Department of the Interior
Bureau of Land Management

Bullhead
Travel Management Plan

March 2009

BLM

Lake Havasu Field Office

BUREAU MISSION STATEMENT

The mission of the Bureau of Land Management is to sustain the health, diversity, and productivity of the public lands for the use and enjoyment of present and future generations.

Table of Contents for TMP

BULLHEAD
TRAVEL MANAGEMENT PLAN

March 2009

1. INTRODUCTION

The Bullhead Travel Management Plan (TMP) is the first of six travel management areas (TMAs) to be completed within the Lake Havasu Field Office (LHFO). The TMP is the implementation plan for DOI-BLM-AZ-C030-2007-0050-EA (formerly EA-AZ-330-2007-50). The Environmental Assessment (EA) analyzed the designation of routes to determine the best combination of open and closed routes to provide transportation and recreation access, protect natural and cultural resources, and minimize conflicts and safety hazards as required by Executive Order 11644 (Appendix B) and codified as 43 CFR 8342. The route decisions are presented in the EA and authorized by the Decision Record.

The Bullhead planning area is a mix of public lands administered by the Bureau of Land Management (BLM), Fort Mohave Indian Reservation, State Lands, Arizona Department of Game and Fish, and private lands (Table 1). However, the TMP applies only to BLM-administered lands. No attempt to manage or restrict legal access to lands under any other jurisdiction is implied nor expressed.

Comprehensive travel management is the planned management of public access, natural resources and regulatory needs to ensure that all aspects of road and trail system planning and on the ground management are considered. This includes natural and cultural resource management, road and trail design, maintenance, motorized and non-motorized recreation and non-recreation uses of the roads, primitive roads, and trails, and public compliance with route designations.

A route inventory was completed for the planning area in 2006 in an interagency project funded by the State of Arizona Off-Highway Vehicle (OHV) program. A detailed route evaluation was conducted in 2007 as planned in the *Lake Havasu Field Office Resource Management Plan* (RMP). Participants included representatives of the Arizona Game and Fish Department, BLM, OHV user organizations, and other interested parties. A Route Evaluation Tree[1] was used to identify four alternatives to accommodate motorized vehicle access, with different levels of access and resource protection emphasis (Appendix A). The specific route-by route designations are available for inspection on the web at http://www.blm.gov/az/st/en/prog/travel_mgmt/bullhead.html as well as on CD.

[1] ARS Route Evaluation Tree, Advanced Resource Solutions, Bureau of Land Management Contract, 2003.

The draft alternative maps have been available on the web for public comment since early 2008. Public and agency comments received were considered in the development of DOI-BLM-AZ-C030-2007-0050-EA and the Bullhead TMP. On December 2, 2008, the EA and the associated draft implementation plan were again posted to the BLM's Arizona website for a 30 day comment period. BLM received two comments. Neither comment was content related. BLM also reviewed the EA and TMP for accuracy, format, clarity and level of detail. Consequently, BLM 1) revised the format to consolidate information that was previously mentioned in several places 2) provided additional information to clarify process and intent and 3) provided a final proof-reading. For additional information, refer to the Decision Record. If special use restrictions are required for minimum equipment standards, a Federal Register Notice will be published. BLM will publish a route guide map of the Bullhead Travel Network (TN) showing all designated, numbered routes.

2. BACKGROUND INFORMATION

The majority of the BLM-administered public land in the planning area was designated "limited to existing roads and trails" in the RMP which was approved May 10, 2007.

The RMP deferred the designation of specific roads and trails as "open," "closed," and "limited." The assignment of designations was to be part of a route evaluation based on the management alternatives to be analyzed in the travel network environmental assessments. Limited routes are those with some type of specific restriction, such as a vehicle size limit, a seasonal restriction, limited to administrative use, or limited to non-motorized vehicles. Limited areas are those that have some combination of open, closed and limited routes. (See Appendix C for the criteria considered).

The route evaluations and the EA for the Bullhead TMP (DOI-BLM-AZ-C030-2007-0050-EA) are now complete. The decision of the EA was to implement **Alternative C**. This alternative was determined to be the combination of "open", "closed" and "limited" routes that most effectively meets the goals of the

RMP, the requirements of EO 11644 on managing OHV travel, and the goals and specific objectives of the Bullhead TN. The goals and objectives are presented in Part III below.

The Bullhead TMA is allocated entirely as an Extensive Recreation Management Area (ERMA), except for the Colorado River Nature Center. In ERMAs, recreation management is custodial, meaning that planning and implementation are limited to resolution of basic land health issues, conflicts between users, and threats to public health and safety.

The Colorado River Nature Center is a Special Recreation Management Area (SRMA). In SRMAs a specific visitor market, seeking a specific structured recreation experience, can be identified. To provide the desired experience, SRMAs usually require a more detailed array of recreation management planning objectives than an ERMA. SRMAs have a more extensive plan and budget and often a larger group of active partnerships.

A. Planning Area Environment and Location

The TMA is located in the eastern portion of the Mojave Desert/Sonoran Desert interface adjacent to the Colorado River. The area has a unique vegetation distribution which varies with topography and drainage conditions. As a transition area between two desert types, it includes a mixture of plants from both biomes. Plants vary from riparian to creosote-bursage communities with some annual grasses and forbs.

The project location is north of I-40, south and east of Bullhead City, in western Arizona and east of I-40 and north and south of Needles, in eastern California. The area is separated by the Colorado River. The river flows south to Lake Havasu, which is created by Parker Dam. The area is the northernmost portion of the BLM Lake Havasu Field Office (LHFO). The Needles Field Office (NFO) boundaries are to the west in California and the Kingman Field Office (KFO) boundaries are to the east (see Map 1 Bullhead Travel Management Area with Surface Management). The area covers Townships 8 – 11 North and Ranges 22 – 23 East of the San Bernardino Meridian in California and Townships 16 - 21 North and Ranges 20 – 21 West of the Gila & Salt River Meridian in Arizona. Table 1 shows the acres and land status in the Bullhead TMA.

Table 1
Land Status

OWNERSHIP	ACRES	PERCENTAGE
BLM	47,400	25
U.S. Fish and Wildlife Service	14,357	7
U.S. National Park Service	1,626	1
Tribal	28,780	15
Private	78,773	41
State Lands	21,461	11
State Wildlife	464	0
TOTAL	**192,861**	**100**

B. Issue Identification

The primary issues identified through public scoping and the RMP are:

- Continued access for OHV use of public land for recreation
- Access to private land and resources for economic and social needs
- Maintaining or improving land health with environmentally sound use
- Coordination with adjacent jurisdictions and counties
- Maintenance of safe use
- Reduced number of visitor conflicts.

Many of the motorized use and vehicle access issues result from two factors: growing demand for OHV travel opportunities and the long period of time that has elapsed since the signing of EO11644 in 1972. Nationwide participation in OHV activity increased 42% between 2000 and 2004 (Cordell, et. al., 2005). In his July 2005 testimony before Congress, current BLM Oregon State Director Ed Shepard stated: "The OHV and motorcycle industry conservatively estimates that there are four to five times more OHVs in the West than there were a decade ago". The growth in OHV use since the signing of EO11644 makes planning and designating routes on public lands ever more challenging.

C. Purpose and Need

The purpose of the TMP is to implement a travel network of designated routes planned in the RMP or identified in TMP scoping, and selected through the EA. The TMP presents management actions needed to meet the specific TMP objectives identified below. The network provides motorized and non-motorized access to BLM-administered public lands and existing recreation opportunity on Maps A, B, C and D.

The TMP is needed to implement the decision in the EA to establish a comprehensive travel network of route designations. The designations are needed primarily to respond to growing public demand for access (Appendix D) and impacts of both motorized and non-motorized use on recreational, cultural and natural resources.

Although most of the Bullhead TMA is under custodial management, collection of baseline data on route use and land health condition is necessary to assess progress toward the TMP objectives through subsequent monitoring. Schedules to complete this work are included in the TMP.

3. GOALS AND OBJECTIVES

The specific objectives of this plan are targets based on best available information. The difficult conditions imposed by the extremely hot, arid climate, as well as the limited resources for ERMA management, create uncertainty about target time frames. However, sufficient monitoring is planned to determine if adequate progress is being made toward the objectives. If progress is not adequate to achieve the objectives in a realistic period of time, management actions will be revised. Applying this principle of adaptive management is an essential component of the Bullhead TMP.

Most objectives require baseline data to determine progress. For determining progress toward land health objectives, cover and bare ground transect data is needed, as well as potential natural plant community composition data that is available from existing ecological site descriptions.

A. ***Recreation and Transportation Goal*****:** Provide a well-defined, relatively safe, environmentally sound travel network for sufficient access and transportation on BLM-administered public land with opportunities for recreation and reduced visitor conflict.

Objective A.1: Outreach and Education

a) Make information available to all visitors to the Bullhead Travel Network on route designations and signing, restrictions, and proper vehicle operation on the routes that is needed to identify open and closed routes, and comply with all rules of travel in the TMA. This will be achieved within one year after the installation of informational and route designation signs is complete in the Bullhead TMA.

b) Six months after the installation of informational and route designation signs is complete in the Bullhead TMA, loss of signs is no greater than 25 percent.

Rationale: In a remote ERMA where roads are primitive (see definitions in Section VI), law enforcement patrols are limited and maintenance and monitoring are infrequent, education of public land visitors is critical for progress toward meeting TMP goals and objectives. Voluntary compliance with the rules and regulations on safety, protection of natural and cultural resources, and maintenance of the travel network require reaching and educating the public. When violations of regulations are witnessed by law enforcement officers, successful prosecution requires that violators have had a reasonable opportunity to be informed of the applicable laws.

Objective A.2: Visitor Safety and Use Conflicts

a) Reduce the number of reported accidents and injuries involving motorized travel by 50 percent by March 31, 2011.

b) Reduce the number of reported complaints involving conflicts among public land users, particularly conflicts between different types of recreation, by 50 percent by March 31, 2011.

