Sign Implementation Strategy

West Mojave Planning Area

Barstow/Ridgecrest Field Offices

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I. Background

On January 29, 2011 Judge Illston issued a remedy order in the case Center for Biological Diversity v. US Bureau of Land Management, C-06-4884 (SI).

"(1) Within 60 days of this order, the BLM should provide the Court with a detailed implementation plan for signing all open routes in the WEMO. The signing should be completed within 180 days of the date of this order."

Through this item, the court ordered the Bureau of Land Management (BLM) to develop a plan to sign all open routes, and to complete the signing of the open routes in the West Mojave (WEMO) area within 6 months of the order. This document addresses the plan to install signs.

This plan addresses the remedy timeline, the scope of the signing to be done, the process that is being used including overall priorities and specific strategies for each of the field offices affected by the order.

Before development of the WEMO Plan, signing had been completed using the 1985/87 route network and has been ongoing since then. Between September 2001 and March 2002, 13 field crews inventoried nearly 8,000 motorized routes within the Western Mojave desert. This information updated data collected by BLM field survey crews in the 1985/87 inventory. Both of these data sets were supplemented by data digitally collected by aerial photography (taken in 1995/96) covering most public lands within the planning area. Additional surveys were performed in specific subregions in response to public comment. This data was used to develop the 2003 WEMO route network.

Since 2003 and before the court issued the remedy order, the BLM had already identified WEMO implementation needs based upon the 2003 Decision Record. BLM received a funding grant from the Off-Highway Motor Vehicle Recreation Division (OHMVR) for implementing its sign plan. Signing has been an ongoing activity since 1985/87 and was accelerated after the approval of WEMO Route Designation Environmental Assessment in 2003.

II. Court Remedy Timeline[1]

Day 1	Court Order Remedy Initiated	1/29/2011
60 Days	Detailed Implementation Plan for signing all open WEMO routes	**3/29/2011**
90 Days	Monitoring Plan to determine:	4/28/2011
	Compliance with route closures	
	Whether illegal routes are being created	
	Plan for maintenance of open route network	
	Plan for installation of informational kiosks at major OHV access points	
	Plan for providing additional enforcement capability for the WEMO route network	
	Quarterly Report Due	4/28/2011
180 Days	Signing complete	7/27/2011
210 Days	Maps available with accurate and updated route information	8/26/2011
	Include language per order on all maps, brochures, kiosks	

[1] The following items will be accomplished through the March 2014 Plan: "(4) The BLM shall carry out additional information gathering and monitoring regarding (a) air quality in and around open areas through air quality monitoring, (b) status of the Mojave fringe-toed lizard and its habitat, and (c) riparian areas and UPAs, including new "proper functioning condition" ("PFC") assessments for al of the springs and seeps in the West Mojave planning."

III. West Mojave Sign Implementation Project Summary

The West Mojave planning area consists of approximately 3.2 million acres of public lands. Approximately 5,098 miles of roads and trails make up the WEMO designated route system for the Barstow and Ridgecrest Field Offices.

Since the Record of Decision for the Final WEMO Plan, BLM has adjusted its signing strategy to reflect the updated route designation decisions. Existing staff have been redirected and supplies have been acquired to accomplish WEMO route signing needs. GPS, general field safety, and OHV and other equipment training have been conducted to ensure consistency and data quality and accuracy of signing information as well as the safety of all field staff.

To implement the court ordered remedy sign plan, BLM identified the following components: priority setting, process, staffing, training, project supplies and equipment inventory, and project funding. The information from this signing effort would then be used to develop the route network maintenance plan, to identify locations for additional informational kiosks and generate updated maps of the designated route network.

IV. Priority Setting

The priority development and implementation strategy for the BLM was based on the WEMO Management Area Zones (MAZs) which were then further divided into smaller, more workable subregions (see tables on next page). BLM has assigned two-person teams made up of a cross section of existing employees that work in a variety of disciplines. Specific tasks and methods necessary to complete implementation of signing were developed and applied to the timeframe established by court order. These court ordered timeframes are different than those planning timeframes identified in the WEMO Plan. Pursuant to the WEMO Plan, priority work had already been identified and assigned through the BLM annual work planning process and portions had been completed by existing BLM staff. Please see Staffing Section below for a more detailed discussion on workload deferred by the court ordered signing.

