Road Monitoring on BLM Lands

2005-BLM-503

supported by

PIC and Volunteer Support for BLM Road Monitoring Project

2005-PIC-577

Las Vegas Field Office

2010

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Why Monitor Roads?

Roads provide access to large tracts of public land for recreational use.

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Why Monitor Roads?

Proliferation of roads and unauthorized off-road vehicle use has left persistent scars in the desert.
(Rowlands 1980)

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Why Monitor Roads?

Off-highway vehicles remain a major source of habitat degradation for covered species:

- Disrupt water balance, thermoregulation and energy requirements of desert tortoises. (USFWS 1994)
- Reduce availability of food. (USFWS 1994)
- Increase erosion and changes drainage patterns. (Brooks and Lair 2005)

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Why Monitor Roads?

Habitat recovery is slow in the desert. Studies show that it takes:

- 76 years for full reestablishment of total perennial plant cover
- an estimated 215 years for the recovery of species composition typical of undisturbed areas (Abella 2010)

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Why Monitor Roads?

Increased visitation does not necessarily create damage. This group of 31 recreationists are staying on designated roads and operating under the speed limit.

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Why Monitor Roads?

Disregard for OHV closures and road designations…

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Why Monitor Roads?

…sets the stage for others to follow the tracks, creating new roads and further fragmenting habitat.

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Why Monitor Roads?

Illegal OHV trail created by an ATV traveling cross-country

8 days later the illegal trail has become a 2-track road used by multiple visitors

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Why Monitor Roads?

Vehicle-caused mortalities on highways and unpaved roads are a continuing concern.

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Step 1:
Route Inventory

In 1994, BLM began inventory and designation of roads on public lands in Clark County.
In 2003-2005, BLM completed an inventory of all roads and trails in Coyote Springs, Gold Butte, Mormon Mesa and Virgin River ACECs – totaling 981 miles

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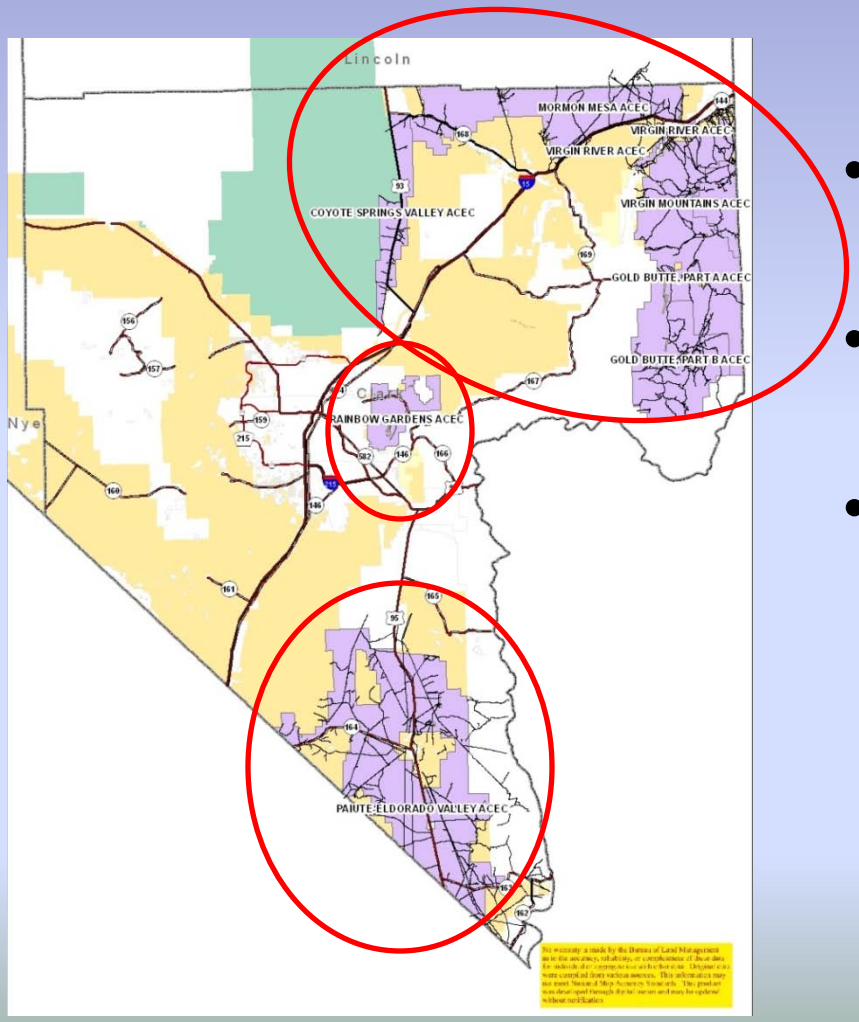
Step 2:
Route Designations



- 1994-1996 - Piute-Eldorado ACEC
- In 2001 - Rainbow Gardens ACEC
- In 2008 - 10 additional ACECs including Coyote Springs, Gold Butte, Mormon Mesa and Virgin River

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Step 2:
Route Designations

Routes were designated to protect resources and provide public access…

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Step 2:
Route Designations

…and signed to notify the public of appropriate uses.

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Step 3:
Route Monitoring

We Are Here

- The project goals are:
  - To gather information on use of roads on public land in order to improve management of those public lands in Clark County;
  - To manage roads through signage to aid in proper use by public;
  - To increase public awareness regarding approved roads and proper use; and
  - To determine the effectiveness of road monitoring conducted by volunteers.