Rationale: Minimizing conflicts among the various recreation uses of the TMA is required in Executive Orders 11644 (see Appendix B) and 11989, as codified in 43 CFR 8340. This plan will guide motorized use on public land. The highest land use values will be diminished if Objective A.2 is not realized. As an ERMA, the Bullhead TMA will receive limited patrolling. Few accidents are reported voluntarily. Therefore, the data collected under this objective will be carefully considered and its limitations factored into analysis.

B. ***Natural and Cultural Resource Goal*****:** Improve or maintain land health and protect cultural resources in the Bullhead TMA.

This will be accomplished by avoiding disturbance of sites with known cultural and biological values, improving important wildlife habitat, reducing runoff and erosion, and maintaining or improving soil

stability. Establishing desired plant communities is an important component of the resources goal, but vegetation establishment is very slow in the arid Bullhead TMA. Therefore, progress may not be defined in typical time periods of 10 years or less.

The following objectives are designed to make progress toward achievement of this goal:

Objective B.1: Route Designation Compliance

a) Eliminate creation of unauthorized routes by the end of 2014 (within five years of implementing this plan).

b) Eliminate significant disturbance adjacent to key open routes, including controlling the increase in width of existing routes by March 2011.

c) RMP decision TM14 states: "Motorized vehicles may be allowed to pull off an existing/designated route 100 feet either side of centerline. This use shall be monitored on a continuing basis." By March 2011, "if monitoring results show effects that exceed limits of acceptable change, motorized vehicles will not be allowed to pull off a designated route 100 feet either side of centerline in those areas where resource damage has exceeded limits of acceptable change." RMP decision TE-2 states "No net loss of quantity or quality of priority species and/or priority habitats will occur in the Lake Havasu Field Office (See Table 3-4 in the PRMP/FEIS), which may provide guidance on limits of acceptable change. TM14 will not be an acceptable rationale for significant expansion of road widths.

d) Eliminate travel on 50% of the closed routes by the end of 2014 (within five years of completing installation of route designation signs).

Rationale: Gaining voluntary compliance with route designations is the central objective of the Bullhead TMP. Nearly all other objectives depend upon the achievement of Objective B.1. This objective will also be the most demanding management challenge. However, without voluntary compliance, routes will continue to proliferate. Unauthorized routes cause loss of resource values (including soil and vegetation damage). Objective B.1 provides a direct measure of compliance.

Objective B.2: Maintain or Improve Land Health (as represented by BLM core indicators of vegetation cover, bare ground and consistent with Arizona Standards and Guidelines).

a) Reduce bare ground by five (5) percent in key areas of closed routes by 2020. This objective also applies to those sections of "closed" routes that are identified for restoration.

b) Increase the proportion of desired plant species in vegetation communities by 5 percent relative to the proportion of those species in appropriate ecological sites descriptions. This will be accomplished by 2020 in key areas. This objective also applies to those sections of "closed" routes that may be identified for restoration.

Rationale: Loss of vegetative cover is a primary cause of erosion, wildlife habitat damage and overall decline of watershed and riparian health. It is also an immediate impact of OHV

activity in unauthorized locations. Monitoring changes in vegetation cover and species composition may be accomplished by simple, well established linear transect methods, and has been selected as a core indicator for collection of national monitoring data.

Recovery of vegetation and improvement in surface condition, especially on closed routes in the Bullhead TMA, will be allowed to occur naturally over extended periods of time. Restoration activities such as ripping, seeding and mulching will only occur in unusual situations on routes where essential access, water quality of the Colorado River, or high value cultural or biological resources are threatened.

This objective addresses soil protection, an important component of the TMP. USDA-Ag Research Services is currently working to develop simple measures of changes in soil aggregate stability that are well correlated with linear disturbances such as OHV routes. When these measures are fully developed, they may be appropriate to incorporate into the TMP.

Objective B.3: Special Status Species and Cultural Resource Protection

Reduce by 50 percent the number of reported incidents of disturbance to special status habitat (plants, special status wildlife species), or cultural sites due to OHV activity by March 2014.

Rationale: Location of desert tortoise habitat, as well as effects on other special status species and cultural sites, were important considerations in evaluating and designating routes in the Bullhead TMA. Address disturbance through Adaptive Management. Refer to Management Actions regarding the collection of baseline data.

4. MANAGEMENT ACTIONS

The management actions in this plan are designed to achieve progress toward the specific objectives of the TMP. Target dates are included in the objectives and many of the actions. Availability of staff and funding will significantly affect whether targets and schedules are met. Grants, new appropriations, partnerships and volunteers will be used to supplement budgets when possible.

A.1 Actions Addressing Outreach and Education Objectives

A.1.1 Signage

a) Outside of the Nature Center SRMA, travel in the Bullhead TMA is limited to only numbered routes designated as “open.” Install network information signs on major access (portal) routes into the TMA instructing drivers of motorized vehicles that only the numbered routes with the word “open” are open to travel, and that all others are closed. Include a website address on the signs where additional information, including a travel network map (Map 3, see management action A.1.2) will be available. Complete this work by March 31, 2010, if funding is available. In addition to the informational (interpretive and regulatory) portal signs, construct several kiosks where all TMA information is available including copies of the network map (Map 3).

b) Install fiberglass sign post or marker at the entrance to the route that say "Open" on all routes designated as open in the TMA and display the unique route number. At intersections display a white arrow decal to show the direction and install additional "open" signs at practical intervals. Complete individual route signing by December 31, 2009, if funding is available.

c) Do not sign closed routes, except in special cases of hazards, property boundaries, and some special wildlife considerations. Install additional signs at intersections and at practical intervals.

d) On the few routes that are limited to non-motorized use mark route with standard symbol decals, indicating that the route is closed to motor vehicles.

e) Mark "Administrative Use Only" routes with standard "closed" route signs.

f) Mark the few routes that are signed as "closed" (see A.1.b. above) with "No Motor Vehicles" or "Route Closed" decals with standard vehicle symbols. Where there is a potential for an "open" route to be extended past its current end point by vehicle travel, "Motorized Route Ends" signs decals may be used.

Rationale: Unambiguous signing is the most critical management action in the challenging task of presenting all travelers with the information they need to be able to voluntarily comply with the route designations. Both the informational portal signs and individual route designation signs are essential in creating the well defined, open route network necessary to meet the goals and objectives of the TMP. Resource protection, safe travel, and reduction of conflicts all depend on establishing a clearly designated travel network of which the public is fully aware.

A.1.2 Publication of TMA Route Guide Map of Designated Routes

a) By December 31, 2009, prepare and publish a route guide map of the Bullhead Travel Network showing all designated, numbered routes. Include specific safety and resource protection rules that govern the travel network.

b) Since the Bullhead TMA is an ERMA, very little action will be taken to acquire easements for new routes. In rare situations, BLM will pursue easements across private or State land to ensure future public access to BLM-administered land within the Bullhead TMA.

Rationale: The open route guide map is nearly as important to education and compliance of users of open routes as the signing. Prosecution of violators of the route designations may not be allowed, if the user has not had a readily available opportunity to acquire a route guide map. It is also an interpretation and education source for information on safety, actions to take in an emergency, desert survival information, and additional sources of information.

A.1.3 Law Enforcement or Ranger Patrols

Patrol high use routes of the Bullhead TMA with a law enforcement officer or park ranger at least once a week to enforce the specific route closures and state regulations, provide a

presence, make public contact, educate visitors about the designated routes, hand-out maps and other information, provide assistance to visitors, and represent BLM in the field. BLM will continue to coordinate with Arizona Game and Fish Department to increase patrols throughout the Bullhead TMA. When law enforcement officers are unavailable, patrol with BLM park rangers to provide the similar services. While park rangers cannot cite violators, park rangers can initiate emergency or law enforcement response. Begin these patrols as soon as signs are installed in the TMA.

Rationale: Patrols will increase visitor services and visibility of BLM personnel in the area as a deterrent, continue and expand cooperative interagency operations, and increase public education efforts to promote voluntary awareness and compliance with use restrictions, and regulations and enhance public safety. Mohave County Sheriff and Arizona Game and Fish also provide law enforcement on BLM-administered public lands. Law enforcement concerns with public use in the area include accidents, DUI, cross country motorized vehicle use and routes and trails proliferation by visitors. Other BLM staff will create a visual deterrent as well.

A.1.4 Additional Public Outreach and Education

a) Complete two outreach programs each year (such as to schools and user-groups, and National Public Land Day presentations) to discuss OHV, "Tread Lightly" and "Leave No Trace" ethics.

b) Publish outreach material in local newspapers a minimum of once every two months concerning BLM travel management. This can include information on protection of resources and recreation opportunities.

c) Expand existing and develop new partnerships to share the workload of TMP implementation. Groups such as the Bullhead and Havasu 4-Wheelers are available for contributions in outreach, monitoring, sign maintenance and other activities.

d) Special Recreation Permits are required for commercial, competitive, and organized group activities on BLM-managed land. Use administration of these permits to distribute additional educational material on OHV activities, rules and routes.

A.2: Actions Addressing Visitor Safety and Use Conflict Objectives

A.2.1 Record all reported accidents and injuries on a standardized form. Create and enter this information in a route management data base. 2010 data will serve as a baseline. The LHFO will annually review this information to determine progress towards meeting objective. Conduct initial visitor counts to provide necessary visitor use baseline data.

A.2.2 Record the number of complaints involving conflicts between public land users. Enter this information into the route management data base. 2010 data will serve as a baseline. The LHFO will annually review this information to determine progress towards meeting objective. This data base will also contain the reported accidents and injuries.

A.2.3 Actions described in A1 (sign installation, outreach and enforcement) are also required to make progress toward this objective.

B.1: Actions Addressing Route Designation Compliance Objectives

B.1.1 The actions needed to achieve compliance with the route designations in the Bullhead TMP are similar to the actions planned for successful outreach and education of the visitors (Management Actions A.1 above). They include clear, instructive signs on portal access roads, numbered signs to identify the open routes, publication of a route guide map and other informative material, and public contacts.

B.1.2 Install gates and barriers on important closed routes if results of TMP monitoring show outreach and enforcement to be insufficient. Consider fencing, including barb wire, post and cable, or other materials to prevent vehicle traffic in areas not designated for motorized travel. Barriers or barricades may be temporary or permanent, and may be made of stone, boulders, steel or wood. Typically, gates will be made of steel and designed to be vandal resistant.

