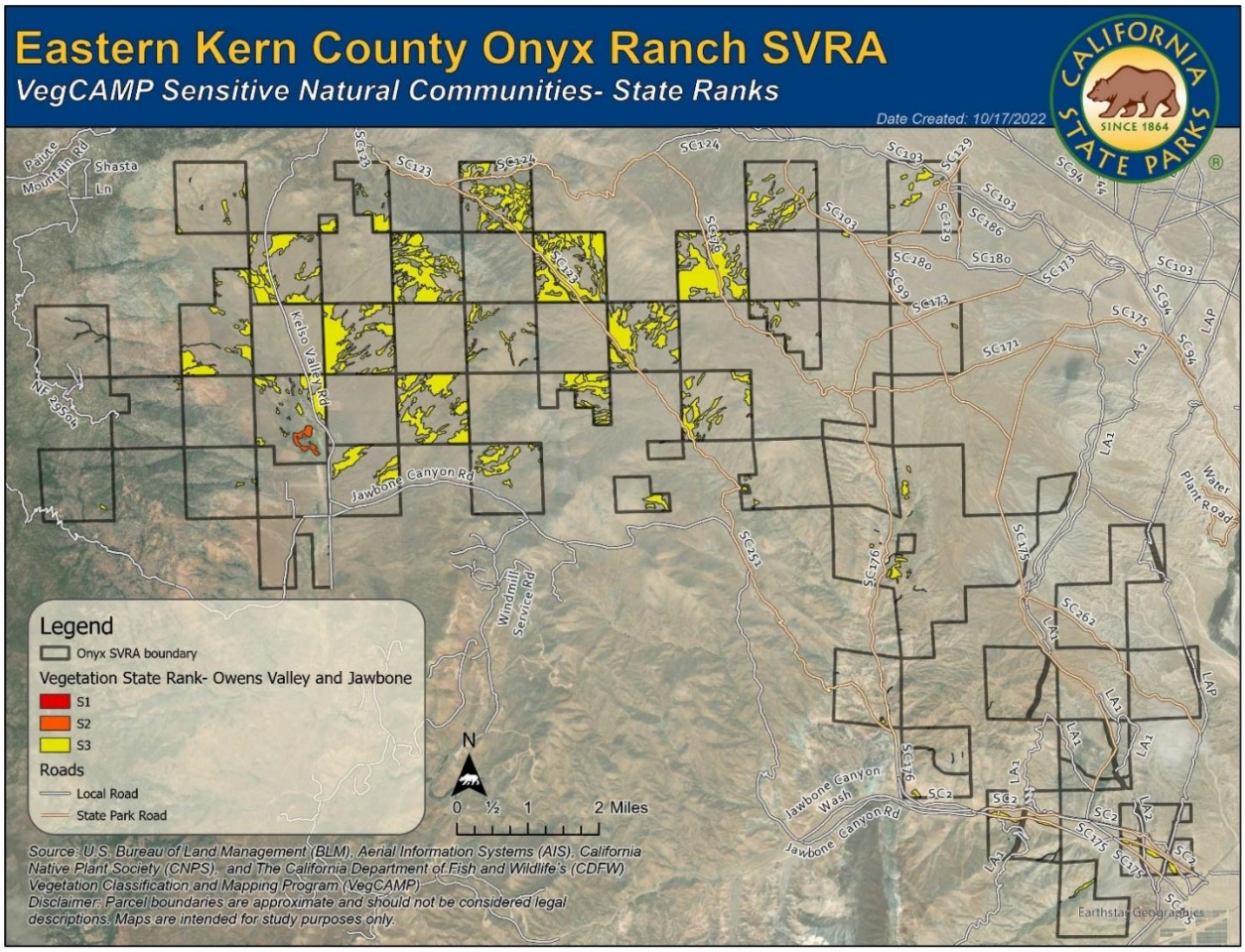


Figure 11. Map of the Sensitive Natural Communities in Onyx SVRA displayed by the State Rank.

3.3 Management Units

Management Unit (MU) delineation at Onyx SVRA is based on vegetation community differences, OHV use type, and the maintenance regimes. A map of the MUs in the Park is below in **Figure 12**. Six MUs and one Sub-Management Unit are in Onyx SVRA and soil types vary throughout the Park. More information on the maintenance and monitoring regimes for the MUs can be found in the Maintenance Plan and Monitoring Plan. Below is a summary of the MUs and soil types in Onyx SVRA.

1. **<u>Kelso Valley and Surrounding Area</u>:** The dominant vegetation community in this MU is composed of Joshua tree woodland, upper Mojave woody scrub, oak forest/woodland, and pine forest/woodland. No OHV riding is permitted in this area and there are no CDPR managed roads in this MU. Cattle grazing pastures and cattle drinking ponds are within this area.

   SOILS: This MU has outcrops of granitic and other intrusive crystalline rocks as well as alluvial fan deposits. The west part of the valley includes rocky outcrops with 30 to 60 percent slopes that consist of shallow, somewhat excessively drained soil. Gentle slopes with gravelly to sandy loam sands are well drained soils formed in mixed alluvium dominantly from granitic rock.

2. **Mack Meadow Cabin:** The dominant vegetation community in this MU is meadow and seep, annual grassland, and desert wash and terrace. No OHV riding is permitted in this area and there are zero miles of CDPR managed roads in this MU. Cattle grazing pastures and cattle drinking ponds are within this area.

   SOILS: Soils consists of alluvial valley deposits with fine sandy loam that occasionally floods. Slopes occurs between 0 to 2 percent in these areas.

3. **Trail Only Area:** The dominant vegetation community in this MU is Joshua tree woodland/blackbrush scrubland, creosote and bursage scrub, and mixed Mojave woody scrub. This area is designated for trail only OHV use and often requires erosion and fence repair. There are approximately 22.7 miles of CDPR managed trails within this MU which were inherited when the property was acquired. Within this MU are two freshwater spring ponds that require cattail management and one intermittent spring. This area is within a grazing pasture. The PCT crosses this MU.

   3a. **Butterbredt Spring:** The dominant vegetation community is wetland/riparian and Joshua tree woodland/blackbrush scrubland. This MU is adjacent to an OHV trail and has a volunteer pedestrian trail within it. Fence repair and cattail management are often needed.

   SOILS: Soils formed from granitic alluvium forming loamy sands in gentle slopes. The area has well drained soils with low runoff. The hills and mountains consist of the Wingap soil series on slopes from 4 to 30 percent. Soils are well drained with low or medium runoff.

4. **Jawbone Open Area:** The dominant vegetation community in this MU is creosote and bursage scrub and desert wash. Open riding and primitive camping occurs throughout this MU. There are approximately six miles of CDPR managed trails within this MU which were inherited when the property was acquired.

   SOILS*:* The Jawbone series consists of shallow, excessively drained soils that formed in material weathered from granitic rocks. Jawbone soils are on mountainous side slopes and ridges and have slopes of 8 to 75 percent.

5. **Onyx Campsites:** The dominant vegetation community in this MU is creosote and bursage scrub and desert wash and terrace. This area is designated for trail only OHV use and there are designated primitive campsites throughout. There are approximately 2.3 miles of CDPR managed trails within this MU which were inherited when the property was acquired. It often requires fence repair. This area is within a cattle grazing pasture.

   SOILS: This area also consists of the Jawbone series which consists of shallow, excessively drained soils that formed in material weathered from granitic rocks. Jawbone soils are on mountainous side slopes and ridges and have slopes of 8 to 75 percent.

6. **Onyx SVRA:** This MU is the entire Park and consists of the previous five MUs. The dominant vegetation community is Joshua tree woodland/blackbrush scrubland and creosote and bursage scrub. There is mixed OHV use and a cattle grazing allotment across the MU. There are

approximately 31 miles of CDPR managed trails within this MU which were inherited when the property was acquired.

SOILS: Consists of the previous five management units.