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To achieve these goals, BLM shall:

- Monitor:
  - use (type and amount of use)
  - conditions (illegal incursions, sign conditions, etc.)
- Document:
  - road conditions
  - reports of illegal use
  - signs, markers and kiosks along roads
  - BLM's response

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To achieve these goals, BLM shall:

- Repair and replace signs, markers and kiosk components when needed;
- Validate work conducted by other agencies or volunteers to determine accuracy of volunteer monitoring and suggest improvements
- Collect, document, and transmit data to the Clark County Desert Conservation Program (DCP)

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To achieve these goals, BLM shall:

- Educate:
  - kiosks and panel signs
  - area maps
  - web page
- Participate in community outreach events

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Anticipated Outcomes:

- Identify where resource damage is occurring
- Determine if there are trends to resource damage
- Determine if data collected by volunteers differs from paid staff, how it differs, and if measures can be taken to reduce any differences
- Improve management response time
- Improve management responses in remote areas

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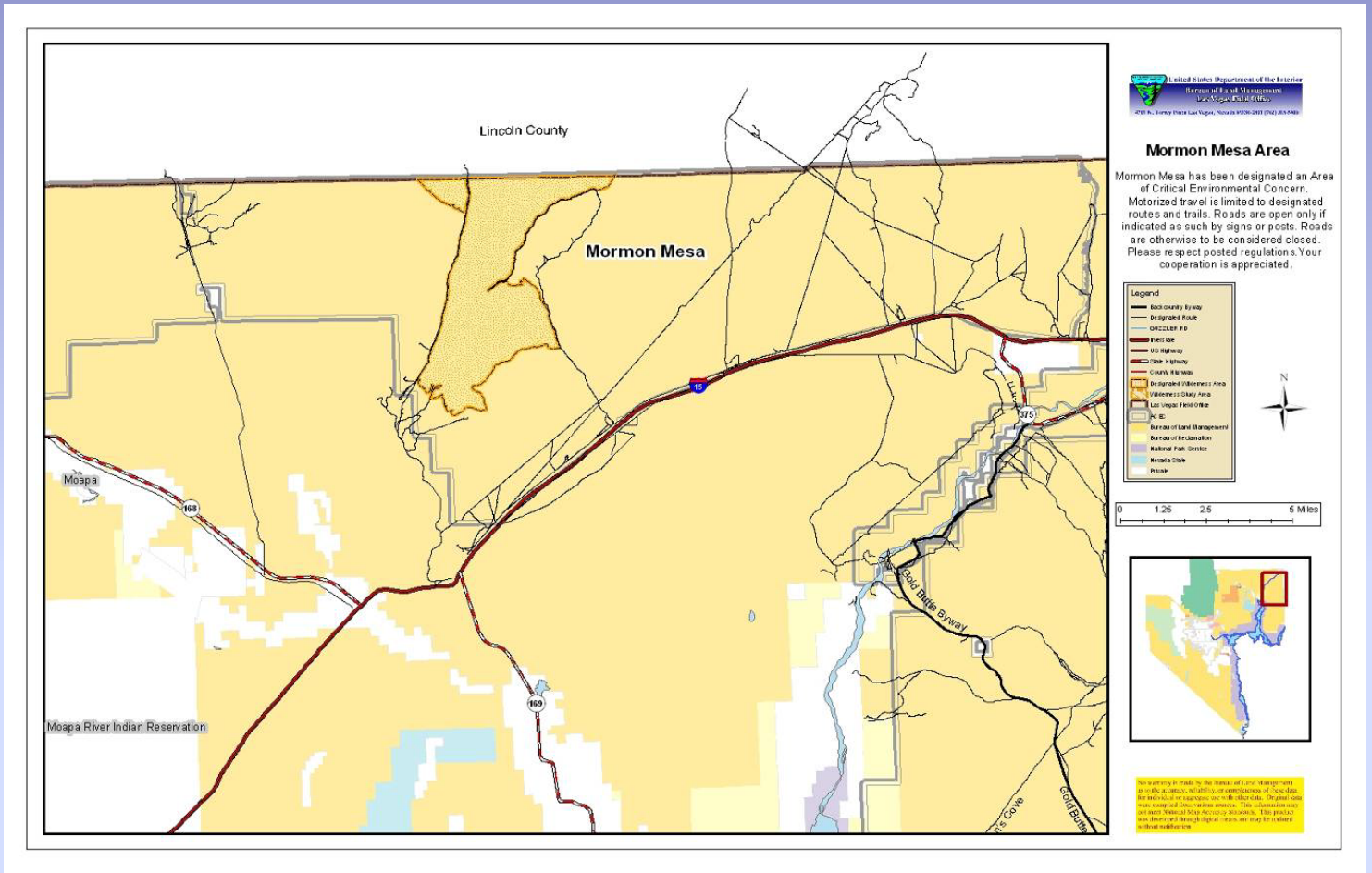
BLM Monitoring Areas:



Mormon Mesa ACEC - approximately 148,000 acres with approximately 212 miles of open roads. (PIC is assisting under agreement with the DCP)