B.2: Actions Addressing Maintenance or Improvement of Vegetation Cover

B.2.1 Allow closed routes on BLM-administered land to recover naturally.

Rationale: Significant increases in vegetative cover will require long periods of time, possibly decades, even with investment in restoration. With resources for TMP implementation limited and outcomes uncertain, the costs of restoration is likely to out-weigh the benefits in all but the most serious disturbances (see Rationale for B2.b).

B.2.2 If a closed route must be restored, the route should be obliterated from public view at least to the "visual horizon" as seen from its intersection with an open route. Restoration should occur within one year of identifying the problem.

a) Install some form of barrier and reclaim the portion of the route that is visible from all intersections with "open" routes.

b) The route will be seeded where necessary to aid rehabilitation of closed routes. Only local native seed mixtures will be selected for each site based on individual site conditions.

c) Recommended reclamation techniques include ripping the road surface with a small dozer to break up compacted soil and allow maximum moisture retention. Broadcast seeding would generally be completed in the fall. After the seed has been distributed uniformly over the area, the ground would be raked or dragged to cover the seed. After the first year, seeded areas would be fertilized if seedling establishment is sparse. Techniques such as hydraulic seeding, seed drilling, mulching, water barring, pitting, roughening, contour furrowing, or similar methods may be used as appropriate on a case-by-case basis.

d) Other methods to close routes may include hand raking and lining small rocks across closed routes, posting with signs and/or blocking with barriers to prevent vehicle entry.

e) Weed treatment and control measures would be implemented as needed to promote re-vegetation with native plants and prevent any new weed establishment and/or control of existing weed sources.

Rationale: The goal of restoration projects on closed routes is to speed the recovery of disturbed area that is eroding at a strongly accelerated rate creating threats to essential access, water quality of the Colorado River, or high value cultural or biological resources.

B.2.3 Collect initial vegetative cover and composition inventory information to establish baseline conditions by 2010. Use transects method described in Section V, Objective B on monitoring.

Rationale: Baseline information is required to determine if progress has been made to achieve objectives.

B.3: Actions Addressing Special Status Species and Cultural Resource Protection

a) Actions for protection of special status species are the same as those in Management Action A.1, B.1 and B.2 above.

b) Record the number of reported incidents of disturbance to special status species habitat, or cultural sites due to OHV activity through 2010 to serve as a baseline. Enter this information into the route management data base. Collect data for incidents of disturbance from sources inside or outside BLM, such as Arizona Department of Game and Fish.

5. MONITORING AND EVALUATION TO ASSESS PROGRESS TOWARD OBJECTIVES

Effective monitoring of progress toward objectives depends on collection of baseline assessment data, acquiring ecological site or reference area data for land health monitoring, and maintaining the necessary funding for this work over an extended period of time. The ability to evaluate monitoring data and modify management in response to results will require the creation and maintenance of a travel management data base. Many changes in management technology and methods, and land use are likely to occur in the periods of time that will be needed to achieve some of the objectives in this plan. Like the management actions, monitoring will also have to be adaptive. For example, use of soil aggregate stability as a primary indicator of OHV impact may be available soon. New sampling tools for linear disturbances are also being developed. Introduction of new technology will be necessary in this and future travel management plans.

Objective A.1.a (Outreach and Education – Information)

Prepare and administer a survey of OHV operators and other visitors to the Bullhead TMA to determine the success of outreach actions in educating the public on use of the designated routes. Periodic visitor counts are required to standardize visitor use and other visitor data.

Objective A.1.b (Outreach and Education – Signage)

Conduct a survey of routes to determine sign condition.

Objective A.2.a (Visitor Safety and Use – Accidents)

Collect all available reports from law enforcement officers, rangers, other responders and other BLM personnel of accidents and injuries occurring in the TMA. Enter and analyze information in the route management data base.

Objective A.2.b (Visitor Safety and Use – Conflicts)

Collect, store and analyze data from incidents of user conflicts, and reports from users themselves, including information that could be gathered in the surveys described in A.1.1.a.

Objective B.1.a (Route Designation Compliance – Unauthorized Routes)

Conduct inspection survey of routes annually with assistance of volunteers to collect observations on new disturbances, including new routes and route changes along open routes or limited routes.

Consider use of aerial photography to support on-the-ground inspections on a five (5) year schedule.

Objective B.1.b (Route Designation Compliance – Disturbance)

Same monitoring procedures as B.1.a

Objective B.1.c (Route Designation Compliance – Pull-off)

Identify pullout areas with procedures described in B.1.a. Measures of acceptable change must be determined through further interdisciplinary analysis. Define limits in terms of reduction in vegetative cover, and soil aggregate stability and use BLM Technical Reference 1734-6, "Interpreting the Indicators of Rangeland Health."

Objective B.1.d (Route Designation Compliance – Travel on Closed Routes)

Identify use of closed routes by inspection surveys conducted at least four (4) times per year by volunteers. Some preparation for inspections such as raking sections of the closed route to identify disturbance is required. Also make use of photographic evidence.

Objective B.2.a (Maintain or Improve Land Health – Bare Ground)

Measure distances of bare ground along a 200 foot line-intercept transect established in four (4) to five (5) key areas once every five (5) to 10 years. Also establish photo points associated with each transect. Refer to Tech Reference 1734-6 for details on the method. Establish at least two transects on each route restoration project.

Objective B.2.b (Maintain or Improve Land Health – Increase Desired Plant Species):

Data on occurrence of desired plant species is collected on the same transects during the collection of bare ground data. Determine changes in plant community composition by applying the dry weight rank method at appropriate intervals.

Objective B.3 (Special Status Species and Cultural Resources)

Monitor for site disturbance in known areas of special status plant species and cultural sites by ocular survey. Many of these sites will be associated with closed routes. Survey approximately 10 percent of the areas with known sites every five (5) years.

A. Summary of the Primary Types of Monitoring in Bullhead TMP

There are three separate aspects for monitoring this TMP. These include implementation, effectiveness and resource monitoring. Implementation and effectiveness monitoring may also identify variables most likely causing an impact to a resource, and help eliminate some potential causes of change from consideration.

Implementation Monitoring
Implementation monitoring is the most basic type of monitoring and simply determines whether management actions have been implemented in the manner prescribed by the plan. There are no specific thresholds or indicators required for this type of monitoring. Progress towards plan compliance will be evaluated and reported at a one year interval from the date of plan approval.

- Provide on-the-ground signing of designated "open", "closed", "limited" routes;
- Provide route guide maps of designated routes;
- Promote acceptable use practices, such as the "Tread Lightly" and "Leave No Trace" programs. Provide other user education programs/materials that promote low impact travel and uses of the BLM-administered public lands;
- Recruit organized user groups and clubs to help monitor, maintain routes and to promote acceptable practices;
- Provide experienced BLM personnel to monitor use and enforce travel regulations;
- Resolve adequate funding sources to manage and maintain the TMA.

The above monitoring would be common to:

Objective A.1 Outreach and Education Objective Actions
Objective A.2: Visitor Safety and Use Conflicts
Objective A.2.2 Law Enforcement or Ranger Patrols
Objective A.2.3 Additional Public Outreach and Education
Objective B.1: Route Designation Compliance
Objective B.2: Maintain or Improve Vegetation Cover
Objective B.3: Special Status Species and Cultural Resource Protection

Effectiveness Monitoring
Conduct compliance (or effectiveness monitoring). The results of monitoring will be used to evaluate implementation progress and the effectiveness of the TMP in achieving desired outcomes and conditions, to identify adaptive measures as adverse impacts are discovered. Monitoring will also evaluate road condition, public safety and changes in visitor demand/preference.

Effectiveness Monitoring is monitoring to determine if the management actions implemented in the TMP were effective; and if so, how effective, in achieving the goals. Effectiveness monitoring will quantify OHV user compliance, and will be evaluated and reported at a one year interval from the date of approval. Monitoring will be accomplished through field verification of the planned road closures including:

- Utilize organized user groups and clubs to help monitor and to promote acceptable practices;
- Visually document implementation or establishment of closure practices (signs, gates, berms, rocks, etc) or road decommissioning practices;

- Visually document if closures and/or decommissioning prevent motorized travel on "closed" roads. If unauthorized travel is occurring, document tracks and resource vegetation with photos and notes;

- Determine the level of OHV use across the landscape using trail counters and aerial photos over time;
- Route proliferation, unauthorized routes;
- Route condition;
- Recreation conflicts;
- Litter/trash;
- Proliferation of non-native species;
- Monitor success of rehabilitation projects;
- Initiate and maintain collaborative partnerships among government agencies, local governments, business communities, volunteers, user groups, stakeholders, educational institutions, individuals, and the private sector to achieve recreation management objectives.
- Administer a survey on recreation demand, preferences, uses, satisfaction, and information needs in the Bullhead TMA within one year of the installation of signing and map publication, and once every two (2) years thereafter in one of the Lake Havasu Field Office TMAs. Work with partners such as universities and user groups to conduct the surveys. Base specific schedule on TMA conditions, acquisition of survey authority, and available resources.

The above monitoring would be common to:

Objective A.1 Outreach and Education Objective Actions
Objective A.2: Visitor Safety and Use Conflicts
Objective A.2.2 Law Enforcement or Ranger Patrols (Common to B.1 and B.3)
Objective A.2.3 Additional Public Outreach and Education

Resource or Validation Monitoring

Resource monitoring documents how implementation of the TMP influences natural and cultural resources over time. The choice of the metrics monitored to document change is critical if resource monitoring is to have a reasonable chance of success in documenting long-term impacts within the TMA. Validating the effect management actions have on natural and cultural resources is more difficult than determining the result of compliance or effectiveness monitoring. Monitoring, as well as management, will be adaptive. Monitoring protocols or techniques will be adjusted as new methods are developed or the discovery that current monitoring is not meeting management needs. Monitoring will be accomplished through protocols such as:

- Resource monitoring upon plan implementation will initially consist of an ecological site inventory following the guidelines of the Arizona Standards for Rangeland Health. However, most ecological sites have already been inventoried and established throughout the state, so the work required here will usually be limited to identification of the ecological site on which monitored is needed.
- On a five (5) year recurring basis, transects, utilizing line-intercept method, will be monitored from sites identified from above. Both reference and impaired sites will be monitored. Core indicators to be monitored: bare ground, vegetation composition including cover, soil aggregate stability, and OHV tracks. Additional monitoring information that will be available from core data collection will include vegetation height and non-native invasive species composition.