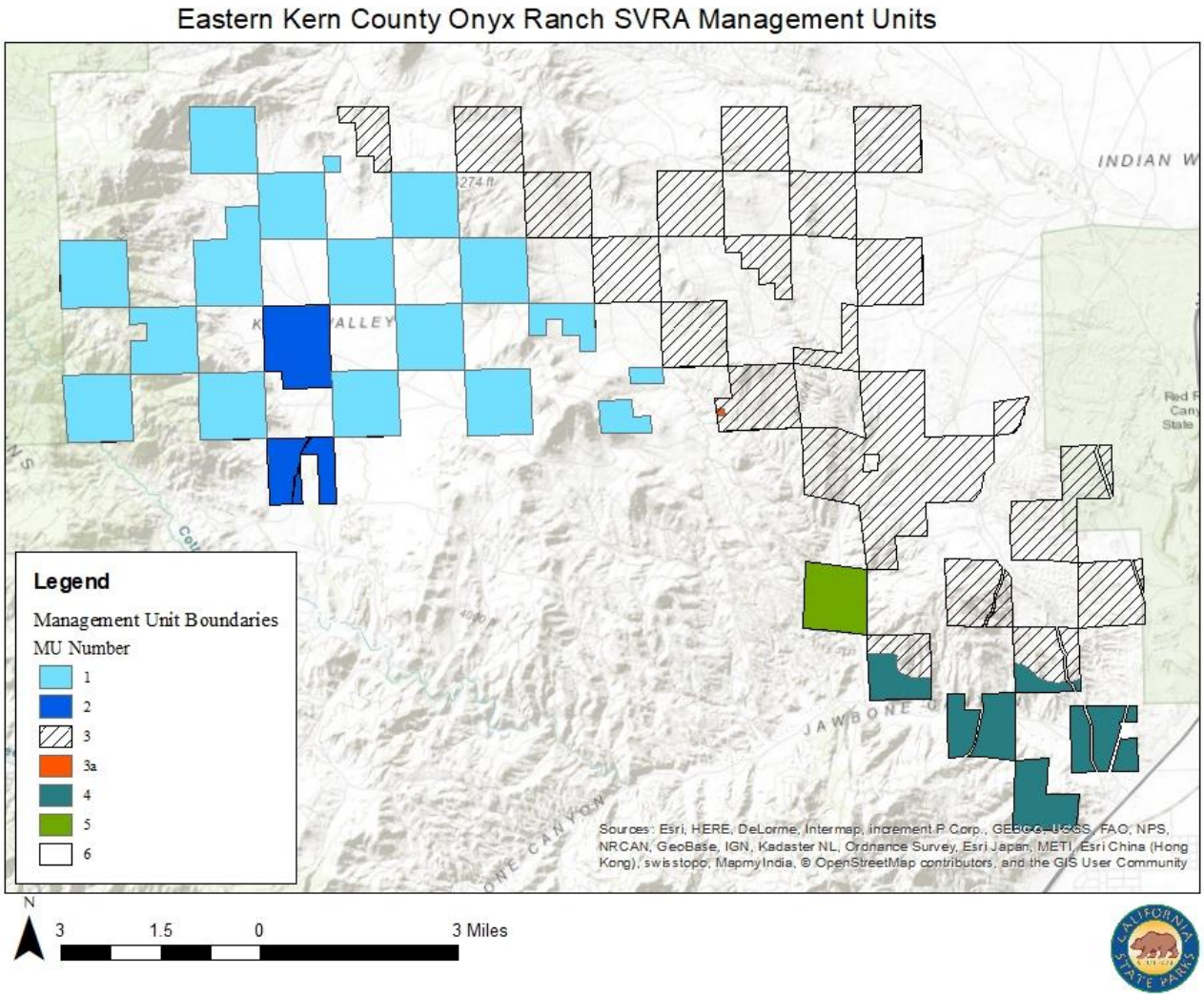


Figure 12. Map of MUs in Onyx SVRA. NOTE: MU 6 is the entire park.

3.4 Establishing Baseline Trail Conditions

Beginning in 2022, Trail Condition Evaluations, as described in Appendix 3 of the 2020 Soil Conservation Standard and Guidelines (CDPR 2020), will be systematically done over time to evaluate the initial condition of designated OHV trails in Onyx SVRA. Trail Condition Evaluations will collect data that will be used to create maps of trail conditions and water crossings in all MUs containing CDPR managed trails, including MUs 3-6. Within the MUs, trails in areas with a high erosion hazard, determined by the Erosion Hazard Map (**Figure 10**), and trail sections that cross drainages, determined by the Potential Wetlands Map (**Figure 6**), will be priority in the order and frequency of trail evaluations. Additionally, trails with higher use levels (SC175, SC 251, and trails in MU4) will be second priority.

Trail Condition Evaluations will be done digitally using ArcGIS Field Maps. Within Field Maps, monitoring personnel will enter the same information collected in the Trail Condition Evaluation Form found in **Appendix C**. CDPR managed trails will be broken down into trail sections. Trail sections will be rated green, yellow, or red for trail conditions and sustainability. Ratings will be based on the information collected during the evaluations, such as slope, watercourse crossings, drainage features and function, and erosion condition. The data collected in Field Maps will be used to make a map of the trail conditions throughout the park with each section represented as green, yellow, or red. The outcome of the Trail Condition Evaluation will inform the Maintenance Plan. In 2024, Trail Condition Evaluations will be updated to also document locations of where unauthorized user-created trails intersect designated routes. These locations will inform the monitoring and maintenance related to specific objectives for the SCP as well as for the WHPP.

For Quality Assurance/Quality Control (QA/QC), monitoring personnel will be properly trained to ensure data is consistently collected. As Trail Condition Evaluations start being implemented, monitoring personnel will monitor a subset of the trails together so that the ratings and methods are standardized. If there are enough available staff and vehicles, a duplicate sample of ten percent of the trails will be done by different individuals to check the QA/QC of the collected data.

Trail conditions will be assessed using the timeline below.

- Year 1: Natural resource staff will become familiar with assessing trails using the Trail Condition Evaluation Form. Trail assessments will be done for all CDPR managed routes. A field map will be made using ArcGIS Online to collect data for the trail assessments and spatially represent the results.
- Years 2-5: Reassessments will be done as described in the Monitoring section below.

4 Goals and Objectives

The purpose of Onyx SVRA is to provide quality OHV recreation while conserving and protecting natural and cultural resources. Ecosystems within the Park include high desert, desert riparian, and montane. Soil conservation through the SCP is needed to maintain sustainable soil conditions for these ecosystems and the OHV recreation that occurs in them. Adaptive management is a critical part of the SCP because it allows for informed management actions that adapt over time-based on-site conditions and monitoring. This section provides a description about the goals and objectives developed for adaptative soil management at Onyx SVRA to meet compliance with the Soil Conservation Standard.

4.1 Determining Compliance with the Soil Conservation Standard

There are two main components to consider when assessing compliance with the Soil Conservation Standard (CDPR 2020):

1. “Sustainable long-term prescribed use” – Sustainable prescribed use would be minimum service life of 25 years. To achieve sustainability, soil loss must not exceed restorability (i.e., the ability to be restored) and if trails or portions thereof cannot be maintained to appropriate established standards for sustained long-term use, they shall be closed to use and repaired, to prevent accelerated erosion. Those areas shall remain closed until they can be managed within the Standard or shall be closed and restored.

2. Preventing “erosion or sedimentation which significantly affects resource values beyond the facilities.” A facility is defined as an OHV trail, track, road, corridor, SVRA, open-ride area, staging area, and/or parking area (excluding structures) (CDPR 2008).

4.2 SCP Goals and Objectives

The overall goals for Onyx SVRA’s SCP are to establish a process for the Park to assess compliance with the Standard, identify maintenance needs associated with compliance, and outline a Monitoring Plan that informs adaptive management. The Onyx SVRA SCP objectives tier directly from the goals of the Standard, consider objectives from relevant state and regional conservation documents, and incorporate best available science. Objectives to meet these goals are discussed in the Monitoring Plan below and follow the S.M.A.R.T. (specific, measurable, achievable/attainable, realistic, and timely) format. These objectives are informed by information gathered for Section 3 Assessment of Existing Conditions and span the next five years.

Objective 1: Within the next five years ensure there are no red-rated roads, trails, or water crossings in any of the MUs designated for OHV use.

> S.M.A.R.T. Target: Zero red-rated roads, trails, or water-crossings in MUs 3, 4, and 5. If there are red-rated or yellow-rated roads, trails, or water-crossings generate a list within two weeks prioritizing repair and immediate maintenance needs.

Objective 2: Over the next five years ensure trespass and unauthorized user-created trails do not extend from Open Areas into trail-only riding areas (MU 3- Trail Only Area).

> S.M.A.R.T. Target: Zero new unauthorized user-created trails extending into MU3- Trail Only Area from MU4- Open Area. Document and address unauthorized user-created trails as they encountered.

Objective 3: Identify and document red-rated trail sections that emerge in MUs 3, 4, and 5 after storm events with greater than one inch of precipitation falling over the course of 24 hours.