For the court ordered signing effort, the priorities for signing were determined by an interdisciplinary team of BLM employees familiar with the WEMO Plan area. This team consisted of a biologist, archeologist, park ranger, recreation and wilderness branch chief, and GIS Specialist. These specialists considered resource values, access, proximity to urban areas, and availability of existing data. These data were assigned values, ranging from the highest priority (5) to the lowest priority (1); prioritization of signing is based upon the values recommended by the individual resource specialists and compiled in a matrix. The results of the matrix established the areas to be signed first based on a higher total numeric value (see appendices A1 and A2). However, all areas will be signed. Each field office's subregion priorities are listed in the tables below.

Barstow Field Office Subregion Priorities

Sub Region	Biological	Wilderness	WSA	Cultural Resources	Proximity Urban Area	Degree of Readiness	Total
1.Afton Canyon	5	5	5	5	2	5	27
2.Joshua Tree	5	5	1	5	5	5	26
3.Calico Mountain	4	3	1	5	5	4	22
4.Cronese Lake	2	5	5	5	2	2	21
5.Ord Mountain	5	4	1	5	4	1	20
6.Newberry/Rodman	4	5	1	5	3	1	19
7.Black Mtn	3	5	1	5	3	1	18
8.Coolgardie	4	5	1	2	4	1	17
9.Pisgah Crater	4	4	1	5	1	1	16
10.Rattlesnake	3	5	1	3	2	2	16
11.Juniper Flats	3	1	1	4	4	2	15
12.Broadwell Lake	3	4	4	1	1	1	14
13.Harper Lake	1	5	1	2	4	1	14
14.Fremont Peak	3	3	1	2	3	1	13
15.Wonder Valley	2	5	1	1	3	1	13
16.El Mirage	3	1	1	2	4	1	12
17.Johnson Valley	3	4	1	1	2	1	12
18.Kramer Hills	4	1	1	2	2	1	11
19.Stoddard Valley	4	1	1	1	2	1	10
20.Mitchell Mountain	2	2	1	2	1	1	9
21.Iron Mountain	2	1	1	1	1	1	7

Ridgecrest Field Office Subregion Priorities

Subregion	Biological	Wilderness	WSA	Cultural Resources	Proximity Urban Area	Degree of Readiness	Total
1.Sierras	4	3	0	5	3	5	21
2. Red Mtn	5	2	0	5	3	5	20
3.El Paso	4	1	0	5	5	5	20
4.Ridgecrest	4	0	0	3	5	5	17
5.Jawbone	3	2	0	5	1	5	16
6.S Searles	3	0	0	3	3	5	14
7.N Searles	3	1	1	3	3	3	14
8.Darwin	1	3	0	5	1	1	11
9.Middle Knob	4	0	0	3	1	1	9
10.Rands	2	0	0	3	1	3	9
11.Lancaster	1	0	0	3	1	1	6

V. Process

In order to sign all open routes in the WEMO Planning area within the timeframe specified in the court ordered remedy, BLM developed the following process for route signing efforts. A map of each sub-region has been developed containing the WEMO designated route system. This was accomplished by overlaying the Geographic Information System (GIS) mapping coverages of the WEMO designated route system and land ownership to each of the identified 32 subregions. Signing of each subregion is accomplished by one or more of the 14 Route Signing Teams. Route Signing Teams consist of two personnel that are equipped with a vehicle, maps, a Geographical Position System (GPS) Unit, an auger, sign post pounder, and route marking decals and numbers. These teams will then verify, through field reconnaissance efforts, the alignment of the routes, and sign the routes according to the California Desert District (CDD) Signing Policy[2] (Appendix B).

The main element of the CDD Signing Policy is that Open Routes will be signed as open, and Closed Routes will not be signed; therefore, if a route is not signed, it is not open. The Route Signing Teams install open route signs, and using a GPS unit, records the location of each open route sign installed. Signing teams also record GPS locations of existing kiosks if not already identified to educate the public regarding proper land use regulations and ethics.

At the end of each work week, the Signing Teams' data is transferred from the GPS units for processing and confirmation of proper data collection. Processing includes differential correction of the GPS data, compilation of data, and exporting into a file format that is used in Arc Map (BLM standard mapping software). This GPS data will then be used to both develop maps with accurate and up to date route information and also assist in future monitoring, maintenance, and enforcement efforts.

Preliminary analysis estimates that WEMO has approximately 5,098 miles of designated routes within its management area. BLM estimates that, on average, 1-2 signs per mile of route (up to approximately 10,000 signs in the WEMO area) are needed including intersections, turns and limited use signs. BLM estimates that it takes approximately 15-20 minutes per sign to install the post, add the decals, and record the site on the GPS unit (or approximately 3,350 hours). This calculation does not include travel time between duty station and assigned subregions or increased travel time in more rugged terrain or other variables (i.e. inclement weather, equipment failure, unanticipated field reconnaissance, etc.) These variables will double the work hours.