- Photo monitoring points will be established to monitor long term effectiveness of "closed" routes, open country travel, success of rehabilitation projects, extent of erosion mitigation areas, as well as areas of good road quality.
- Monitor the known Sonoran Desert Tortoise (SDT) burrows and the associated SDT occupying those burrows annually to determine health and welfare of the individual SDT. Continue the telemetry study in the TMA, if needed, to determine the movements of the SDT in the TMA.

The above monitoring would be common to:
Objective B.1: Route Designation Compliance
Objective B.2: Maintain or Improve Vegetation Cover
Objective B.3: Special Status Species and Cultural Resource Protection

6. STATEWIDE STANDARDS FOR OHV OPERATION

Route specific designations are indicated on Map 2 Bullhead Travel Management Plan Route Network, and in Appendix E, listed by route inventory number. The routes were assigned BLM agency standard transportation numbers; these are different from the inventory numbers. The changes are reflected in Map 3.

A. Standard Management Based on Route Classifications

During the route inventory and evaluation, the routes of the Bullhead TMA were classified by asset type (roads, primitive roads and trails), functional class (collector, local or resource) and maintenance intensity class (level 0 or level 1). These classifications are defined in the Glossary in Appendix O and are useful guidelines for establishing route limitations by vehicle type and function, maintenance schedules, or special vehicle restrictions. The route categories and designated mileage are shown in Tables 2 - 4 below.

Asset Types

Road (14.7 miles)
These routes will be open to all motorized vehicle use year-round. Roads will generally accommodate two way recreational, and commercial rural traffic, and may be passable by passenger car and large vehicle types (motor homes, trailer combination vehicles, haul trucks). Some roads may accommodate resource extraction traffic by heavy trucks. They will be maintained as funding becomes available. These include the main access roads from the public highways to the public land. Typical travel way width is 22 feet or wider depending on traffic type, alignment and topography, with or without shoulders. State vehicle laws apply on use of these routes.

Primitive Road (81.5 miles)
These routes will be open to all motorized vehicle use year-round. They are existing unimproved routes. They are typically single lane 8 to 10 feet wide and accommodate full size 4WD vehicles. These routes will generally accommodate single lane travel, with passing turnouts or widening as

needed. They may be passable by passenger car, but rough between many spots. Typically these are routes with a local or resource functional class, and Level 1 maintenance intensity. Maintenance will be very infrequent. State vehicle laws apply to motor vehicle use on these routes.

Trails (17.9 miles)
Some routes (0.4 miles) will be open to motor vehicle use year round. The remaining routes (17.5 miles) will be non-motorized trails. These routes include very rough roads intended to remain in that condition. Special use restrictions may be established for these routes to require minimum equipment standards following publication of Federal Register Notice. Physical barriers or restrictive devices, and signing may be installed. Monitoring will be carried out to detect change and take corrective action.

Table 2
BLM Transportation Asset Type
Designation Summary

ASSET TYPE	DESIGNATION	MILES	TOTAL (MILES)
Road			15.0
	Open	14.7	
	Limited	0.0	
	Closed	0.3	
Primitive Road			125.3
	Open	81.5	
	Limited	17.4	
	Closed	26.4	
Trails			1.5
	Open	0.4	
	Limited	0.1	
	Closed	1.0	
TOTAL			141.8

BLM Functional Classifications

The functional class designations summary is shown in Table 3, and for each route in Appendix E. Most of the routes are designated as "Resource Roads", unpaved, single lane, with very low traffic volume (ADT $\leq$200) and very low traffic speeds.

Table 3
Functional Classes
Mileage Summary

FUNCTIONAL CLASS	MILES
Collector	0.0

Local	5.1
Resource	136.7

The functional classes indicate the relative importance of a route's transportation and access functions, and are the basis for geometric design standards and maintenance guidelines. The functional classifications are determined according to guidance in BLM Manual 9113 Roads.

Transportation Maintenance Intensity Classes

The maintenance intensity class summary is shown in Table 4, and for each route in Appendix E. The maintenance classes will provide the basis for updating the BLM Facility Asset Maintenance System (FAMS) database for the project area. No existing BLM transportation assets are presently identified in the facility management system, and maintenance on roads and trails over the past 10 year has been minimal to none. Authorized users (e.g. mineral materials operations, grazing permits, utilities) also perform intermittent road maintenance on routes needed for their permitted activities. Under BLM policy, with appropriate NEPA analysis, transportation maintenance and repairs may be conducted on Bureau routes on a case by case basis.

Table 4
Maintenance Intensity

MAINTENANCE INTENSITY	TOTAL (MILES)
Level 0	27.7
Level 1	114.2

B. Standard Arizona BLM OHV Regulations and TMP Policies

1. Permittees (e.g. for hunting, wood gathering, livestock operators) must comply with TMP route designations. Exceptions may be made by the authorized officer.
2. There shall be no motorized access to harvested game off of the designated route, although use of mechanized game carrier off of the designated route is permitted outside of designated wilderness areas.
3. Camping within ¼ mile of a natural water hole or human-made watering facility that denies livestock access to the only reasonably available water is unlawful.
4. Use of motorized or mechanized vehicles off of the designated route for the purpose of working livestock is prohibited.
5. State vehicle laws apply to motor vehicle use
6. There are no posted speed limits on BLM roads, primitive roads or trails. The speed on primitive roads will be 15 – 25 miles per hour.
7. BLM will not develop, endorse or publish road or trail ratings. BLM may describe physical characteristics of a route.

7. FUNDING AND PRIORITIES

Many of the objectives and schedules will require adequate funding to be met. Currently the available funding is marginal, particularly in the Bullhead TMA, where the priority for full implementation will be lower than in larger TMAs that include more special recreation management areas. Funding shortfalls will require prioritization of the many management activities that will be spread across six TMAs and several thousand miles of routes.

Achievement of the goals and objectives of the TMP is likely to depend on supplementing Lake Havasu Field Office labor and operations budget with Challenge Cost Share projects, volunteer support, and sharing resources with other agencies and offices. Grant programs such as Arizona OHV Program and Arizona Trails Heritage Program present additional funding opportunities. Assistance agreements or cooperative management plans can leverage BLM funds with external contributions. Setting priorities for implementation, monitoring progress toward objectives, and adaptive management in response to effectiveness monitoring assure that available resources are used with the greatest efficiency and effectiveness.

A. Project Prioritization

Prioritization of work would be guided by four factors. Each factor is related to the route location:

1. Factor 1: Are located within an area of high resource value.
2. Factor 2: Have above-average density of important sensitive species.
3. Factor 3: Have higher than average vehicle disturbance.
4. Factor 4: Have significant urban interface issues.

The highest priority would be given to areas for which all four factors apply. The second priority would be those routes characterized by factors 1 through 3. The third priority would be routes characterized by factors 1 and 2. The fourth priority would be routes characterized by factor 1 only. The fifth priority would be remaining routes.

Implementation of route designation will have the following order:
1. Survey for baseline resource information.
2. Implement route signing.
3. Initiate enforcement and visitor service patrols.
4. Develop and publish route guide maps that are up-to-date, readily available and have an easily understandable format.
5. Maintain signs, kiosks, routes, maps and brochures.
6. Route rehabilitation as necessary.

Table 5
Implementation Time Frames

ACTION	COMPLETION TIME	COMMENTS
Increase enforcement, visitor services.	Year 3 - Ongoing	Potentially available in current budgets

Pursue funding for route rehabilitation.	Year 2 - Ongoing	May require additional federal appropriations and external participation
Sign designated routes.	Year 1 - Ongoing	Assumes funding in year 1.
Maintain open travel network.	Year 1 - Ongoing	Assumes funding in year 1.
Install informational kiosks and interpretive signing.	Year 1 - Ongoing	Assumes funding in year 1.
Develop and publish route guide maps and brochures.	Year 1 - Ongoing	Assumes funding in year 1.
Routinely maintain signs, kiosks, routes, maps and brochures.	Year 2 - Ongoing	Assumes ongoing funding.

B. Route Maintenance and Construction Costs

The cost figures in Table 6 are presented for general planning purposes.

C. Plan Revision and Amendment

The Bullhead TMP will be in effect until rescinded or amended by future management action or revision of the RMP. Adaptive management measures may be undertaken with plan maintenance actions and implementation progress tracking.

Table 6: Potential Route Maintenance Costs (Estimated)
(2003 dollars)

	Cost in $	Unit/Quantity
Trail Repairs		
Rolling Dip	105	each
Outslope	10.5	feet
Grading	1,050	mile
Brush cutting	2,000	acre
Remove Berm	10.5	feet
Berm Drain	65	each
Fill Ditch	1,050	mile
Re-Route	4,000	mile
Waterbar	55	each
Energy Dissipater	650	each
Stream and Drainage Crossings		
Correct Drainage	Obliteration	each
Clean Inlet (Culvert)	35	each
Clean Outlet (Culvert)	170	each
Flume	250	each
Reset Flume	125	each
Drop Inlet	150	each
Excavate Crossing	3,500	each
Ford Crossing		each
Install Culvert	2,000	each
Retaining Wall	125	sq. ft
Habitat Protection		
Sign	50	each
Fence	4	feet
Repair Fence	100	each
Pipe Barrier	25	feet

	Cost in $	Unit/Quantity
Rehabilitation		
Trails < 50" Wide		
Stabilization	3,400	mile
Obliteration	17,000	mile
Primitive Roads < 96" Wide		
Stabilization	6,800	mile
Obliteration	27,000	mile
< 144" Wide		
Stabilization	13,600	mile
Obliteration	55,000	mile
> 144" Wide		
Stabilization	21,250	mile
Obliteration	85,000	mile
Revegetation	25	sq. yd.
Facilities		
Visitor Contact Sta.	40,000	each
Vault Latrines	18,000	each
Campground/1 site	4,000	each
Info kiosk 3-Panel/roof	2,500	each
Info kiosk 2-Panel/roof	2,000	each
Info kiosk 1-Panel/roof	1,000	each
Info Board	450	each
Gate, Type 1	3,000	each
Gate, Type 2	2,000	each
Gate, Type 3	1,000	each