> S.M.A.R.T. Target: Within two weeks of storm events with greater than one inch of precipitation falling over the course of 24 hours, perform trail condition assessments in known problem areas in MUs 3, 4, and 5. Generate a prioritized list of repairs and maintenance of red and yellow-rated trail sections.

Objective 4: Ensure soil disturbance from large special events held at Onyx SVRA is minimized by keeping all activities confined to public-use areas, assuring no new trails are created, and making sure no new ground disturbance occurs.

> S.M.A.R.T. Target: Confine special events to public-use areas, ensure no new trails are created and no new ground disturbance occurs.

Objective 5: Pre-emptively identify and document erosion and/or soil loss related concerns monthly to prevent unnatural accelerated erosion.

> S.M.A.R.T. Target: Ensure no new red-rated trail sections, features, or unauthorized user-created trails go unnoticed. Create a prioritized maintenance list within two weeks of discovering new problem areas.

Objective 6: Ensure all OHV road and trail maintenance activities minimize soil disturbance, reduce unnatural erosion, and are performed in accordance to the Maintenance Checklist (available in Section 9.2 Appendix B).

S.M.A.R.T. Target: Within a week following major, non-routine maintenance activities, natural resources staff will perform site visits to ensure maintenance was executed properly and effectively according to the Soil Conservation Standard and Guidelines and ensure the maintenance checklist was implemented and adhered to.

5 Maintenance Plan

The Maintenance Plan outlines the current maintenance schedule, type of maintenance conducted, equipment used for maintenance, and procedures for documenting maintenance activities for each MU. The maintenance plan will be updated over time to adapt to management objectives and persistent maintenance problems identified by the initial assessment and the Monitoring Plan below.

5.1 Maintenance Schedule

Annual Trail Condition Evaluations, Post Storm Event Inspections, Special Event Monitoring, and Post-Maintenance Monitoring inform the maintenance schedule for each MU. In addition, incidental observations of trail conditions will inform park operations of maintenance needs as applicable. As needs arise, heavy equipment operators within the district perform maintenance. Because there is no water truck for the Park, maintenance activities are prioritized after storm events that result in soil moisture. In general, the MUs require maintenance on the schedules below.

- **MU 1 - Kelso Valley and Surrounding Area:** There is no authorized OHV recreation in this area. Primary management effort for this MU is to discourage OHV recreational use via fencing and signage. An aerial assessment of trail density may be done to determine where the highest density of unauthorized user-created trails occur. Signage and/or fencing may be installed or repaired in areas with the highest density of unauthorized user-created trails.
- **MU 2 - Mack Meadow Cabin:** There is no OHV recreation in this area. Primary management effort for this MU is to discourage OHV recreational use via fencing and signage. An arial assessment of trail density may be done to determine where the highest density of unauthorized user-created trails occur. Signage and/or fencing may be installed or repaired in areas with the highest density of unauthorized user-created trails.
- **MU 3 – Trail Only Area:** This MU contains the majority of the Park's inherited OHV trails and gets moderate use, requiring maintenance more often. Maintenance here is often done after high use periods, such as holiday weekends, and after large storm events. Maintenance after high use periods includes grading trails and repairing fence lines. After large storm events, drainage features may need to be repaired. Primary management effort for this MU is to keep OHV recreational use on the designated trails. An arial assessment of trail density may be done to determine where the highest density of unauthorized user-created trails occur. Signage and/or fencing may be installed or repaired in areas with the highest density of unauthorized user-created trails.

    - **MU 3a - Butterbredt Spring:** There is no OHV recreation in this area. Primary management effort for this MU is to maintain the existing fence line around the spring.
- **MU 4 - Jawbone Open Area:** This MU is within Jawbone Open Area, gets high use and contains areas prone to erosion. This area also has a high tail density as it is part of the BLM Jawbone Open Area. It requires maintenance more often and is often worked on after high use periods and storm events. Maintenance after high use periods includes grading trails and repairing fence lines. After large storm events, drainage features may need to be repaired. Primary management effort in this MU is to maintain and repair trail conditions and reduce erosion.
- **MU 5 - Onyx Campsites:** This MU contains designated camping areas, gets high use, and has areas prone to erosion. It requires maintenance more often and is often worked on after high use periods and storm events. Maintenance after high use periods includes grading trails and repairing fence lines. After large storm events, drainage features may need to be repaired. Primary management effort in this MU is to maintain and repair trail conditions and reduce erosion.
- **MU 6 - Onyx SVRA:** This MU encompasses the whole park. The maintenance schedule follows that of the other five MUs. Primary management effort in this MU is to maintain OHV roads and trails to the 2020 Soil Standard.

5.2 Types of Maintenance Activities and Equipment

The heavy equipment operator based in Red Rock SP maintains the roads and trails as needed in Onyx SVRA. At Red Rock SP, there is a backhoe and skid steer. Other equipment can be transported from Hungry Valley SVRA for use in Onyx SVRA if needed. The trail crew at Hungry Valley SVRA is also available to provide assistance with non-mechanized trail maintenance, such as repairing fence lines to protect sensitive and restricted areas.

Maintenance activities include grading the road for tread maintenance, repairing fence lines, and repairing drainage features by repairing and clearing drainage outlets, water breaks, rolling dips, and pulling berms onto trails. Although a single road may cross multiple landowners, all park maintenance is restricted to CDPR parcels.

5.3 Documentation of Maintenance Activities

Heavy equipment operators complete a *Mechanized Construction – Maintenance Checklist* form each time they perform mechanized maintenance activities within Onyx SVRA park boundaries. This checklist is located in **Appendix B**. Within the form, the operator of the equipment, type of equipment, soil type, soil moisture, weather, trail slope, and type of maintenance is selected. There are also several guiding principles that are checked off as they pertain to the maintenance activity. Forms are turned into the Park's Environmental Scientists upon maintenance completion and are reviewed, added to the annual Compliance Report, and stored onsite both digitally and hard copied in a file. Refer to Compliance Report and Action Plan section under the Monitoring Plan for details of what is discussed in this report.

5.4 Guidelines for Maintenance Activities

The following guidelines, excerpted from the 2020 Soil Conservation Standard and Guidelines (CDPR 2020), will be followed for all pertinent maintenance activities.

- *Conduct maintenance for OHV trails with deference to the skill rating of the trail. An expert trail may look "ugly," to the casual observer but this may be due to features on*

the trail that qualify it for an expert skill rating. Maintenance may not be needed on such a trail if it is stable and not creating drainage or sedimentation problems and is otherwise in compliance with the 2020 Standard.

- *At failed drainage structures, determine the cause of failure before repairs are initiated. Input from qualified experts is usually required.*
- *Do not conduct maintenance that compacts soil if soil is too wet or too dry.*
- *Remove and reuse sediment that has accumulated in trail waterbreak (e.g., rolling dips, sediment basins/ponds/traps) for other trail structure needs, such as rebuilding the crests between rolling dip troughs.*
- *Minimize or eliminate outside berms. However, do not "blade" off the trail as sidecast. Berm materials should be pulled back and graded into the trail tread.*
- *Repair rills and gullies in trail treads with soil reclaimed from waterbreak outlets and outside berms. Soil should not be scraped from the trail tread to fill rills and gullies.*
- *Smoothly grade soil and rock that may have sloughed onto a road or trail from a roadcut to make a safe trail. In some cases, analysis by a qualified geologic expert may be needed to determine if removal of the sloughed material will destabilize the roadcut.*
- *Conduct repair of "whoops" or "stutter" bumps by ripping the trail tread and regrading.*
- *Conduct any road or trail maintenance objective by moving the smallest amount of soil necessary to meet the objective.*
- *Evaluate the need for maintenance with mechanical equipment before equipment is mobilized to the maintenance site.*
- *Transport maintenance equipment across sections of trail that do not need maintenance without impacting those sections.*

6 Monitoring Plan

The Monitoring Plan ensures that Onyx SVRA's facilities and features are functioning properly and that the Standard is being met. Each type of monitoring includes an objective that follows S.M.A.R.T. (specific, measurable, achievable/attainable, realistic, and timely) format principles and inherently conform to best available science and adaptive management. Monitoring objectives are met by:

- Utilizing the Trail Condition Evaluations as a parameter to assess and monitor trail conditions;
- Establishing baselines of existing conditions, where applicable, of OHV roads and trails, drainages and water crossings based on the Trail Evaluations;
- Establishing a target for OHV roads and trails based on the following:
    - Re-evaluating the condition of designated OHV trails annually;
    - Ensuring trespass and unauthorized user-created trails do not extend into trail-only riding areas and non-OHV areas;
    - Continued assessment of drainages and water crossings for erosion and maintenance needs;
    - Identifying areas needing repairs after storm events;
    - Monitoring special event routes to ensure standards are being met; and
    - Ensure maintenance activities were implemented effectively.