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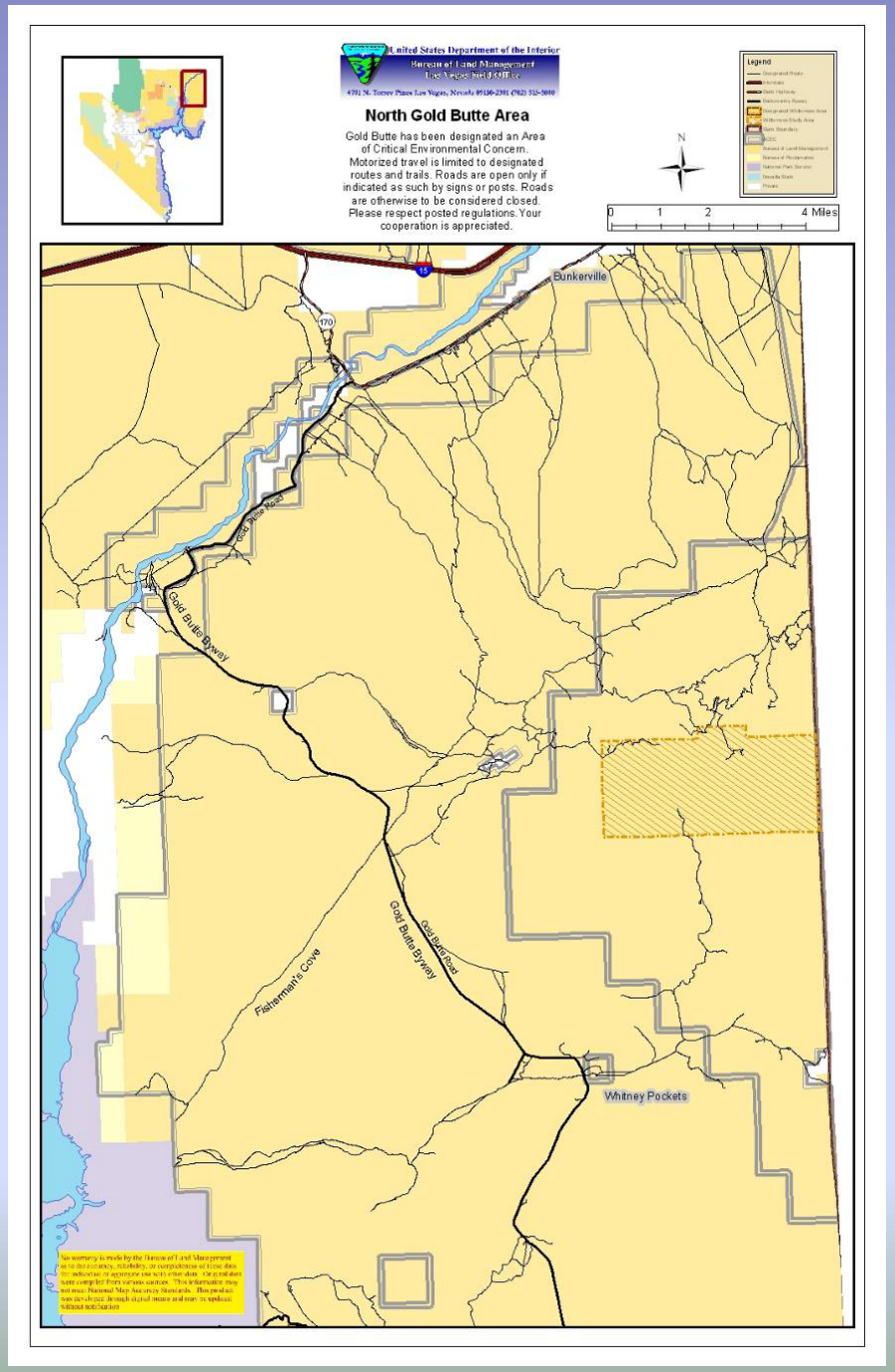
North Gold Butte (ACEC Parts A and C) - approximately 221,000 acres with approximately 366 miles of open roads. (PIC is assisting under agreement with the DCP)



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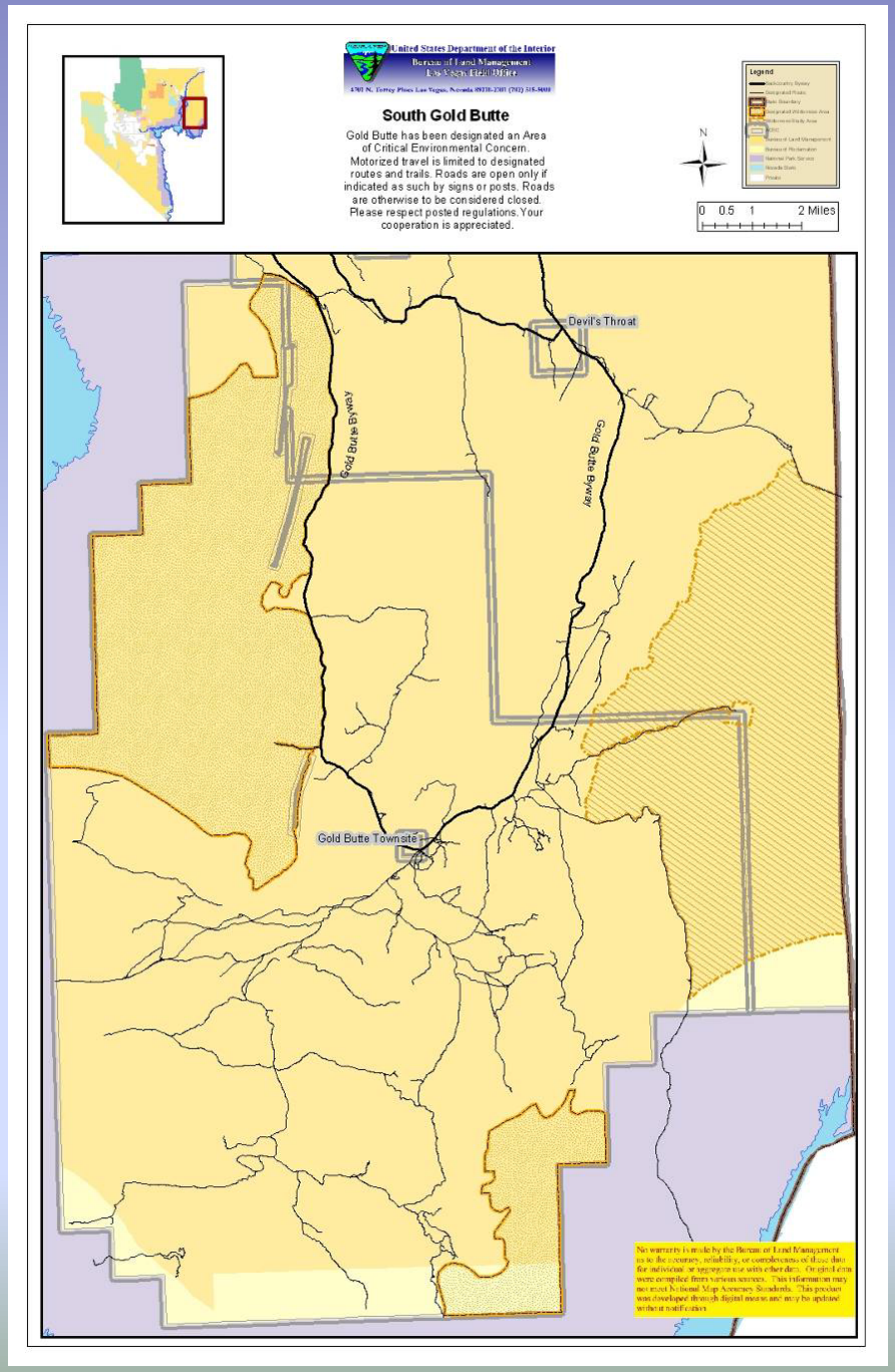
South Gold Butte (ACEC Part B) - approximately 123,000 acres with approximately 291 miles of open roads. (PIC is assisting under agreement with the DCP)