Bureau of Land Management

Lake Havasu Field Office

2610 Sweetwater Avenue
Lake Havasu City, AZ 86406

Bullhead Travel Management Plan

ENVIRONMENTAL ASSESSMENT

DOI-BLM-AZ-C030-2007-0050-EA

(Formerly EA-AZ-330-2007-050)

Mohave County, Arizona
San Bernardino County, California

Prepared by: Myron E. McCoy
Date: March 2009

Table of Contents - EA

1. INTRODUCTION

A. Project Environment and Location

Sandy washes, open uplands, long established primitive roads, and impressive mountain vistas all contribute to the appeal of the public land in the Lake Havasu Field Office to the thousands of visitors who ride OHVs for transportation and recreation. The routes they travel give them access to destinations they could not have otherwise reached. At the same time, those routes are also proliferating as use increases. Areas of important plant and wildlife habitat have been disturbed. Soils compacted on travel routes hold less water causing runoff and erosion. As OHV use grows, conflicts with other visitor uses of the area increase. This project, the formal designation of travel routes in the Bullhead Travel Management Area, was identified in the 2007 Lake Havasu Field Office Resource Management Plan as necessary to help resolve the issues created by the increasing intensity and types of recreation and transportation use.

The TMA is located in the eastern portion of the Mojave Desert/Sonoran Desert interface adjacent to the Colorado River. The area has a unique vegetation distribution which varies with topography and drainage conditions. As a transition area between two desert types, it includes a mixture of plants from both biomes. Plants vary from riparian to creosote-bursage communities with some annual grasses and forbs.

The project location is north of I-40, south and east of Bullhead City, in western Arizona and east of I-40 and north and south of Needles, in eastern California. The area is separated by the Colorado River. The river flows south to become Lake Havasu. The area is the northernmost portion of the Bureau of Land Management's (BLM) Lake Havasu Field Office (LHFO). The Needles Field Office (NFO) boundaries are to the west and the Kingman Field Office (KFO) boundaries are to the east (see Map 1 Bullhead Travel Management Area with Surface Management). The area covers Townships 8 – 11 North and Ranges 22 – 23 East of the San Bernardino Meridian in California and Townships 16 - 21 North and Ranges 20 – 21 West of the Gila & Salt River Meridian in Arizona.

B. Project Background

In the early 1980s, responding to Presidential Executive Orders 11644 and 11989, the BLM began designating all BLM-administered public lands in one of three Off-Highway Vehicle (OHV) designation categories "open", "closed", and "limited". Since then, BLM has been working towards designating roads and trails on BLM-administered lands. The *Lake Havasu Field Office Resource Management Plan* (RMP) approved on May 10, 2007, committed to completing a Travel Management Plan (TMP) within five years. When completed, the TMP will include six planning units (Bullhead, Havasu, Cactus Plain, Alamo, Bouse, and Wenden). These units are referred to as Travel Management Areas (TMAs) and encompass over 1.3 million acres. Bullhead is the first TMA to be completed since the completion of the RMP. Completion of each unit requires the completion of an Environmental Assessment (EA) and a TMP. The TMP is the implementation plan for the EA.

The Bullhead TMP implements route designation consistent with 43 CFR 8340-8342.1. The goals of the TMP are presented below. See the TMP for additional information on goals, objectives and management actions.

Recreation and Transportation Goal: Provide a well-defined, safe, environmentally sound travel network for sufficient access and transportation on BLM-administered public land, opportunities for recreation and minimal user conflict.

Natural and Cultural Resource Goal: Improve or maintain land health and protect cultural resources in the Bullhead TMA.

BLM routinely coordinates with adjacent jurisdictions and counties. Additionally, BLM recognizes the effects of changes to land ownership on continued public access. In the RMP, BLM stated that prior to the transfer of any parcel, BLM will determine if public access is needed to reach other public lands. If access is required, BLM will establish an easement for public access prior to the transfer of ownership.

C. Purpose and Need for the Proposed Action

The purpose of this EA is to analyze the impacts associated with the BLM's proposal to designate routes within the Bullhead planning area as "open", "closed" or "limited". The BLM proposes to designate approximately 142 miles of inventoried travel routes (269 routes) on approximately 33,150 acres of BLM-administered lands. These routes are the inventory of existing roads and trails as identified in the RMP (see Map 1).

The Proposed Action is necessary for the protection of natural and cultural resources and for the safety of public land visitors. BLM committed to designating a Transportation Network (TN), consisting of all routes of travel for the planning area in the RMP. These routes include motorized and non-motorized (including, but not limited to foot travel, equestrian and bicycle). The proposed TN would protect soil, vegetation and wildlife habitat conditions by designating routes "open", "closed" or "limited". The route designations are prioritized based on the impacts of both motorized and non-motorized use to natural and cultural resources.

D. Decision to be Made

The EA analyzes the trails identified in the RMP and whether they should be designated as "open", "closed", and "limited" to motorized and/or non-motorized travel. The RMP designates motorized use as "limited" to existing roads and trails to the field route inventories by BLM staff and contractors using GPS between 1990 and 2004. Additional routes were added in 2006 to complete the route inventory in the RMP. The Proposed Action addresses the main issue in the planning process by designating routes of travel for motorized and non-motorized use. The TMP implements the decision of this EA.

BLM will designate 142 miles of existing routes across public land within the Bullhead planning area.

- A designation of "**open**" typically means that the route is recommended open to all use for access (other than limits that may be required by law).
- A designation of "**closed**" typically means that the route is recommended for closure to all use. Physical closure for a route may include restoring the route to the degree possible to blend with surrounding landscape, as well as installation of physical barriers and signing at the original departure point, if necessary.
- A designation of "**limited**" typically means the route is recommended limited for use by certain parties or entities, vehicle types, or seasons, etc. For example, a route may be limited to administrative or to motorized use during seasons when impacts to sensitive resources are minimized.

E. Scoping and Issues

Public scoping and involvement throughout the TMP process is critical to its viability and implementation. In November 2006, two public scoping meetings were held in Bullhead City to help gather and collect data, comments, issues and concerns. Over 100 people participated in these meetings and expressed strong opinions for the importance of protecting public access to and across public land. In September 2006, and again in September 2007, meetings were held with representatives and officers of OHV clubs including the Havasu, Bullhead, Hualapai and Parker 4-Wheelers to better inform organized user groups of the planning process and the purpose of the TMP.

The primary issues included:

- Continued access for OHV use as recreation opportunities on public land
- Access to private lands and resources for economic and social needs
- Effects of changes to land ownership on continued public access
- Coordination with adjacent jurisdictions and counties

In March 2008, the No Action and three action alternative maps were posted to BLM's Arizona State website at http://www.blm.gov/az/st/en/prog/travel_mgmt/bullhead.html. The alternatives are described as No Action, Protection, Proposed and Access. The public was invited to comment for 30 days on the alternatives (Evaluation Phase). Sixteen comments were received and considered for preparing this environmental assessment.

2. PROPOSED ACTION AND ALTERNATIVES

BLM has adopted the Route Evaluation Tree (Tree) for designating routes. The Tree and the basic evaluation criteria are in Appendix F. The Tree applies a set, analytical method to all inventoried routes to determine each route's designation and if any limitations are necessary to protect or enhance recreation, cultural, and/or natural resources. An interdisciplinary team used the Tree to evaluate each route. The team included LHFO staff, the adjoining BLM offices, cooperating agencies and tribal representatives (who requested to be included). Specialists in wildlife, cultural, recreation, lands/realty, minerals, wilderness and others participated. See Section V for list of participants in the route evaluation process.

The existing and accumulated GIS data is integral to the route evaluations. A contractor, Advanced Resource Solutions (ARS) developed a database utilizing the Tree to facilitate and capture specific resource criteria for each route. This analysis is the basis for designation. Appendix G contains the specific route designation reports.

When the TMP and EA are complete, they will be on the internet at http://www.blm.gov/az/st/en/prog/travel_mgmt/bullhead.html, CD and at public locations (i.e. Mohave County Library and the Bullhead City Chamber of Commerce) for public review and comment. The TMP presents four alternative route networks (Maps A, B, C, and D). The final TMP decisions will designate each route, "open", "closed" or "limited". An access guide will be published implementing the TN and replace any previous maps.

Common to All Alternatives Except the No Action Alternative

All of the alternatives, except the No Action Alternative, would close some routes. However, it is assumed that the amount of OHV use would not change greatly. Rather, the OHV use would shift and concentrate on the routes designated "open".

Alternative A - No Action (Map A)

This alternative would be a continuation of existing conditions. Travel would be allowed on the approximately 142 miles of existing roads and trails without specific route designation, or any mitigation or rehabilitation efforts. A network of OHV routes would not be analyzed and designated. This would leave the area susceptible to route proliferation and illegal cross-country travel. The increasing OHV use and visitation would continue contributing to the diminishing resource conditions.

OHV management necessary to address new public and administrative access needs, protect resources, promote public safety and minimize conflicts among various uses of public lands would not be implemented. The OHV designations decision in the RMP of "limited to designated roads and trails" would not be implemented. This alternative is not preferred for the stated criteria and because it would not be in conformance with the RMP.

Table 7
Route Designation by Alternative
Miles, Numbers, and Percent of Routes
Alternative A

Designation	Number of Miles	Percent of Miles	Number of Routes
Open	137.1	96.7	261.0
Limited: non-motorized	0.0	0.0	0.0
Limited: to authorized use	3.2	2.2	2.0[2]
Closed	1.5	1.1	6.0[3]
Totals	141.8	100.0	269.0

Alternative B - Protection (Map B)

This alternative's primary management emphasis would be the protection and enhancement of natural and cultural resource values through a significant reduction in the miles and routes of travel available for OHV use. The approximately 142 miles available for OHV use would be reduced by 86 miles (60%). Approximately 56 miles of routes would be designated "open" for motorized recreation when compared to the No Action Alternative (Alternative A). Alternative B would provide for a minimum of OHV routes and miles within a "limited to designated roads and trails" management setting. Reclamation of closed

[2] Power line right-of-way in Dead Mountains Wilderness.
[3] In Dead Mountains Wilderness.

routes would be prioritized based on wildlife habitat, soil loss potential, cultural resource impacts, or other resource protection needs

Alternative B permits non-motorized recreation opportunities including, but not limited to hiking, mountain biking, and equestrian sports. Alternative B allows OHV access for administrative purposes, such as maintenance of utility corridors, range improvements and mining claims. This alternative would be the most restrictive to public access while providing maximum protection to natural, scenic and cultural values.