In addition to the monitoring methods described above, park staff conduct visual monitoring as part of the routine patrol of Onyx SVRA.

6.1 Monitoring Schedule

The monitoring activities outlined in the following sections will follow the schedule below in **Table 2**.

Table 2. Monitoring schedule for Onyx SVRA.

Monitoring Activity	Timing	Frequency
Trail Condition Evaluations	July-September	Annually
Open-Riding Area Monitoring	Done incidentally to other management activities year-round.	Year-round
Post Storm Event Inspections	After storm events.	Year-round
Special Event Monitoring	After special events.	Year-round
General Field Observations	Done incidentally to other management activities year-round.	Year-round
Post-maintenance Monitoring	After maintenance activities.	Year-round

6.2 Repeated Trail Condition Evaluation

Objective 1: Within the next five years ensure there are no red-rated roads, trails, or water crossings in any of the MUs designated for OHV use.

> S.M.A.R.T. Target: Zero red-rated roads, trails, or water-crossings in MUs 3, 4, and 5. If there are red-rated or yellow-rated roads, trails, or water crossings, generate a list within two weeks prioritizing repair and immediate maintenance needs.

Monitoring: Assess trail conditions throughout the Park annually to inform management decisions and create a map of trail conditions and water crossings. Trail Condition Evaluations, discussed in the Assessment section above, will be repeated over time to allow ongoing monitoring of changes in trail conditions. Trails in areas with a high erosion hazard, determined by the Erosion Hazard Map (**Figure 10**), and trail sections that cross drainages, determined by the Potential Wetlands Map, will be first priority in the order and frequency of trail evaluations. Additionally, trails with higher use levels (SC175, SC 251, and trails in MU4) will be second priority. A copy of the Trail Condition Evaluation form can be found in **Appendix C**.

Management Response: If red-rated or yellow-rated sections are identified, a prioritized maintenance list will be generated within two weeks to fix any issues and perform immediate maintenance needs. This list will be given to the district's heavy equipment operator(s). Problem areas may have photos taken to document before and after images. If a section of trail has regularly reoccurring issues, a more permanent solution will be executed in reference to the 2020 Soil Conservation Standard and Guidelines. A geologist will be consulted if more complex erosion issues are identified.

6.3 Monitoring of Open-Riding Areas

Objective 2: Over the next five years ensure trespass and unauthorized user-created trails do not extend from Open Areas into trail-only riding areas (MU 3- Trail Only Area).

S.M.A.R.T. Target: Zero new unauthorized user-created trails extending into MU3- Trail Only Area from MU4- Open Area. Document and address unauthorized user-created trails as they encountered.

Monitoring: Onyx SVRA resource staff will monitor the boundaries of the Jawbone Open Area and Dove Springs Open Area and observe and monitor fence conditions for new and problematic unauthorized user-created trails extending from the Open Areas onto trail-only CDPR parcels. This monitoring is done incidental to other management activities within the Park. Additionally, starting in 2024 the locations of unauthorized user-created trails will be documented during Trail Condition Evaluations discussed in Section 3.4 and Section 6.2. Data from these evaluations will inform the monitoring and management for Objective 2.

Management Response: As problems are identified, they are documented and addressed. These problems, and their solutions, are included in the annual Compliance Report and Action Plan. If a section of trail has regularly reoccurring issues, a more permanent solution will be executed in reference to the 2020 Soil Conservation Standard and Guidelines. For instance, if a wire fence is repeatedly cut, it may be replaced with a wooden peeler fence.

6.4 Post Storm Event Inspections

Objective 3: Identify and document red-rated trail sections that emerge in MUs 3, 4, and 5 after storm events with greater than one inch of precipitation falling over the course of 24 hours.

S.M.A.R.T. Target: Within two weeks of storm events with greater than one inch of precipitation falling over the course of 24 hours, perform trail condition assessments in known problem areas in MUs 3, 4, and 5. Generate a prioritized list of repairs and maintenance of red and yellow-rated trail sections.

Monitoring: Following storm events with greater than one inch of precipitation falling over the course of 24 hours, resource staff will perform inspections of known problem areas. Trails in MUs with a high erosion hazard (MUs 3, 4, and 5) are a priority for these informal inspections. Specifically, SC 176 and SC 251 are assessed.

Management Response: If problems are identified, a prioritized maintenance list will be generated to fix any issues and perform immediate maintenance needs. This list will be given to the district's heavy equipment operator(s). Problem areas may have photos taken to document before and after images. If a section of trail has regularly reoccurring issues, a more permanent solution will be executed in reference to the 2020 Soil Conservation Standard and Guidelines.

Maintenance and repair after a storm event do not necessarily mean the Park is out of compliance with the soil standard or that there is a sediment effect beyond the Park's boundary, but trail sections may be temporarily closed due to safety issues. All trails in Onyx SVRA were inherited and cross boundaries with BLM property. Temporary closure of trail sections may require coordination with the BLM.

6.5 Special Event Monitoring

Objective 4: Over the next five years, minimize soil disturbance caused by special events.

S.M.A.R.T. Target: Confine special events to public-use areas and ensure no new trails are created and no new ground disturbance occurs.

Monitoring: Onyx SVRA resource staff will monitor soil related impacts from special events by performing pre- and post-event inspections. The resource staff at Onyx SVRA will approve trail conditions for special event routes before and after the event takes place to ensure standards are being met. To prevent new trail creation and ground disturbance, special events will be confined to public-use areas. Typically, there are a couple of special events at Onyx SVRA a year. These events are usually either Sport Rides or film shoots, and often cross between BLM parcels and CDPR parcels, requiring a permit from both entities. Special event permits for Onyx SVRA usually require the following with regards to roads and trails:

- All vehicles, equipment and animals will be confined to public access roads or parking lots.
- No structures or sets are to be built, no trees or shrubbery are to be cut, trimmed or injured and no disturbance is to be made of the ground surface.
- Plants and animals are fully protected and must not be harmed.
- Permit holder must avoid activities that may cause soil erosion.
- All vehicles must stay on established roadways.
- For films, actors and crew will take reasonable precautions to avoid contact with vegetation in order to not damage the Park's natural resources.
- State Park Peace Officers are usually required to monitor courses and film events.

Management Response: If inspections determine special events are causing issues, resources staff will work with the special event coordinator to mitigate issues and to add verbiage to special event permits that stress the importance of following guidelines.

6.6 General Field Observations

Objective 5: Pre-emptively identify and document erosion and/or soil loss related concerns monthly to prevent unnatural accelerated erosion.

> S.M.A.R.T. Target: Over the next five years, ensure no new red-rated trail sections, features, or unauthorized user-created trails go unnoticed. Create a prioritized maintenance list within two weeks of discovering new problem areas.

Monitoring: Park staff will observe field conditions while in the Park. Trail conditions, drainages and water crossings are monitored for erosion and maintenance needs. Unauthorized user-created trails are documented using photos and GPS coordinates and are then entered into an excel tracking sheet so they can be addressed. This monitoring is done incidental to other management activities while Park staff are in the Park.

Management Response: If problems are identified, a prioritized maintenance list will be generated to fix any issues and perform immediate maintenance needs. Monitoring schedules and features will be adjusted as needed. If a section of trail has regularly reoccurring issues, a more permanent solution will be executed in reference to the 2020 Soil Conservation Standard and Guidelines.

6.7 Post-Maintenance Monitoring

Objective 6: Ensure all OHV road and trail maintenance activities minimize soil disturbance, reduce unnatural erosion, and are performed in accordance to the Maintenance Checklist (available in Section 9.2 Appendix B).

S.M.A.R.T. Target: Over the next five years, ensure that maintenance activities follow the Soil Conservation and Standard Guidelines.

Monitoring: Within a week following major, non-routine maintenance activities, natural resources staff will perform site visits to ensure maintenance was executed properly and effectively according to the Soil Conservation Standard and Guidelines and ensure the Maintenance Checklist was implemented and adhered to. This monitoring is to confirm that the issue was resolved or determine if additional work is needed.

Management Response: If additional work is needed, resource staff will work with the maintenance staff to address the issue.

6.8 Management of Collected Data

Concurrent with or shortly after the monitoring programs listed above, collected data and reports will be entered and stored on the Onyx SVRA's Natural Resources Sharepoint.