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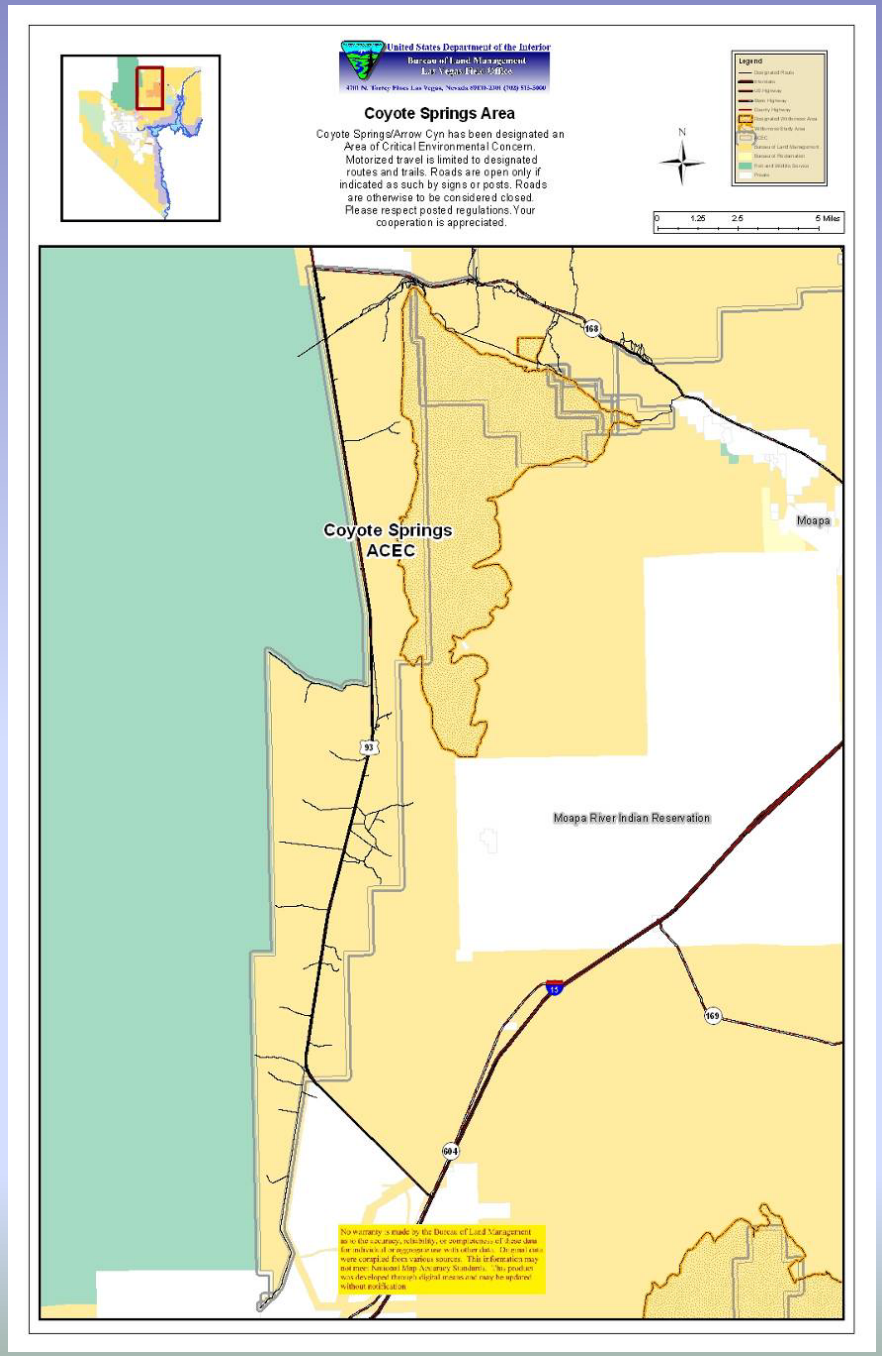
Coyote Springs ACEC - approximately 52,000 acres with approximately 150 miles of open roads. (PIC is assisting under agreement with BLM)