This alternative is not preferred because it restricts OHV access and recreational opportunities on BLM-administered public land. This alternative restricts access to users with physical disabilities and limits their recreational opportunities.

Table 8 Route Designation by Alternative Miles, Numbers, and Percent of Routes Alternative B			
Designation	**Number of Miles**	**Percent of Miles**	**Number of Routes**
Open	56.5	39.8	54.0
Limited: non-motorized	1.0	0.7	1.0
Limited: to authorized use	40.7	28.7	66.0
Closed	43.6	30.8	148.0
Totals	141.8	100.0	269.0

Alternative C - Proposed Action (Map C)

Recognizing the popularity of motorized and non-motorized travel, BLM's Proposed Action balances the protection of natural and cultural resources while providing opportunity for motorized and non-motorized travel. Through a significant reduction in the number and miles of routes through closures and restoration, upland health standards will be maintained and impacts to natural and cultural resources would be reduced.

The number of OHV route miles closed (approximately 28 miles) and limited (approximately 17 miles) represents a combined 31.6% of the approximate 142 miles of existing routes. Conversely, approximately 96.6 miles (68%) of the 142 miles travel routes would be designated open and available for OHV use when compared to the No Action Alternative A. While approximately 28 miles would be closed, it cannot be assumed that OHV use would be reduced. It is reasonable to assume that OHV users will, therefore, be concentrated on the remaining routes. However, moving users to nearby open areas would provide time for the closed areas to begin recovery from use. This alternative provides a reasonable compromise between popular use and the need to protect resources.

In most cases, routes connecting locations and destinations would remain "open" unless an alternate route is determined to have less of an impact. Routes that damage or have increased potential for resource damage or user conflicts would be closed or limited.

Table 9 Route Designation by Alternative Miles, Numbers, and Percent of Routes Alternative C			
Designation	**Number of Miles**	**Percent of Miles**	**Number of Routes**
Open	96.6	68.1	136.0
Limited: non-motorized	0.5	0.4	3.0
Limited: to authorized use	17.0	12.0	22.0
Closed	27.7	19.5	108.0
Totals	141.8	100.0	269.0

Alternative D - Access (Map D)

This alternative would provide the most designated OHV routes. The number of miles available for motorized use would be reduced by about 23 miles (16%). Approximately 119 miles (84%) of travel routes would be designated "open" for motorized recreation when compared to the No Action Alternative. Alternative D would be the least restrictive and allows the most public access.

A network of OHV travel routes would be designated that would reduce route proliferation and illegal cross-country travel. However, the increasing OHV use and visitation is likely to continue contributing to the decline of resource conditions. This alternative is not preferred because the level of OHV management required for addressing public and administrative access is high; protecting natural and cultural resources would be more difficult; the cost of promoting public safety and minimizing conflicts among users on the larger network would exceed available resources.

Table 10
Route Designation by Alternative
Miles, Numbers, and Percent of Routes
Alternative D

Designation	Number of Miles	Percent of Miles	Number of Routes
Open	119.2	84.0	179
Limited: non-motorized	0.0	0.0	0.0
Limited: to authorized use	6.9	4.9	6.0
Closed	15.7	11.1	84.0
Totals	141.8	100.0	269.0

Conformance with Land Use Plan

The Proposed Action (Alternative C) is in conformance with the *Lake Havasu Field Office Resource Management Plan* (RMP) which was approved May 10, 2007. The specific decisions and excerpts that apply to the Proposed Action are shown in Appendix H.

Relationship to Statutes, Regulations, or Other Plans

Management direction is in compliance of the following: Federal Land Policy and Management Act of 1976, National Environmental Policy Act 1969, Wilderness Act of 1964, Arizona Desert Wilderness Act of 1990, Sikes Act of 1974, Public Rangelands Improvement Act of 1978, Wild Free-Roaming Horse and Burro Act of 1971 as amended, Archaeological Resources Protection Act (ARPA) of 1979, National Historic Preservation Act (NHPA) of 1966 as amended 1992, Native American Graves Protection and Repatriation Act (NAGPRA) of 1990, and the Master Memorandum of Understanding (MOU) between the Arizona Game and Fish Commission and Department of Interior BLM, 1987 (AGFC-BLM MOU).

3. AFFECTED ENVIRONMENT

General Project Setting

The planning area includes both the California (15,668 acres) and Arizona (129,793 acres) sides of the Colorado River with the population centers of Needles on the California-side and Bullhead City, Mohave Valley and Golden Shores on the Arizona-side. Public lands administered by the BLM comprise 47,400 acres (25%) of the TMA. Conversely, 75 percent (145,431 acres) of the planning area is managed or

owned by the respective states, private and/or tribal property. See the *Lake Havasu Field Office Proposed Resource management Plan and Final Environmental Impact Statement*, Chapter 3, for additional information. The surface management acreage information is shown in the table below.

Table 11
Bullhead TMP (Acres)

	Arizona	California	Total in Planning Area	Percentage of Planning Area
Non-BLM (State/private/tribal)	129,793	15,668	145,431	75
BLM public land	31,139	16,261	47,400	25

The TMA is located in the eastern portion of the Mojave Desert/Sonoran Desert interface adjacent to the Colorado River. This area has a unique vegetation distribution which varies with topography and drainage conditions. This is a location where two deserts Mohave and Sonoran come together forming and interface containing a mixture of plants from both biomes. Plants vary from riparian to creosote-bursage communities with some annual grasses and forbs.

Resources or Concerns Not Affected

The following resources or concerns are not present or not affected by the Proposed Action, and are not discussed further:

3. Environmental Justice
4. Farm Lands (Prime or Unique)
5. Fuels/Fire Management
6. Human Health and Public Safety
7. Rangeland
8. Socio-economics
9. Wastes, Hazardous or Solid
10. Wild and Scenic Rivers

Resources or Concerns Present or Could be Affected

The following resources or concerns are present or could be affected by the Proposed Action. The complete description of the Affected Environment is attached as Appendix I. Additional information is provided in Appendices M and N, and in the LHFO RMP, Chapter Three, "Affected Environment."

- Air and Atmospheric Values
- Climate Change
- Areas of Critical Environmental Concern
    - Bullhead Bajada Natural and Cultural
    - Beale Slough Riparian and Cultural
- Cultural Resources
- Floodplains (includes Washes)
- Lands and Realty Management
- Law Enforcement
- Mineral Resources
- Native American Religious Concerns
- Recreation Management
- Colorado River Nature Center SRMA
- Soils
- Threatened or Endangered Species (Appendix J), Priority Wildlife (Appendix K)
- Travel Management
- Vegetation (Appendix M)
- Visual Resource Management
- Water Quality, Drinking or Ground
- Weeds, Invasive and Noxious (Appendix N)
- Wetlands/Riparian Zones (Appendix L)
- Wildlife Resources (including Migratory Birds)
    - Beale Slough
    - Needles Revegetation Project
    - Colorado River Nature Center
- Wilderness
    - Warm Springs Wilderness
    - Dead Mountains Wilderness
    - Chemehuevi Mountains Wilderness
- Wild Horse and Burros

4. ENVIRONMENTAL CONSEQUENCES

A. Potential Direct and Indirect Effects

This section analyzes the environmental impacts and effects of implementing each alternative upon the resources and concerns identified in Affected Environment. The analysis includes the environmental consequences of no action in management (Alternative A) and the changes in impacts (direct and indirect) by alternative. Existing conditions (Alternative A) comprise the baseline used for assessing impacts.

Many management actions are common to all alternatives or more than one alternative. Similarly, the impacts associated with implementation of a given set of management actions may be common to more than one alternative or even to several seemingly disparate resources. When a proposed activity is not addressed in a specific section, no impact is anticipated.

The environmental consequences analysis below is organized by resource and includes the number of routes that affect the resource. Since every resource is not affected by each route, the number of routes designated will vary by resource. Also, the sum of the number of routes affected across resources by alternative may not equal 269. This is because 1) many routes were designated based on multiple resources or issues and 2) some resources do not affect the entire planning area. See Tables 7 through 10 for miles and percentage of routes for each route designation by alternative.

During route evaluation, an interdisciplinary team completed a separate form identifying the issues and concerns for each of the 269 routes. The result was an array of possible designations for each route. The individual route designation reports (approximately 600 pages), detailing the specific analysis by route, are in Appendix G, available on CD or on the web at http://www.blm.gov/az/st/en/prog/travel_mgmt/bullhead.html

Air Quality and Atmospheric Change

Common to All Alternatives Except the No Action Alternative
All of the alternatives would close some routes. However, the amount of OHV use would not change greatly. Rather, users would continue to use the routes left "open". Moving users to the remaining open areas would concentrate dust accumulation in some areas and on some routes. While the concentration of dust would vary by alternative, it is unlikely that the current impact on air resources from dust would change.

The creation of unauthorized routes would likely increase the amount of dust accumulation in the air shed. However, it is assumed that the number of riders would not significantly change. Therefore, the impact to the existing air shed would not change.

Alternative A - No Action
This alternative would allow the current situation to continue and routes would not be designated "open", "closed" or 'limited". The illegal new routes caused from cross country travel, hill climbing and the additional surface disturbance would increase dust accumulation in the affected areas and on routes "open" for use under alternatives B, C, and D. This alternative would allow the existing 261 routes to remain as "open" access with potential for motorized vehicle intrusions from these routes.

Alternative B – Protection
This alternative would designate seven (7) routes "open", "close" nineteen (19) routes to all uses by restoring to the visual horizon, and ten (10) as "limited" use by limiting use to motorized administrative use.