6.9 Compliance Report and Action Plan

An annual Compliance Report and Action Plan will be specific to MUs in which ground disturbing activities occurred during the year. The Compliance Report and Action Plan will contain the following sections:

- Change analysis of trail assessments to show improvements
- Maintenance activity
- Infrastructure improvements
- Future planned actions and possible future projects

The Compliance Report and Action Plan will cover October to September of the following year (i.e. October 2024- September 2025) and will be submitted to OHMVRD staff by the 31st of October (i.e. October 2025) for review and comment.

7 Constraints

While actively implementing and completing the objectives and goals listed in this SCP, Onyx SVRA does encounter constraints, such as stochastic events, annual weather cycles, lack of a General Plan, and limited staff and equipment. More details about constraints are discussed below.

7.1 Stochastic Events

Stochastic (random) events are unpredictable events which may impact the land or draw resources which would otherwise be directed towards management. Examples of stochastic events which may occur within or nearby Onyx SVRA include wildfires and flooding.

7.2 Annual Weather Cycles

The location of Onyx SVRA is known to have extremely variable weather cycles, with hot and dry summers and cold winters, with occasional snowfall. Management activities dependent on certain weather conditions may be impacted by the annual weather cycle. Specifically, maintenance activities of roads and trails may be scheduled after periods of rainfall when there is soil moisture.

7.3 General Plan

Onyx SVRA currently does not have a General Plan. This lack of a General Plan limits any projects within CDPR parcels in the BLM Open Areas such as Jawbone Canyon and Dove Springs. For the SCP update in five years, a General Plan draft may be available to discuss and tie aspects of that plan to the SCP.

7.4 Staffing and Equipment

Onyx SVRA is the newest of the SVRAs being acquired in 2014. Permanent natural resource staffing for the Park began in 2016 with one Environmental Scientist. Since then, natural resource staff has grown to two Environmental Scientists and one Worker I. Limited staffing results in the need to highly prioritize maintenance and monitoring work to meet the Standard. Additional maintenance, trail crew members, and a heavy equipment operator will need to be hired to more efficiently meet the goals and objectives set forth in this SCP.

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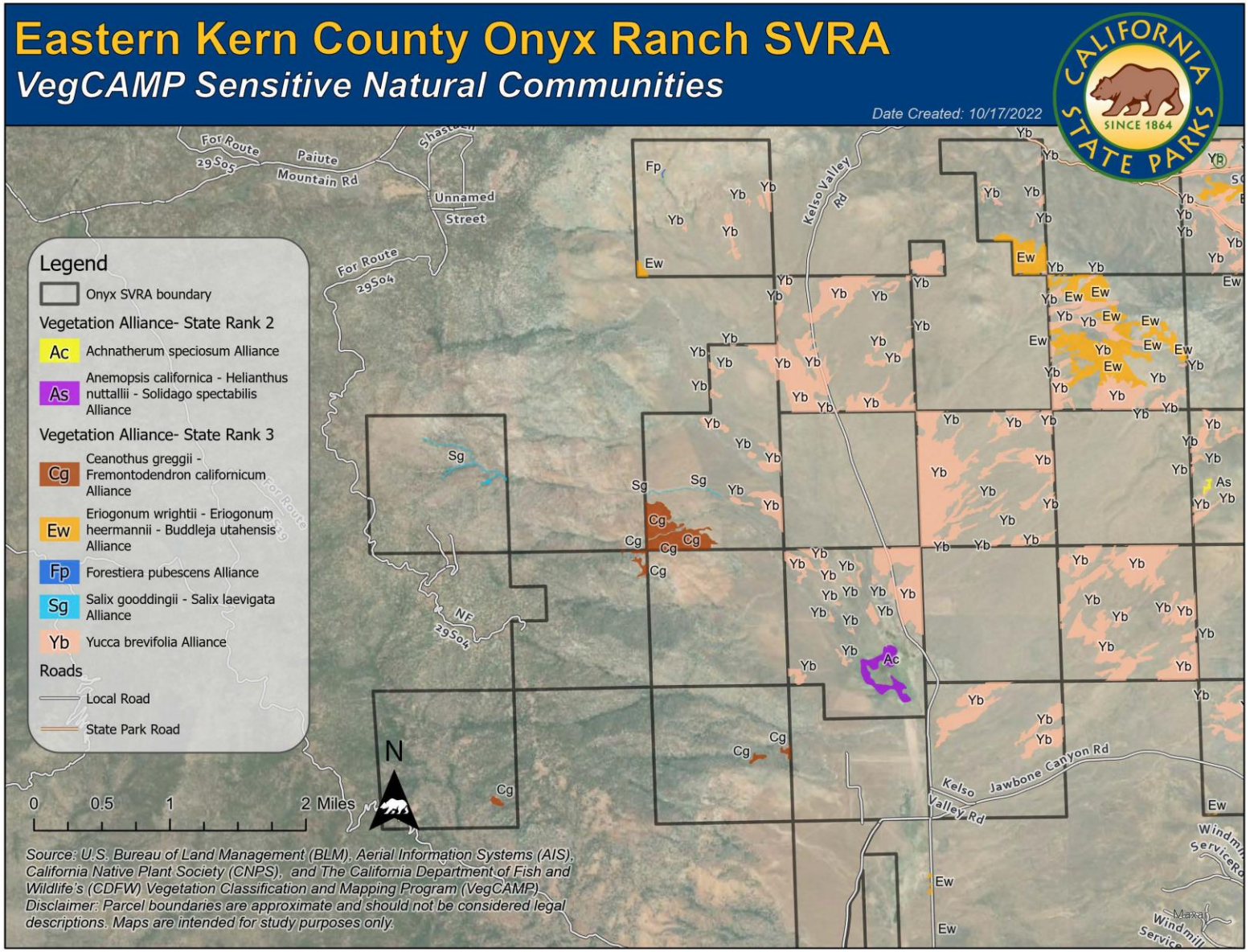
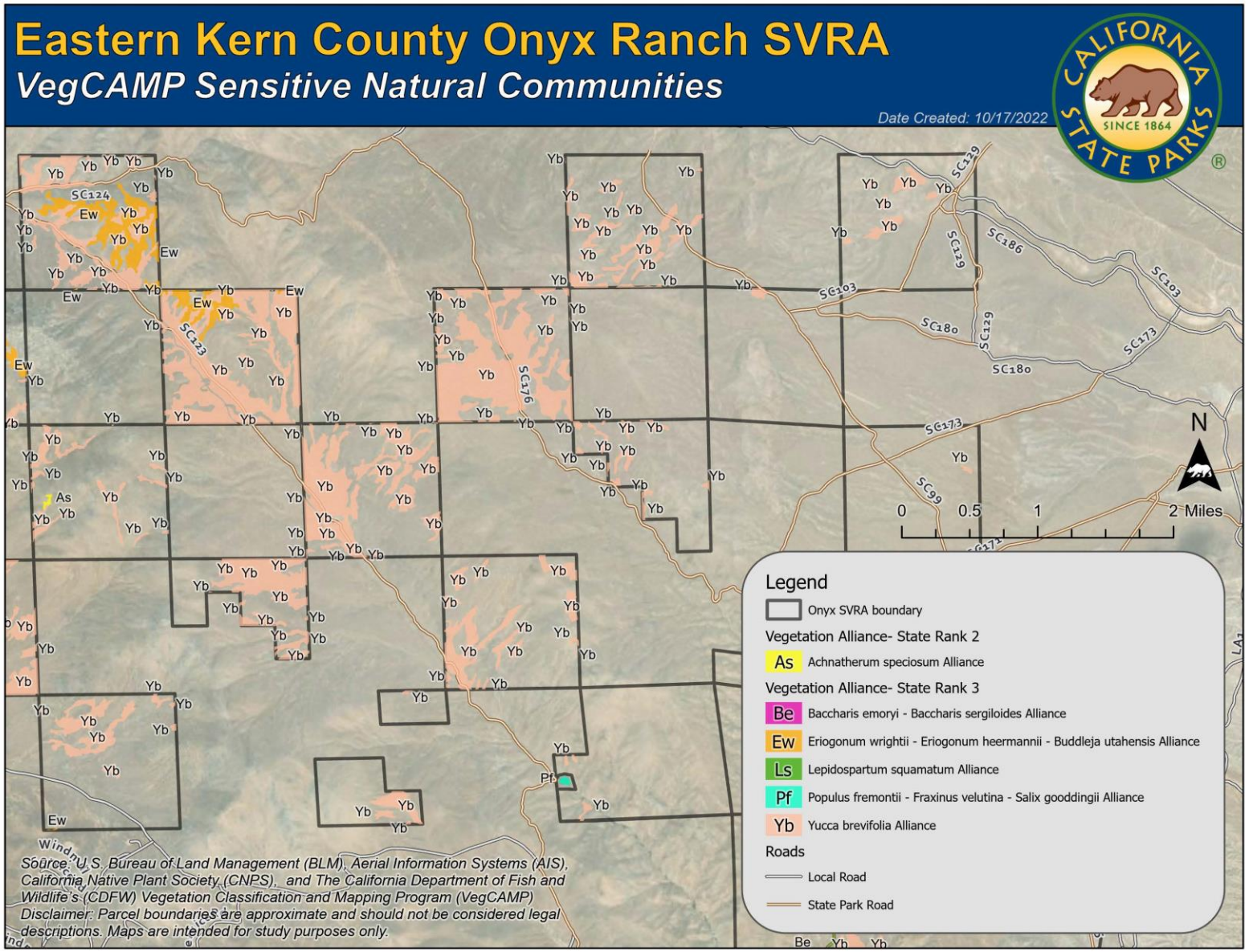
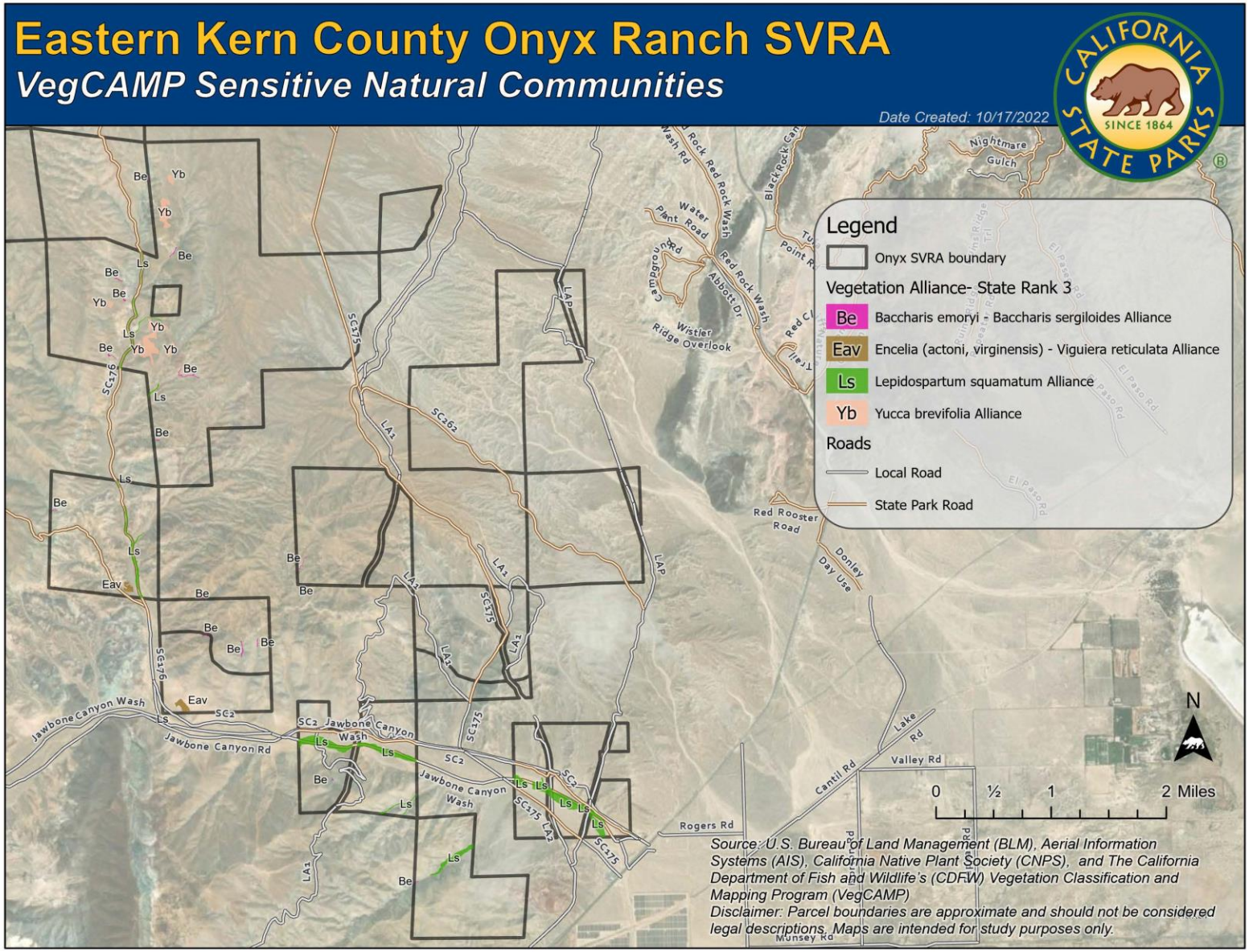
9 Appendices