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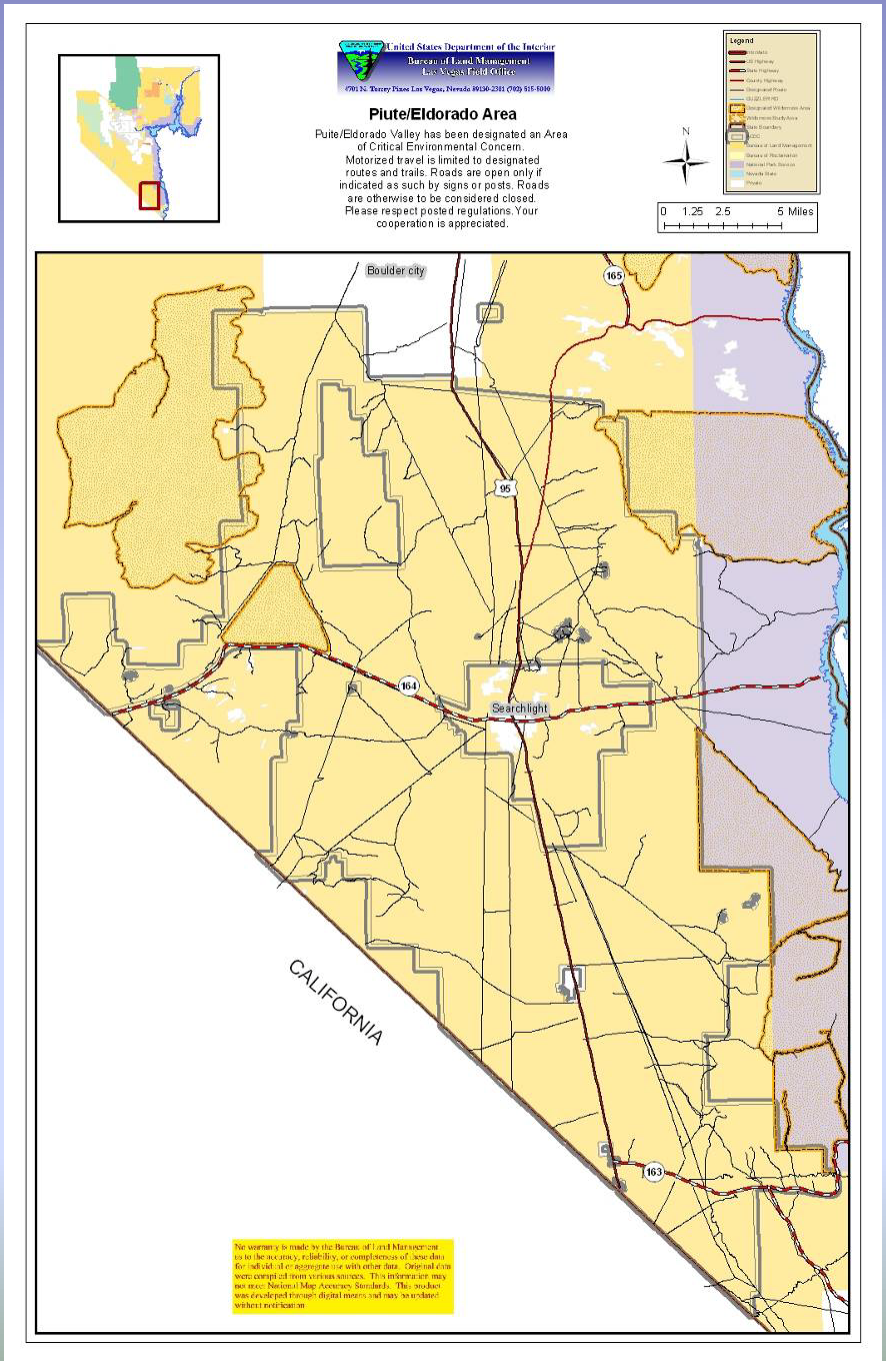
Piute-Eldorado ACEC - approximately 328,000 acres with approximately 828 miles of open roads.



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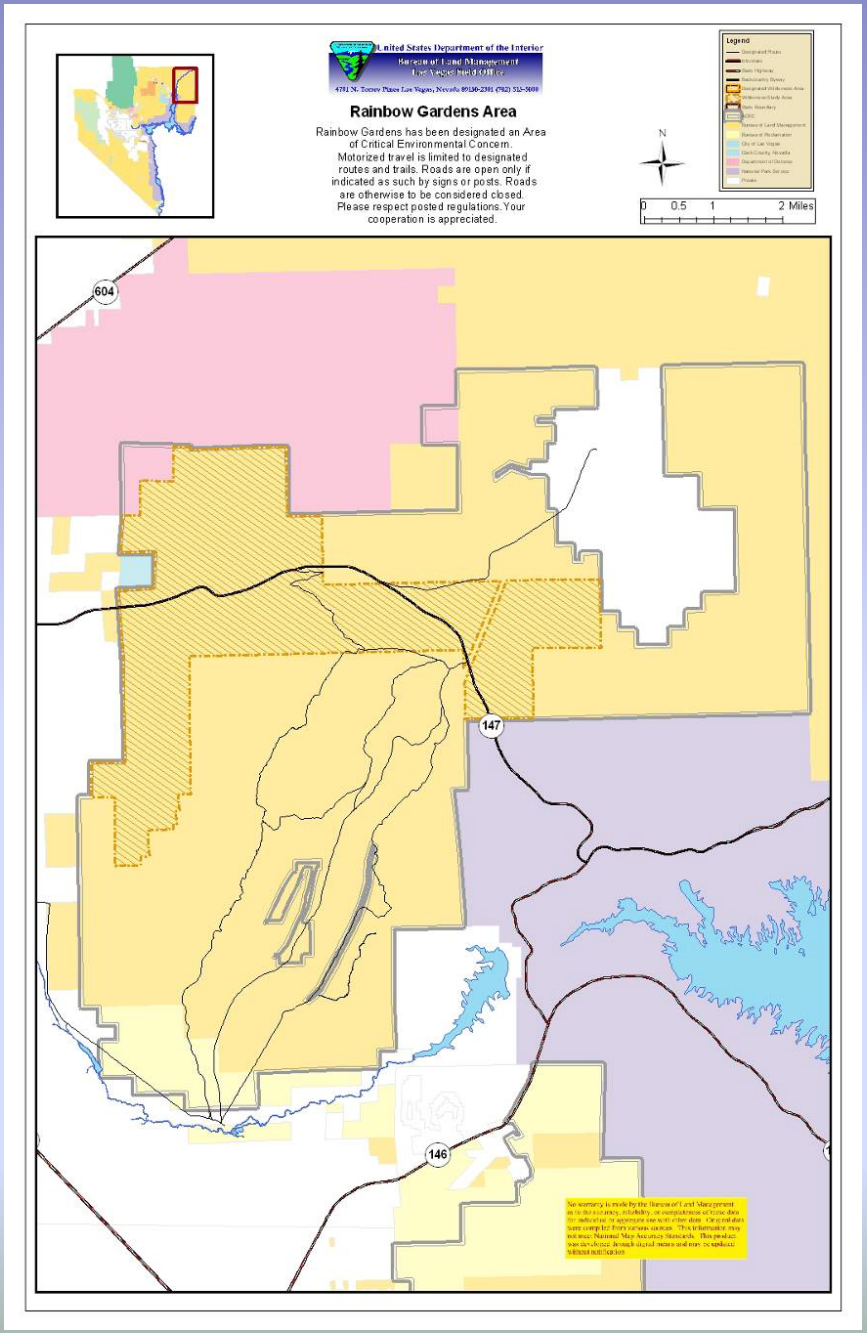
Rainbow Gardens ACEC - approximately 39,000 acres with approximately 70 miles of open roads.