Alternative C – Proposed
This alternative would designate 24 routes "open", "close" eight (8) routes to all uses by restoring the visual horizon and four (4) routes "limited".

Alternative D – Access
This alternative designates routes as "open" access for 30 routes without monitoring management concerns and "closes" six (6) routes to all uses by restoring the route to some extent the visual horizon.

Climate Change

Changes in climate can influence the timing and length of seasons, which in turn can have a direct effect on plants and animals. This includes changes in ranges, abundances, phenology (timing of an event such as breeding), morphology and physiology, and community composition, biotic interactions and behavior. Changes are being seen in all taxa, from insects to mammals, in North America as well as on many other continents. Climate change analyses are comprised of several factors, including greenhouse gases (GHGs), land use management practices, the albedo effect, etc. The tools necessary to quantify climatic impacts are presently unavailable. As a consequence, impact assessment of specific effects of anthropogenic activities cannot be determined. Additionally, specific levels of significance have not yet been established. Therefore, climate change analysis for the purpose of this document is limited to accounting and disclosing of factors that contribute to climate change.

Alternative A - No Action

By continuing to keep all roads and trails open this alternative would contribute to climate change via changes in reflectivity of the vegetation, changes in ground cover (more exposed soil), thermal balance, changes as biomass composition, or changes in carbon cycling rates. This would decrease carbon sequestration or increase GHG emissions.

Alternative B - Protection

This alternative would close the most routes and could increase the number of plants in the area; therefore, expanding the area where plants could grow increases carbon sequestration and/or reduces GHG emissions. Measurable effects on climate are likely to be negligible.

Alternative C - Proposed Action

This alternative would close approximately half of the existing routes and could increase plant growth within the area; therefore, carbon sequestration within the area could improve over time. However, measurable effects on climate are likely to be negligible.

Alternative D - Access

By continuing to keep as many roads open as possible, this alternative may contribute to climate change via changes in reflectivity of the vegetation, changes in ground cover (more exposed soil), changes in thermal balance, changes as biomass composition, or changes in carbon cycling rates. However, measurable effects on climate are likely to be negligible.

Areas of Critical Environmental Concern

The Bullhead Bajada Natural and Cultural ACEC, as defined in the RMP, is an area of concern for the Bullhead TMP. The Bullhead Bajada Natural and Cultural ACEC will be managed to protect and prevent irreparable damage to the relevant characteristics or important values designated for the ACEC. Relevant characteristics include the historic Beale's Wagon Road, adjacent prehistoric resources, habitat for Arizona State-listed Sonoran Desert tortoise and other special status or sensitive species present throughout the area. The road system comprises a site complex that is eligible for the NRHP and is of regional, if not national, importance.

Alternative A - No Action

By continuing to keep all roads and trails "open", this alternative would contribute to the deterioration or displacement of cultural resources via road construction and maintenance activities, vandalism. This continued access would lead ultimately to a negative impact upon the sacred or ceremonial value ascribed to cultural resources within the ACEC by Native Americans. This alternative allows the existing 261

routes to remain as “open” with the potential for continued motorized vehicle intrusions from these routes.

Alternative B - Protection
This alternative would close the most routes. A proactive approach to biological and cultural resource management within the ACEC that uses stewardship education, networking, research, planning, land protection, and regulatory and technical tools should be initiated to produce long-term strategies that ultimately protect the ACEC to benefit present and future generations. This alternative designates 26 routes “open”, 98 “closed” and 48 as “limited”.

Alternative C - Proposed Action
This alternative would close approximately half of the existing routes and could increase adverse affect upon biological and cultural resources within the ACEC. Reasonable precautions must be taken to ensure that land use does not inadvertently impact these resources. This alternative designates 83 routes “open”, 72 “closed” and 17 as “limited”.

Alternative D - Access
By continuing to keep as many roads “open” as possible, this alternative may contribute to intrusions or alterations to a cultural property or biological resource that may affect the integrity of the resource. Landscape deterioration caused by an increase in off road vehicles within the ACEC could lead to physical changes that could affect the values of cultural properties. This loss would affect the completeness and accuracy of the information used by scientists for interpreting cultural resources. This alternative designates 113 routes “open”, 57 “closed” and two (2) routes as “limited”.

Cultural Resources/ Paleontological Resources

The BLM will actively manage Bullhead TMP archaeological sites as high value site areas. Designated travel routes within the area not inventoried for their archaeological value will be evaluated. Any new routes proposed will be evaluated. If sites are identified, they will be either avoided or mitigated. Appropriate steps will be taken to eliminate OHV impacts on sites. Preservation in place through avoidance is the most commonly applied mitigation measure; however, this mitigation strategy requires long-term, systematic monitoring. Excavation or data recovery, in cases where avoidance is not feasible, is an acceptable form of mitigation if conducted under an approved research design.

The use of roads and trails will cause some impact to non-renewable cultural resources due to surface disturbance. An increase in the number of roads and trails increase the probability of direct, long-term, adverse impacts on archaeological sites.

Compliance with Section 106 of the National Historic Preservation Act (NHPA) and the Archaeological Resources Protection Act (ARPA) for authorized actions requires consultation with the Arizona State Historic Preservation Officer (SHPO), federally recognized Native American tribes and other members of the interested public. The identification and evaluation of cultural resources, and adherence to procedures for resolution of adverse effects and mitigation of impacts are also required. The Tree database classifies known cultural sites and areas into three categories: “Known Cultural Sites”, “National Register of Historic Places” and “Special Cultural Resource Management Areas”.

Alternative A - No Action
Under the No Action Alternative, no new authorized trail or road development would occur. Although this alternative would have the least direct impacts on non-renewable cultural resources, the indirect

impacts of increased visitor use as population increases would result in the creation of new unauthorized trails and roads. Cultural resources would continue to be adversely impacted under the No Action Alternative due to the lack of management and associated mitigation or avoidance measures, resulting in a permanent resource loss.

Table 12 Cultural Resources / Paleontological Resources Number of Routes Alternative A		
	Known Cultural Sites	**Special Cultural Management Areas**
Open	245	32
Closed	0	0
Limited	0	0

Alternative B - Protection
This alternative would close the most routes. This action could increase preservation and protection of cultural resources for present and future generations.

Table 13 Cultural Resources / Paleontological Resources Number of Routes Alternative B		
	Known Cultural Sites	**Special Cultural Management Areas**
Open	46	2
Closed	135	19
Limited	64	11

Alternative C - Proposed Action
This alternative would close approximately half of the existing routes. The indirect impacts of increased access and visitation (i.e. surface collection, vehicle and foot traffic, vandalism, etc.) may be more harmful than the direct effects of trail and route building. Increasing recreation in general and opening up new access to the Bullhead planning area has an adverse affect on non-renewable cultural resources. Impacts on known and unknown cultural resources have cumulative impacts through incremental degradation of the resource base from a variety of sources. This degradation reduces scientific information and interpretative potential or may affect values important to Native American communities. Cumulative impacts cannot be directly measured, but because we are dealing with non-renewable cultural resources, damaged or destroyed resources are permanent resource losses.

Table 14 Cultural Resources / Paleontological Resources Number of Routes Alternative C		
	Known Cultural Sites	**Special Cultural Management Areas**
Open	125	16
Closed	97	10
Limited	23	6

Alternative D - Access
This alternative keeps as many roads and trails open as possible and may lead to direct impacts to archaeological and historical sites. More access equates to more routes raising the potential for creating illegal unauthorized routes. OHV use could directly affect cultural resources through direct disturbance, soil compaction, altered surface drainage, and erosion. The direct effects are loss of archaeological materials and deposits and the information they contain.

Table 15
Cultural Resources / Paleontological Resources
Number of Routes
Alternative D

	Known Cultural Sites	Special Cultural Management Areas
Open	162	24
Closed	77	8
Limited	6	0

Mitigation Common to All Alternatives Except the No Action Alternative
Current management actions that direct travel through designation of roads and trails for all uses would enhance the protection of cultural resources.

Class III inventories would be performed in compliance with Section 106 of the NHPA and would be completed prior to all new surface-disturbing activities. The compliance process would identify required mitigation measures to avoid or reduce impacts on resources. A proactive monitoring plan to evaluate the condition of known archaeological sites and historic resources would be developed for the area. The effects of vandalism caused by increased visitation may be mitigated through education and interpretative programs. Adverse impacts to unknown sites would decrease if systematic Class III inventories were scheduled throughout the area.

Floodplain (includes Washes)

Common to All Alternatives
All the alternatives, except the No Action Alternative, would close some routes. However, it is assumed that the OHV use would not change and riders would move to the routes designated "open". BLM has not determined the location of floodplains on any of the routes. Therefore, BLM cannot determine the impact to floodplains that may occur for routes that may be "closed", "limited" or receive increased use. However, it is anticipated that no significant change under all alternatives to floodplains on the inventoried routes will occur within the various watersheds.

Alternative A - No Action
Under this alternative, route management would occur in a custodial manner or on an as needed basis. There would be greater distribution of OHV use over a larger area that would sustain the current route network and the proliferation of routes would continue. This alternative would continue to disturb additional ground. This alternative would allow the existing 261 routes to remain as "open" access with the potential for continued motorized vehicle intrusions from these routes.

Alternative B – Protection
This alternative designates 35 routes "open", 71 "closed" and 45 as "limited".

Alternative C – Proposed
This alternative designates 86 routes "open", 55 "closed" and 11 as "limited".

Alternative D – Access
This alternative designates 106 routes "open", 42 "closed" and four (4) as "limited".

Lands and Realty Management

Common to All Alternatives
Under all alternatives, the BLM Lands and Realty program will continue to have the authority to issue right-of-ways, land use permits and other authorizations that may affect the continuity of existing routes. The BLM will evaluate the impacts to the existing routes and may recommend the creation of a new route(s) using the Tree or the rehabilitation of the existing route(s).

Law Enforcement

Common to All Alternatives - Except the No Action Alternative
BLM rangers enforce federal laws and regulations on public lands. Once routes are designated "open", "closed", and "limited" the routes will be signed. Signing routes provides law enforcement rangers greater authority to issue warnings and citations. Signing will result in better compliance and resource protection.