9.1 Appendix A. Maps of VegCamp Sensitive Natural Communities


Eastern Kern County Onyx Ranch SVRA
VegCAMP Sensitive Natural Communities
Date Created: 10/17/2022
CALIFORNIA STATE PARKS SINCE 1864
Legend
Onyx SVRA boundary
Vegetation Alliance- State Rank 2
Ac Achnatherum speciosum Alliance
As Anemopsis californica - Helianthus nuttallii - Solidago spectabilis Alliance
Vegetation Alliance- State Rank 3
Cg Ceanothus greggii - Fremontodendron californicum Alliance
Ew Eriogonum wrightii - Eriogonum heermannii - Buddleja utahensis Alliance
Fp Forestiera pubescens Alliance
Sg Salix gooddingii - Salix laevigata Alliance
Yb Yucca brevifolia Alliance
Roads
Local Road
State Park Road
N
0 0.5 1 2 Miles
Paiute Mountain Rd
Unnamed Street
Kelso Valley Rd
Jawbone Canyon Rd
Source: U.S. Bureau of Land Management (BLM), Aerial Information Systems (AIS), California Native Plant Society (CNPS), and The California Department of Fish and Wildlife's (CDFW) Vegetation Classification and Mapping Program (VegCAMP)
Disclaimer: Parcel boundaries are approximate and should not be considered legal descriptions. Maps are intended for study purposes only.


Eastern Kern County Onyx Ranch SVRA
VegCAMP Sensitive Natural Communities
Date Created: 10/17/2022
CALIFORNIA STATE PARKS
SINCE 1864
N
0
0.5
1
2 Miles
Legend
Onyx SVRA boundary
Vegetation Alliance- State Rank 2
As Achnatherum speciosum Alliance
Vegetation Alliance- State Rank 3
Be Baccharis emoryi - Baccharis sergiloides Alliance
Ew Eriogonum wrightii - Eriogonum heermannii - Buddleja utahensis Alliance
Ls Lepidospartum squamatum Alliance
Pf Populus fremontii - Fraxinus velutina - Salix gooddingii Alliance
Yb Yucca brevifolia Alliance
Roads
Local Road
State Park Road
Source: U.S. Bureau of Land Management (BLM), Aerial Information Systems (AIS), California Native Plant Society (CNPS), and The California Department of Fish and Wildlife's (CDFW) Vegetation Classification and Mapping Program (VegCAMP)
Disclaimer: Parcel boundaries are approximate and should not be considered legal descriptions. Maps are intended for study purposes only.


Eastern Kern County Onyx Ranch SVRA
VegCAMP Sensitive Natural Communities
Date Created: 10/17/2022
CALIFORNIA STATE PARKS SINCE 1864
Legend
Onyx SVRA boundary
Vegetation Alliance- State Rank 3
Be Baccharis emoryi - Baccharis sergiloides Alliance
Eav Encelia (actoni, virginensis) - Viguiera reticulata Alliance
Ls Lepidospartum squamatum Alliance
Yb Yucca brevifolia Alliance
Roads
Local Road
State Park Road
Red Rooster Road
Donley Day Use
Jawbone Canyon Rd
Jawbone Canyon Wash
Rogers Rd
Valley Rd
Lake Rd
Cantil Rd
Munsey Rd
Nightmare Gulch
Water Plant Road
Wistler Ridge Overlook
Abbott Dr
Red Rock Wash
N
0 ½ 1 2 Miles
Source: U.S. Bureau of Land Management (BLM), Aerial Information Systems (AIS), California Native Plant Society (CNPS), and The California Department of Fish and Wildlife's (CDFW) Vegetation Classification and Mapping Program (VegCAMP)
Disclaimer: Parcel boundaries are approximate and should not be considered legal descriptions. Maps are intended for study purposes only.