Crews are currently in the field completing signing according to the priority signing areas set above. BLM anticipates that the signing implementation will be completed within the timeframe allowed by the court even considering the variables identified above. BLM will provide an update of the progress made by the signing teams during the first quarterly report that is due to the court April 28, 2011.

[2] BLM Field Offices in the CDD rely on this sign policy even though it indicates it has expired. To date, the CDD sign policy has not been reissued or replaced with a current version.

Staffing

For the 28 staff members assigned to the signing teams, all other job priorities have been set aside or deferred in order to satisfactorily accomplish the court order. Their existing duties are described below.

Members of the signing team include 1 recreation/wilderness branch chief,1 outdoor recreation planner, 5 park rangers, 6 force account[3] team members (this includes the entire Barstow Field Office force account team), 1 geologist, 10 fire fighters, and 2 natural resource technicians, 2 sub-contractors.

The Recreation & Wilderness Branch Chief is responsible for monitoring the Pacific Crest Trail, monitoring and preparing a legal description for the Cottonwood Creek Wild and Scenic River, monitoring the Piute Mountain Fire Rehabilitation project, for overseeing and managing the Recreation Branch Employees, and managing the program's budget.

The outdoor recreation planner is responsible for developing the Amargosa Wild and Scenic River Plan, administration of OHV grants, coordinating partnerships with local schools, government and businesses for environmental education of children, both locally and regionally, and representing BLM on the planning team for the Old Spanish National Historic Trail, designated by Congress in 2009.

Typically park rangers are responsible for implementation of fee collection at 2 designated Off-Highway Vehicle (OHV) fee sites, safety and cleanliness of campgrounds and weekly cleaning of 50+ vault toilets, administration of the wilderness program including required monitoring, sign replacement and special recreation permit monitoring, and monitoring and repair of OHV exclusion fences. They are responsible for the upkeep and stocking of more than a dozen public information kiosks and cleaning and maintaining visitor facilities at the Trona Pinnacles National Natural area.

The force account team is responsible for 5 major construction projects: Sawtooth Campground development, Owl Canyon storm damage repair, Mule Canyon road storm damage road repair, and Dumont Dune OHV Area fencing to protect adjacent fringed toed lizard habitat, designated wilderness, and the cultural and riparian ACEC, and completing the reconstruction of the Bird Springs Pass road. They also maintain 232 miles of existing open routes to prevent route proliferation and maintain all infrastructure including remote visitor centers, signing boundaries of designated open areas, and are also responsible for maintaining trail systems.

The geologist, in addition to regular public response and plan processing duties, is responsible for identifying and overseeing remediation (closure by one of several techniques requiring technical evaluation) of abandoned mine lands on 3.2 million acres.

The 10 firefighters take on many of the park ranger duties already mentioned and provide emergency medical services throughout the field offices. They also perform abandoned mine land hazard feature inventory and wild horse and burro facility maintenance. Normally during this time of year, they would be completing required annual training to prepare them for the upcoming current year fire season.

[3] Force Account employees are primarily responsible for construction and heavy equipment operation for large scale capital improvement projects. They also support other BLM field offices on similar projects.

The natural resource technicians duties include field coordination of weed treatments on 3.2 million acres of riparian and upland areas including areas populated by listed and other rare plant species. One of these staff is one of two certified herbicide applicators in the Barstow Field Office for oversight of all chemical invasive weed treatments. They are also responsible for overseeing and managing contract crews performing habitat restoration within the Rand Mountains, Ord Mountains, Juniper Flats and Jawbone ACEC, completing effectiveness monitoring on previous restoration efforts, preparing grants to complete restoration in FY 2012, and preparing Phase II of the Rand Mountain Management Area Permit program.

In addition to these 28 personnel, 85 percent of the GIS Specialist time is allocated to support the court ordered signing. Duties include mapping work for the Amargosa Wild and Scenic River Plan, Dumont Dunes fencing project, abandoned mine lands, the Marine Base proposed land expansion (approximately 190,000 acres), preparation for the 2014 WEMO Plan route update and all other project support on 3.2 million acres.

Unless an emergency situation presents itself, the duties of all of these staff will be temporarily deferred for the next 6 months.

Total cost of the implementation for the signing portion of the court order is approximately $1,960,000.