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Results

- Total number of miles driven by BLM from April through June 2010, including travel to monitoring locations:
  - April: 718
  - May: 1,405
  - June: 1,619
  - Total: 3,742 miles
- PIC first 2 quarters
  - Volunteer miles - 8,155
  - PIC staff miles - 7,120

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Results

- Miles of designated roads monitored by BLM from April through June 2010:
  - April: 233
  - May: 398
  - June: 417.5
  - Total: 1,048.5 miles

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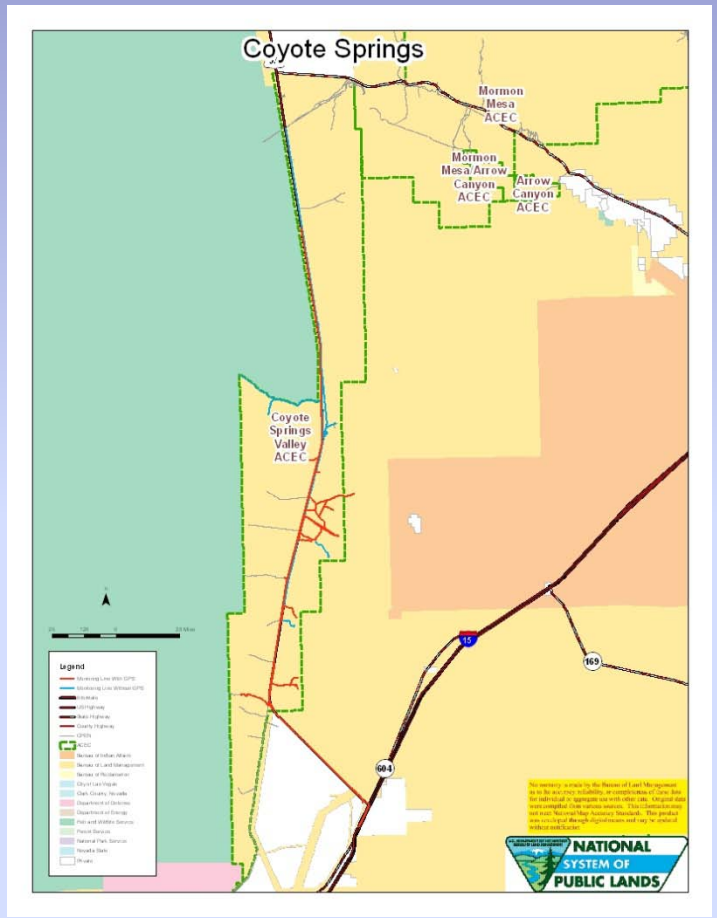
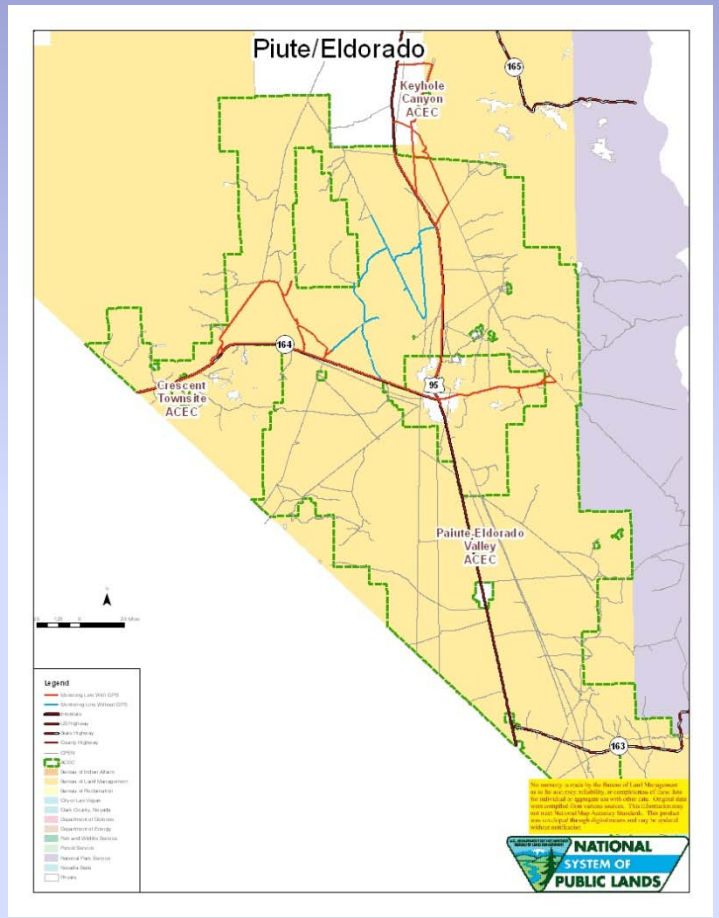
Results