9.2 Appendix B. Mechanized Construction – Maintenance Checklist

Mechanized Construction - Maintenance Checklist

Trail Name _____Trail No._____ Segment No. _____

Trail Difficulty easiest more difficult most difficult Max Trail Slope ___% Ave Trail Slope ___%

Activity: maintenance reconditioning new construction Side Slope:____%

Drainage: Outslope Rolling Dip Confined Flat Other_____

Equipment: Hand Trail Tractor Mini-excavator Other_____

Soil Type: clayey loamy sandy Rock Fragments (%): <15 15-50 >50

Soil Depth: shallow deep Vegetation Type: _____ Photo Numbers: _____

Operator _____ Assistant(s) _____Date _____

Weather_____ Soil Moisture_____

Last Maintenance (mo/yr) _____ Maintenance Type : Hand Mechanical

Notes:_____

Guideline	Yes	No	N/A
1. This checklist was reviewed before starting maintenance or construction on this trail			
2. Prior to mobilization the completed OHV Trail Condition Evaluation Forms were reviewed and trail segments, sections, or features needing maintenance or reconditioning were confirmed.			
3. Equipment was operated by certified operators, or under direct supervision of certified operator			
4. If new, this trail was constructed to Guidelines			
5. OHV rolling dips were constructed/maintained by compacting moist soil in lifts no greater than 4 inches loose thickness			
6. Prior to mobilization, need for maintenance with mechanical equipment was validated			
7. The blade was lifted and the equipment walked across sections of trail that needed no maintenance			
8. Soil collected in rolling dip outlets was recycled into rolling dip structures or back onto the trail tread			
9. Berms were worked back into the trail tread, not bladed off the trail as sidecast			
10. Rills and gullies in treads were repaired with soil reclaimed from rolling dip outlets or from outside berms, not by blading the trail tread			

11. Soil sloughed from cutbanks or sideslopes above the trail was bladed only as needed to maintain a safe trail; cutbanks were not bladed into or undercut			
12. Whoops and stutter (braking) bumps were repaired by ripping, blading, and compacting trail treads when soil was moist (except for non-cohesive soils)			
13. The amount of soil moved was the smallest amount needed to meet the maintenance objective			
14. Where soil was too dry for compaction, maintenance was deferred or done by hand			

If "no" is checked, enter a footnote number and write a brief explanation under comments.

Comments: _____

_____

_____

9.3 Appendix C. Trail Condition Evaluation Form

I. Form Header Information

Trail Name / No.

Enter name and/or number of the trail for the rated segment.

Vehicle Type

Circle one or more of the vehicle types, MC (motorcycle), ATV (all-terrain vehicle), or 4x4 (four wheel drive), or SM (snow mobile).

Trail Difficulty

Circle one of the trail difficulties, easiest, more difficult, most difficult.

USGS Quad

Enter the name of the USGS topographic map quadrangle on which the rated segment occurs.

Planning Watershed

Enter in either the name or the code for the CalWater (2.2) planning watershed in which the trail occurs (http://www.ca.nrcs.usda.gov/features/calwater/).

Begin Segment

Enter the location where the rated segment starts. This could be a GPS file designation, a named trail junction, a milepost, etc.

End Segment

Enter the location where the rated segment ends. This could be a GPS file designation, a named trail junction, a milepost, etc.

Site Characteristics

Give a generic description of the site and soil-related conditions that exist along the trail.

Soil/Geology

Enter a brief description of the soil and/or geologic units on which the trail segment is located. Information can be provided from field observations by a qualified soil scientist or geologist, or it may be obtained from NRCS or USFS soils maps, geological publications listed in the California Geological Survey (CGS) geology/soils index and website, and other published and unpublished reports including various planning documents.

Vegetation

Enter a brief description of the primary vegetation present in the vicinity of the trail.

Range of Side Slopes

Circle the range of side slope percent (%) that the segment of trail crosses.

Trail Slope

Enter the average trail slope and the maximum trail slope in percent (%) for the segment evaluated.

Rating (GYR)

As the final step in completing the form, enter the recommended overall rating for the whole segment. Enter only *one* letter for the rating: a G, Y, or R.

GPS Ref

Enter the file name of the GPS record. Add location information following post-processing of the GPS record.

Rated By

Enter your name or initials as the rater.

Date

Enter the date the field observations were made and recorded.

Reviewed By

Signature of responsible official who reviewed and acted on the rating.

Date

Date reviewed by responsible official.

Page of

Enter page number and total number of pages used to rate the segment.

II. Form Body Information

Column 1 – Section; Begin – End

For features with a length dimension, enter the beginning and ending distance of that feature, e.g. 1200 feet to 1500 feet for a 300foot feature. Distance can either be from an established reference point such as a trail marker (mile post) or intersection, or the GPS file designation for the beginning and ending points.

Column 2 - Section Length Enter the length of the section being evaluated and note whether it is an estimate or has been measured.

Column 3 - Trail Slope

Enter the slope (grade) of the tread surface for the section evaluated as a percent (%) If the slope varies, enter the range followed by the slope most typical for the section in parentheses, e.g. 3 – 25% (6%).

Column 4 - Crossings

Facing downstream, every crossing has three primary components: the left approach (LA), the right approach (RA) and the channel section (CS). Enter a checkmark (√ or X) in the column corresponding to the part of the crossing being evaluated, e.g. LA for left approach. Rate each component on a separate line. Rate each approach according to G7, Y7, or R7. Rate each channel section according to G8, Y8, or R8. Record the condition of all watercourse approaches even if the rating is a G7. This serves as documentation that the approach was evaluated.

	Approach Length (from last water break or drainage divide to channel)		
Trail Gradient	< 30 feet	30 – 150 feet	> 150 feet
< 8 %	G7	G7	Y7
8 – 20%	G7 or Y7	Y7 or R7	R7
> 20%	Y7 or R7	R7	R7

Guidelines for Rating Approaches to Watercourse Crossings

The key concept is sediment delivery. Where runoff water from a trail is drained onto a natural slope a long distance from a watercourse, most sediment is filtered out before it can reach a watercourse.

Column 5 - GYR Condition Codes

Enter the appropriate condition code using the Green, Yellow, Red indicators of trail conditions listed as guidelines. More detailed descriptions are presented in the expanded 2008 Soil Conservation Guidelines/Standards for OHV Recreation Management.

Where variable conditions are encountered, the rater will have to use good judgment using the condition codes as an overall guide. Additional details can be written in the comments section of the form.

Column 6 - Cause Codes

Using the cause codes provided as guidelines, enter a cause code for each trail section where a condition code was entered in Column 5. More detailed cause code descriptions are presented in the expanded 2008 Guidelines/Standards. Most trail condition problems have multiple causes. Generally, one to three causes, listed in order of importance, will be enough to describe the problem. If the cause of an observed condition is unique, then describe that cause in the comments column. A cause code combined with a GYR condition code will usually both describe the problem and identify a treatment.

Column 7 – Comments

Record observations and recommendations not captured by the basic codes, including unique non-repeatable data.

Column 8 – Photograph Number (s)

Enter the identification number(s) for photographs taken of the evaluated section. As a minimum, one photo should be taken for each section given a Red condition code. If the entire trail segment has been rated Green, take at least one photograph of a representative section of the trail segment

I. Form Header Information

Trail Name / No.

Enter name and/or number of the trail for the rated segment.

Vehicle Type

Circle one or more of the vehicle types, MC (motorcycle), ATV (all-terrain vehicle), or 4x4 (four wheel drive), or SM (snow mobile).

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Enter in either the name or the code for the CalWater (2.2) planning watershed in which the trail occurs (http://www.ca.nrcs.usda.gov/features/calwater/).

Begin Segment

Enter the location where the rated segment starts. This could be a GPS file designation, a named trail junction, a milepost, etc.

End Segment

Enter the location where the rated segment ends. This could be a GPS file designation, a named trail junction, a milepost, etc.

Site Characteristics

Give a generic description of the site and soil-related conditions that exist along the trail.

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Enter a brief description of the soil and/or geologic units on which the trail segment is located. Information can be provided from field observations by a qualified soil scientist or geologist, or it may be obtained from NRCS or USFS soils maps, geological publications listed in the California Geological Survey (CGS) geology/soils index and website, and other published and unpublished reports including various planning documents.

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Enter a brief description of the primary vegetation present in the vicinity of the trail.

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Circle the range of side slope percent (%) that the segment of trail crosses.

Trail Slope

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Rating (GYR)

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Reviewed By

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Date

Date reviewed by responsible official.

Page of

Enter page number and total number of pages used to rate the segment.