Even though 27 of the 29 personnel identified are current BLM employees, a substantial portion of their 2011 salaries came from project-specific BLM appropriated funding. The majority of this court ordered signing project is funded by BLM appropriations and it is not identified as a workload accomplishment. Therefore, a substantial workload that has been identified through the BLM annual work planning process and has accomplishments associated with the funding, is no longer funded. This could lead to reduced funding in upcoming years as a result of funded, uncompleted accomplishments as has occurred in the past.

VI. Training

It was determined that additional training was needed to ensure efficient and safe use of all equipment. Prior to training, the knowledge of the signing and implementation crews varied widely in terms of competence with existing pieces of equipment. Global Positioning System (GPS) training using the Trimble units was conducted to assure technical competence of users to ensure consistency in data collection, reporting, and eventually mapping can be completed to protocol.

All Terrain Vehicle (ATV) and motorcycles provide access to remote sign sites. An auger is a hand held earth drill that is needed to perforate hard surfaces (e.g. compacted clay soils) for sign placement when a post pounder is not adequate. In order to meet safety standards for operation of equipment, ATVs, motorcycle, and auger training were conducted. In addition risk assessments have been completed and tail gate safety meetings have been conducted to ensure safe operation in the field. In order to work in remote locations in the desert, a minimum of two individuals are required on each field team to ensure a safe working environment.

Training was completed as follows:

GPS	February 22, 2011, 1:00	Barstow Field Office	All team members
ATV/Motorcycle	February 24, 2011, 8:00	El Mirage	All team members
GPS	February 25, 2011, 10:00	Barstow Field Office	All team members
Auger	March 7, 2011, 8:30	Barstow Field Office	All team members
GPS	March 9, 2011, 9:00	Ridgecrest Field Office	All team members

VII. Project Supplies and Equipment Inventory

Decals are used to number and letter open route signs on the ground so that they correspond with the eventual maps (see CDD Sign Policy Appendix B).

Current Decal Inventory	
LETTER ITEM	**QUANTITY**
G	1,374
O	512
J	1,228
S	807
C	1,474
B	620
A	1,132
F	1,292
W	256
M	1,917
V	896
T	320
R	712
E	2,158
P	450
H,L,N,I,K	0

Current Decal Inventory	
NUMBER ITEM	**QUANTITY**
0	3,623
1	5,330
2	4,524
3	4,725
4	5,000
5	2,847
6	999
7	5,048
8	6,983
9	971

3,850 brown fiberglass signs are on hand in the following stages of readiness for installation:

2,790-blank signs, no decals (each sign can be installed including adding decals in 15-20 minutes)

120-signs set up for Coolgardie with Logo, Flag, Open Route, letters CG
(NOTE: One side only, needs all the decals on the second side, some time in the field may be saved since these signs have been partially stickered)

940-signs ready to go with Logo, Flag, Open Route (no letters)
(NOTE: One side only, needs all the decals on the second side, some time in the field may be saved since these signs have been partially stickered)

Normally within a year, BLM installs and replaces up to approximately 1,000 signs in the WEMO area. Much of the existing inventory was to cover that planned workload.

Equipment Inventory On-Hand Needed for Signing	
Item	**Inventory**
Trimble GPS Units	11
Hand Auger	8
Post Pounders	23
Cameras	11
ATVs	10
Motorcycles	7
Vehicles	14

All of this equipment and vehicles serve all of the needs of the two field offices. For the duration of this project, all other activities which require this equipment or vehicles will be deferred.

Based on previous purchases, additional supply/equipment needs have been identified. These are summarized below.

Additional Supplies and Equipment Required for Court Ordered Signing	
Item	**Need in Addition**
Open Route Signs	4,000
Hand Auger	5
Cameras	2
Trimble GPS/software	4 (1 replacement)
Utility Vehicle	1

Additional inventory will be purchased as needed.

VIII. Project Funding

WEMO Route Signing Costs	
Staffing	
GIS Support Staff	$ 103,200
Field Office Management	$ 102,400
14 Signing Crews	$ 739,200
Three Friends of Jawbone Signing Crews	$ 147,840
Vehicle Costs	
14 Vehicles	$ 92,400
Three Friends of Jawbone Auger Trucks	$ 120,450
Supplies	
Open Route Signs	$ 449,500
Kiosks (Two Pannel)	$ 75,000
Maps for Kiosks	$ 6,000
Brochures	$ 59,000
18” X 21” Aluminum Limited Use Signs	$ 12,800
48” X 48” Aluminum Limited Use Signs	$ 51,200
Grand Total	**$1,958,990**

Except as identified under Project Summary and Inventory sections of this document all funding will be BLM appropriated and therefore will result in other activities being deferred as described in Section VI.