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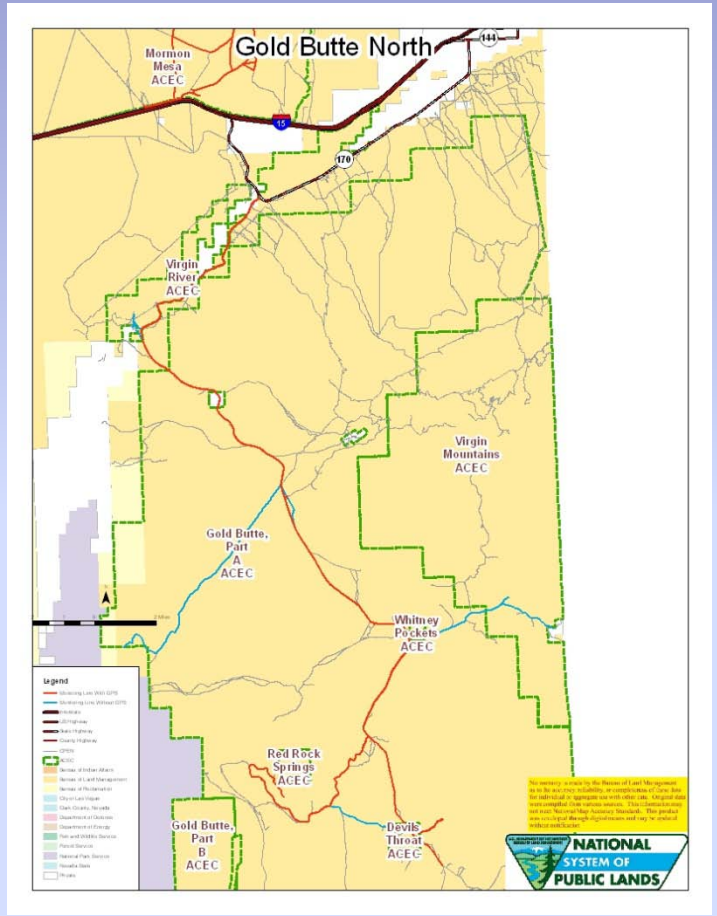
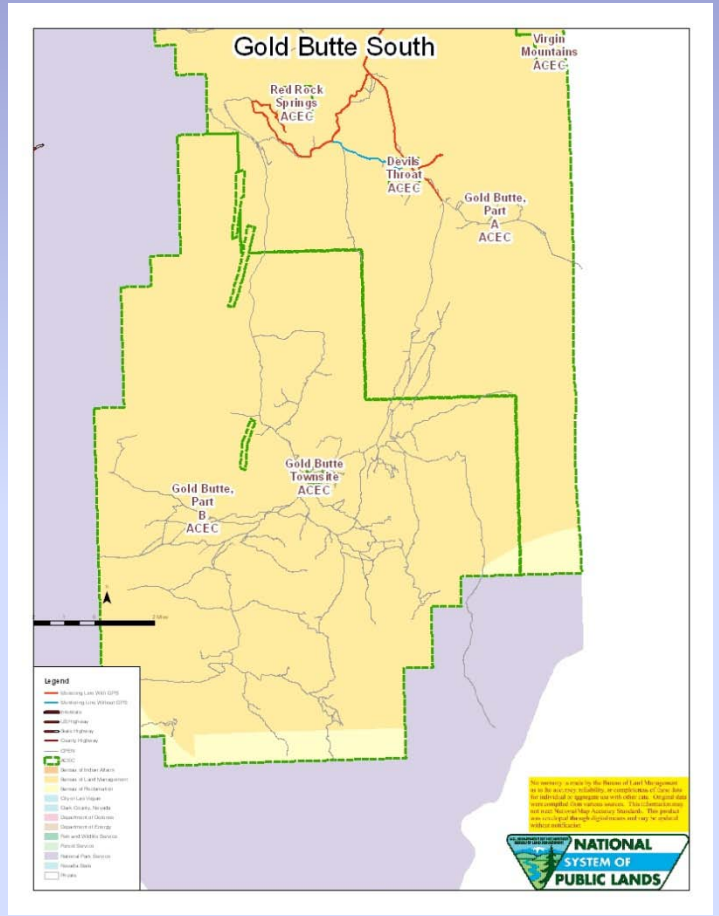
Results





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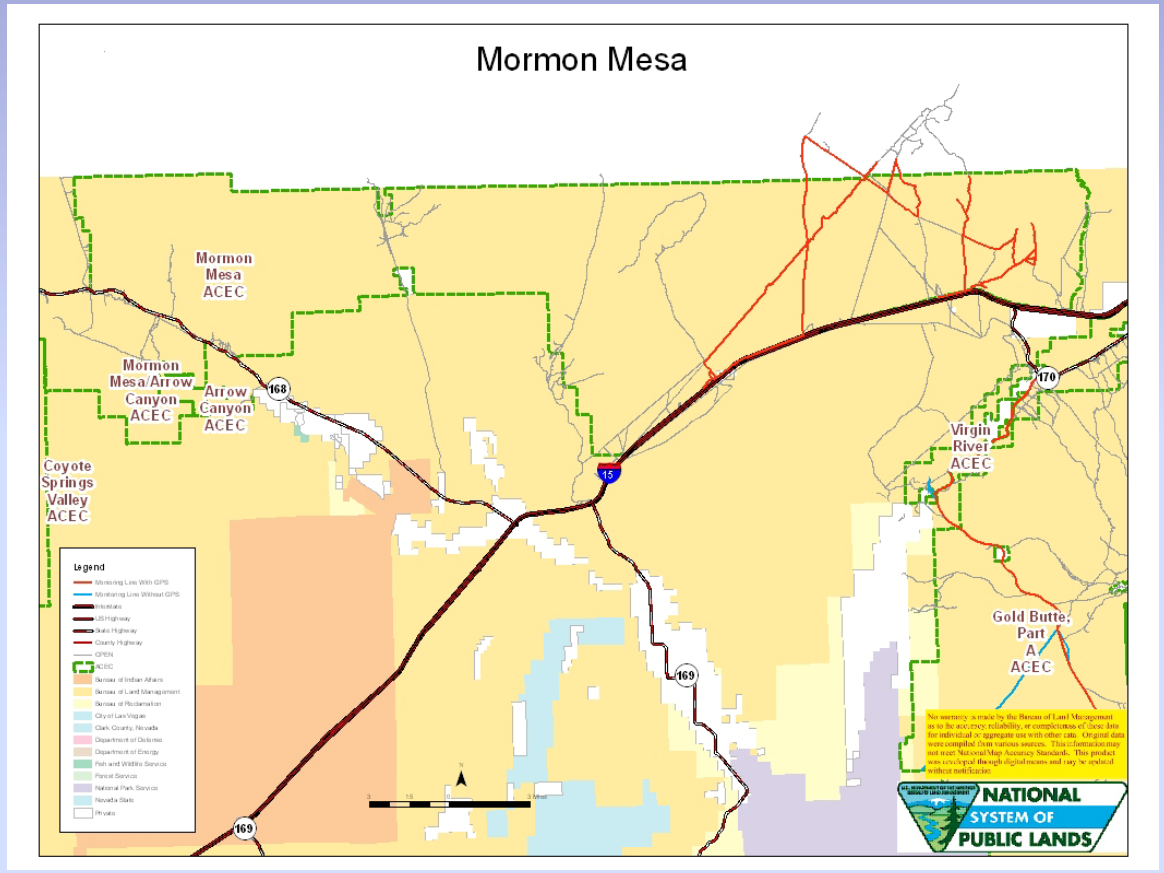
Results