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Column 1 – Section; Begin – End

For features with a length dimension, enter the beginning and ending distance of that feature, e.g. 1200 feet to 1500 feet for a 300foot feature. Distance can either be from an established reference point such as a trail marker (mile post) or intersection, or the GPS file designation for the beginning and ending points.

Column 2 - Section Length Enter the length of the section being evaluated and note whether it is an estimate or has been measured.

Column 3 - Trail Slope

Enter the slope (grade) of the tread surface for the section evaluated as a percent (%) If the slope varies, enter the range followed by the slope most typical for the section in parentheses, e.g. 3 – 25% (6%).

Column 4 - Crossings

Facing downstream, every crossing has three primary components: the left approach (LA), the right approach (RA) and the channel section (CS). Enter a checkmark (√ or X) in the column corresponding to the part of the crossing being evaluated, e.g. LA for left approach. Rate each component on a separate line. Rate each approach according to G7, Y7, or R7. Rate each channel section according to G8, Y8, or R8. Record the condition of all watercourse approaches even if the rating is a G7. This serves as documentation that the approach was evaluated.

	Approach Length (from last water break or drainage divide to channel)		
Trail Gradient	< 30 feet	30 – 150 feet	> 150 feet
< 8 %	G7	G7	Y7
8 – 20%	G7 or Y7	Y7 or R7	R7
> 20%	Y7 or R7	R7	R7

Guidelines for Rating Approaches to Watercourse Crossings

The key concept is sediment delivery. Where runoff water from a trail is drained onto a natural slope a long distance from a watercourse, most sediment is filtered out before it can reach a watercourse.

Column 5 - GYR Condition Codes

Enter the appropriate condition code using the Green, Yellow, Red indicators of trail conditions listed as guidelines. More detailed descriptions are presented in the expanded 2008 Soil Conservation Guidelines/Standards for OHV Recreation Management.

Where variable conditions are encountered, the rater will have to use good judgment using the condition codes as an overall guide. Additional details can be written in the comments section of the form.

Column 6 - Cause Codes

Using the cause codes provided as guidelines, enter a cause code for each trail section where a condition code was entered in Column 5. More detailed cause code descriptions are presented in the expanded 2008 Guidelines/Standards. Most trail condition problems have multiple causes. Generally, one to three causes, listed in order of importance, will be enough to describe the problem. If the cause of an observed condition is unique, then describe that cause in the comments column. A cause code combined with a GYR condition code will usually both describe the problem and identify a treatment.

Column 7 – Comments

Record observations and recommendations not captured by the basic codes, including unique non-repeatable data.

Column 8 – Photograph Number (s)

Enter the identification number(s) for photographs taken of the evaluated section. As a minimum, one photo should be taken for each section given a Red condition code. If the entire trail segment has been rated Green, take at least one photograph of a representative section of the trail segment

OHV Trail Condition Evaluation Form

Trail Name _____Trail No. _____ Vehicle Type: MC ATV 4x4 SM Trail Difficulty: easiest, more difficult, most difficult

USGS Quad _____ Planning Watershed _____ Begin Segment _____ End Segment _____

Site Characteristics: Soil/Geology _____ Vegetation _____ Side Slopes: 0-30% 30-50% >50%

RATING (**G**,**Y**,**R**) ____GPS Ref _____ Avg Trail Slope ___% Max Trail Slope ____% Rated By _____ Date _____ Reviewed By ____ Date ____ Page __ of __

Section **B = Begin E = End**	**Section Length**	**Trail slope**	**Crossings** **LA**	**CS**	**RA**	**Condition Codes**	**Cause** **Codes**	**Comments**	**Photograph Numbers**
B E									
B E									
B E									
B E									
B E									
B E									
B E									
B E									

B E									
B E									

OHV Trail Condition Evaluation Code Key

	Green		Yellow		Red
G1	**Water control** is provided by enough functional water breaks to divert runoff from the trail before it has the volume and velocity to cause erosion. Where present, rills occur on less than 1/3 of the distance between water breaks.	Y1	Water breaks do not divert all runoff from the trail because they are nearly filled to capacity and/or are partially breached, or spaced too widely. Where present, rills occur on more than 1/3 of the distance between water breaks	R1	Water breaks no longer divert runoff from the trail because they are full and/or have been breached, or are absent or spaced too widely. Gully or rill erosion may be present.
G2	No accelerated **erosion off-trail.** Runoff at water break outlets and on slopes adjacent to the trail is dispersed effectively. Vegetation or litter filters all sediment.	Y2	Rill erosion and/or sediment deposition occurs at water break outlets and/or on slopes adjacent to the trail. All sediment is filtered or deposited before it reaches a watercourse.	R2	Gully erosion occurs at water break outlets or on slopes adjacent to the trail and/or sediment is transported to a Type I or Type II watercourse.
G3	**Sediment traps**, where present, are functional and have adequate capacity for at least one season of use. Trapped sediment can be retrieved during normal maintenance.	Y3	Where present, most sediment traps are full or nearly full, but still functional. Most trapped sediment can be retrieved during normal maintenance.	R3	Where present, sediment traps have been breached and have a plume of sediment and/or a gully below the breach. Most sediment cannot be retrieved.
G4	**Tread wear** is minimal. Tread is generally incised less than 6 inches. Tread wear is generally evident on less than 1/3 of the distance between water breaks or on less than 1/3 of the tread width.	Y4	Tread wear is evident. Tread is generally incised 6 to 12 inches and tread wear is generally evident on more than 1/3 the distance between water breaks and on more than 1/3 of the tread width.	R4	Tread wear is severe. Tread incision is generally greater than 12 inches deep and tread wear is generally evident on the entire distance between water breaks.
G5	**Tread width** is generally no greater than 1.5 times the design width for the designated use.	Y5	Tread width is generally greater than 2 times the design width for the designated use and appears to be increasing.	R5	Tread width is generally greater than 3 times the design width for the designated use and has caused or is causing erosion, sedimentation, and damage to vegetation.
G6	**Off-trail travel is** limited to single tracks or single passes generally less than 300 feet long. Tracks are not eroded and have little effect on water control.	Y6	Off-trail travel is common, well defined, and generally greater than 300 feet long. Water control is inadequate and some erosion is apparent.	R6	Off-trail travel has caused severe resource damage, gully erosion, eroded hill climbs, or extensive damage to vegetation and/or sensitive habitat.

G7	**Approach to watercourse crossing** is short and has a gentle gradient. Tread is stable, shows little evidence of erosion, and is at design width. No damage to riparian vegetation outside the tread.	Y7	Approach to watercourse crossing is short and steep or long and gentle. Tread may show some evidence of erosion and may show evidence of widening. Minimal damage to riparian vegetation.	R7	Approach to watercourse crossing is both steep and long and/or tread is unstable and shows evidence of accelerated erosion. Approach may be widening and damaging riparian vegetation.
G8	**Channel Section** has only minor channel widening, minor bank erosion, no bars.	Y8	Channel Section has widened moderately, modest bank erosion, modest lateral and/or mid-channel bars.	R8	Channel Section has widened significantly, extensive bank erosion, large lateral and mid-channel bars.
G9	**Outboard Fill** is stable. Exhibits minor surficial sloughing without sediment transport	Y9	Outboard Fill is distressed. Exhibits cracking and Moderate sloughing w/ limited sediment transport.	R9	Outboard Fill has failed and sediment is moving down slope.

	CAUSE CODES		**CAUSE CODES**
C1	Water breaks not constructed to design standards	**C11**	Rocks or roots exposed in tread
C2	Water break spacing is too wide for conditions	**C12**	Barriers (natural or constructed) to control traffic are lacking
C3	Cascading runoff from a trail or road upslope	**C13**	Mechanical erosion makes maintenance ineffective
C4	Cascading runoff from an impervious surface upslope	**C14**	Storm intensity unusual or unique for the area
C5	Wet area caused by a seep or spring	**C15**	Design / layout /construction prevents effective drainage
C6	Excess soil moisture at time of use	**C16**	Uncompacted sidecast on outboard slope
C7	Trail section is poorly located (describe)	**C17**	Berms, Whoops, and stutter bumps
C8	Trail gradient is too steep for the type and/or amount of use occurring	**C18**	Crossing alters channel dimensions and/or stream gradient.
C9	Segment is not ~~designated or~~ designed for the type or amount of use occurring	**C19**	Rutting or vegetation damage to meadow, spring, wet area, riparian area
C10	Trail Blockage, e.g. brush, logs, rockfall, landslide	**C20**	Segment is not designed for the type and amount of use occurring