Mormon Mesa
Mormon Mesa ACEC
Mormon Mesa/Arrow Canyon ACEC
Arrow Canyon ACEC
Coyote Springs Valley ACEC
Virgin River ACEC
Gold Butte, Part A ACEC
168
170
15
169
169
Legend
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Results*

- A total of 72 disturbance incidents were documented by BLM this quarter
  - 28 new point disturbances
  - 38 new line disturbances
  - 6 new area disturbances were documented.

53% of all disturbances were illegal incursions

*The results on the following slides indicate areas not previously recorded. BLM can not determine at this time when the damage occurred at most of these sites.

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Results

Point Disturbances - BLM

25%- Dumpsites without tires

25%- Other: Recreation Areas (Camping and Staging Areas)

21%- Sign Damage

11%- Road Hazards

7%- 2-Track Incursions

8%- Graffiti or Burn Area

3%- Weed Infestation

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Results

Point Disturbances – PIC

225 points

- Sign Damage (25%),
- Recreation Areas (19%)
- 2-Track (16%)
- Denuded areas (16%)
- Dumpsites without tires (11%)

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Results

Line Disturbances - BLM (Total: 15.9 miles)

92%- Unimproved; Two–Track

5%- Hill Climbs

3%- Improved; Two-Track

97% of all road proliferation is attributed to OHV or other 4WD vehicles.

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Results

Area Disturbances - BLM (8.3 Acres)

- 50%- Shooting Areas
- 17%- Scenic Overlook
- 17%- OHV Play Areas
- 16%- Parking Areas

PIC, after BLM data validation, collected 22.07 acres of area disturbance data. The majority of areas (42%) were campsites and (12%) staging areas.

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Results

This quarter a total of 78 signs were installed of which:

- 24 signs were replacements due to vandalism, weathering, or that were otherwise missing.
- 2 were repaired due to vandalism, vehicle damage, weathering or other non-human caused damaged (e.g., wind damage).
- 52 new signs were installed

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U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
DESIGNATED
ROUTE
MOTORIZED
USE
LIMITED TO
DESIGNATED
ROUTES
ONLY


U.S. DEPARTMENT OF THE INTERIOR
MARCH 3, 1849
U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
LIMITED
USE AREA
IN AREA BEYOND SIGN
VEHICLES MUST REMAIN
ON DESIGNATED ROUTES
NO CROSSCOUNTRY TRAVEL
OBEY POSTED SIGNS
VIOLATIONS PUNISHABLE–UP TO $100,000 FINE


U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
RESTORATION IN
PROGRESS
PLEASE DO NOT
DISTURB


ALL VEHICLE USE LIMITED
TO DESIGNATED
ROADS AND TRAILS


U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
NATIONAL
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PUBLIC LANDS

Results

- BLM visited 59 incidents documented by volunteers:
  - *Coyote Springs*: 13 disturbance sites
  - *Mormon Mesa*: 18 disturbance sites
  - *North Gold Butte*: 18 disturbance sites
  - *South Gold Butte*: 1 disturbance sites
  - *Piute/Eldorado*: 9 disturbance sites

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Results

- Observations of people/groups recreating within the monitoring areas:
  - BLM - 10
  - PIC – 17

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Adaptive Improvements to Methods

- Interdepartmental cooperation and communication has been strengthened, primarily with Law Enforcement and the Restoration Team, helping to ensure that all goals were met for this quarter.
- BLM, with PIC input, improved the Data Dictionary and field forms
- BLM and PIC are now collecting monitored routes with second GPS to show where we traveled in addition to incident recorded.

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Adaptive Improvements to Methods

- PIC and BLM provided additional training for volunteers
- PIC created a “cheat sheet” to remind volunteers of collection and observation methods.
- PIC improved materials and supplies provided to volunteers (maps, safety equipments, etc.)

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Adaptive Improvements to Methods

- PIC continues to review quality of work provided by each volunteer to retrain as needed and to determine suitability to work on this project.
- BLM has identified that volunteers are collecting point features in situations where BLM records incidents as lines and areas. This will be analyzed and addressed in the next few months.

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Adaptive Improvements to Methods

- All monitors will be reminded to be more diligent about recording recreational use.
- BLM will use traffic counters to help determine when use is occurring.

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Management Response: Restoration of habitat

Before

After

When damage occurs, restoration is scheduled.

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Management Response: Restoration of habitat

Before

After

One day there is a road and the next it is gone.

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Management Response: Trash Removal

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Management Response: Law Enforcement

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Incident Delegation

- 53% of BLM recorded incidents received a management response by BLM during the first quarter of monitoring.
- 29% additional incidents were delegated to Law Enforcement or Restoration.
- 14% require further evaluation to determine management response.
- 4% do not require a management response. (i.e., superfluous sign, tracks from legal parking)

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References

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