Common to All Alternatives
During the route evaluation process, the interdisciplinary team was aware of "Dumping" and "Hazards" on specific routes. This information played a role in the designation for routes. These classifications are included under the Law Enforcement classification.

Alternative A - No Action
Specific routes would not be signed and marked. Updated recreation and travel maps would not be a high priority. OHV users and visitors would have a greater potential of becoming lost, having accidents and/or needing rescue services. Overall, public safety and resource protection would not increase. This alternative would allow the existing 261 routes to remain as "open" access with the potential for continued motorized vehicle intrusions from these routes.

Alternative B – Protection
This alternative designates 43 routes "open", 88 "closed" and 48 as "limited".

Alternative C – Proposed
This alternative designates 84 routes "open", 74 "closed" and 21 as "limited".

Alternative D – Access
This alternative designates 116 routes "open", 58 "closed" and five (5) as "limited".

Mineral Resources

Saleable Minerals

Common to All Alternatives

Route designation will not impact the administration of the mineral materials program since the roads used to access the mineral material sites are authorized as a part of the contract/permit issued.

Locatable Minerals

Common to All Alternatives

Generally, route designation will have minimal impact on mineral exploration and development since route use is generally authorized as part of the action. However, there may be an impact if a route to be used by the operator has been designated "closed". BLM would reassess to change the designation as "limited" to authorized users if there were no other existing feasible alternate routes. Upon completion of the mining project the route would be "closed" and reclaimed.

Alternative A - No Action

This alternative would not impact access to mining claims since all of the routes would remain "open".

Alternative B - Protection

This alternative "closes" and "limits" many routes that could be used by the public to access their mining claims to perform casual use, exploration and mining activities. This may result in more mining notices and/or plans being filed by claimants and operators to access their claims since previously used routes may be "closed".

Alternative C - Proposed Action

This alternative would close one (1) route HN16C that accesses mining claims within the vicinity of the Moss Mine. A claimant and/or operator would file a mining notice and/or plan of operations for access.

Alternative D - Access

This alternative would generally not impact access to mining claims since the majority of the roads would remain "open".

Native American Religious Concerns

Common to All Alternatives

The Bullhead planning area has locations of religious or cultural concern to Native Americans, the Fort Mohave Tribe, among others. Such areas identified or that become known through Native American notification and consultation will be considered during the implementation phase. The BLM will take no action that would adversely affect areas or sites where Native American Religious Concerns are present without Section 106 and government-to-government consultations with the appropriate Native Americans. Refer to Cultural Resources in this section for numbers of routes and designation.

Recreation Management

Alternative A - No Action
This alternative would allow the "limited to existing roads and trails" designation to continue for OHVs on public land. The existing route inventory would be designated as "open" without any distinction between motorized and non-motorized use, or for make a distinction for limiting routes to a particular, season, or other type of use.

Loop routes are not encouraged. This would allow some routes to dead end and raise potential for OHV cross country travel and/or hill climbing. This alternative does not address factors to avoid or reduce user conflicts from the variety of recreation opportunities on BLM-administered public land. This alternative does not adequately address affects to specific resources, including:

- Wildlife, habitat, soils, historic, cultural, etc.
- Commercial access
- Administrative access

There are 261 miles of inventoried existing miles of routes that are "open" to motorized OHV use. This alternative does not address route widening from a single track to double track to full sized vehicles to continue. Illegal route widening contributes to vegetation and habitat loss increasing potential of erosion, route cutting, and increasing maintenance and may affect public safety. This alternative is not preferred due to the reduced recreational benefits and resource impacts.

Table 16
Recreation Management
Number of Routes
Alternative A

	Recreation Settings	Special Recreation Management Areas
Open	261	4
Closed	0	0
Limited	7	0

Alternative B - Protection
This alternative has the highest reduction in the number of routes available for motorized recreation. About 60 percent of the miles available for OHV use would be either "closed" or "limited". Non-motorized users would find larger areas available without the noise and interruptions generated by OHVs. The routes remaining "open" would experience additional use that may result in an increased conflict between users. This conflict would result in decreased opportunities for ATV and motorcycle users. There is also the potential safety issue of increased accidents due to a higher volume of traffic on a relatively small number of routes. Additionally, access for hunting and game retrieval would be reduced; this could decrease the hunter success and satisfaction. There are no provisions for relocating routes in more sustainable locations.

Table 17
Recreation Management
Number of Routes
Alternative B

	Recreation Settings	Special Recreation

		Management Areas
Open	54	1
Closed	148	3
Limited	67	0

Alternative C - Proposed Action
The management actions would have varying impacts to the recreational opportunities. The impact on OHV users would be fewer miles of routes. Those routes that remain would be signed. The strategy of signing, route guide maps and bulletin board information would reduce the number of users getting lost and the potential for riding cross-country and route proliferation. With fewer roads and trails and greater trail use compliance, less soil compaction and vegetative damage would occur. If motorized users move from "closed" routes to the remaining "open" routes, the setting of the "open" areas may become more congested and could affect some non-motorized users.

There are many riding opportunities; both loop and destination routes and some dispersed camping opportunities exist in less travelled areas. Driving vehicles off existing routes to park for camping, picnicking, or hunting use has created additional disturbance and new spur routes.

Route proliferation would be reduced through implementing route designation and public education. Closure of routes would reduce OHV opportunities; however, most of these routes were created by illegal cross-country travel. BLM would apply the identified Recreation Opportunity Spectrum (ROS) categories to help ensure the appropriate range of recreation opportunities is available.

Table 18
Recreation Management
Number of Routes
Alternative C

	Recreation Settings	Special Recreation Management Areas
Open	136	1
Closed	108	3
Limited	25	0

Alternative D - Access
This alternative provides the maximum availability of routes for motorized access. While the alternative is closer to the No Action Alternative, Alternative D provides less protection for wildlife, habitat, soils, and historic, cultural and other resources. Though this alternative would designate routes "open", "closed", and "limited", the additional routes would allow the present resource impacts, including runoff and erosion, to continue and not provide adequate resource protection. Alternative D would have more potential for invasive species to spread in areas that may have been closed under the Proposed Action.

Table 19
Recreation Management
Number of Routes
Alternative D

	Recreation Settings	Special Recreation Management Areas
Open	179	1
Closed	84	3

Limited	6	0

Soils

Alternative A – No Action
This alternative would allow the current situation to continue and routes would not be designated "open", "closed" or 'limited". Illegal new routes caused by cross country travel, hill climbing and the additional surface disturbance would increase soil erosion and sediment loading into the lower Colorado River. This alternative would allow the existing 261 routes to remain as "open" access with the potential for continued motorized vehicle intrusions from these routes.

Alternative B – Protection
This alternative would close the most routes and could decrease soil erosion. This alternative could also reduce disturbance to vegetative cover, further controlling soil erosion and sediment loading. This alternative designates 22 routes "open", 39 "closed" and 17 as "limited".

Alternative C – Proposed
This alternative would close routes and could decrease soil erosion. This alternative could also reduce disturbance to vegetative cover, further controlling soil erosion and sediment loading. This alternative designates 47 routes "open", 23 "closed" and eight (8) as "limited".

Alternative D – Access
This alternative designates 58 routes "open", 19 "closed" and one (1) as "limited".

Threatened or Endangered and Special Status Species

Common to All Alternatives
Reducing the availability of open roads does not equate to a reduction in the number of OHV operators. By implementing a road network system, OHV operators will become more concentrated in greater numbers on "open" roads and staging areas. These roads and staging areas will more than likely increase in use, width and size overtime. Significant localized impacts could potentially degrade areas important to threatened, endangered and special status species as roads and staging areas become larger, wider and more braided.

Alternative A - No Action
Under the No Action Alternative, road management would occur in a custodial manner or as problems occurred. There would be a greater distribution of OHV use over a larger area that would sustain the current road network and create additional routes overtime. Current routes would increase in use, width and size. Potential disturbance of threatened, endangered and special status species, particularly the Mojave Desert tortoise in California and the Sonoran desert tortoise in Arizona, would be greater probability than Alternatives B and C. Alternative A is the least beneficial to these species. This alternative would allow the existing 261 routes to remain as "open" access with the potential for continued motorized vehicle intrusions from these routes.

Alternative B - Protection
This alternative provides the greatest benefits to all threatened, endangered and special status species. Under this alternative, the greatest number and miles of the current road network would be closed to OHV. This will result in a benefit to habitat quality/quantity utilized by these species. The probability of human and threatened, endangered and special status species encounters would be reduced the greatest extent under this alternative. This alternative designates 47 routes "open", 141 "closed" and 67 as "limited".

Alternative C - Proposed Action
The intent of this alternative is to improve the TN to balance OHV access and reduce the disturbance to threatened, endangered and special status species. Cover, forage and space should become greater in availability, habitat fragmentation should be reduced and habitat quality/quantity would be increased. The probability of human and threatened, endangered and special status species encounters would be reduced. This alternative designates 128 routes "open", 102 "closed" and 25 as "limited".

Alternative D - Access
This alternative provides the least benefits to threatened, endangered and special status species other than Alternative A. Although this alternative closes a portion of the current road network, disturbance to wildlife would remain similar to that of the No Action Alternative (Alternative A). Under Alternative D, habitat quality/quantity would be reduced over time and the probability of human and threatened, endangered and special status species encounters would be similar to that of Alternative A. This alternative designates 170 routes "open", 79 "closed" and six (6) as "limited".

Travel Management

Common to All Alternatives -- Except the No Action
All OHV use would be limited to designated roads and trails.

Alternative A - No Action
Under this alternative, there would be no change to the "existing roads and trails" designation. However, its presumed OHV use, both vehicles and users would continue to increase, or at a minimum remain at, or near present levels. Any maintenance would continue to be sparse, infrequent and at a very minimal level by BLM and volunteer groups through grants or other outside funding sources. This situation has failed to manage or control route proliferation produced by the increasing levels of OHV use and illegal cross-country travel, in turn causing the degradation of natural, cultural and scenic resources. This alternative is not preferred. This alternative would allow the existing 261 routes to remain as "open" access with the potential for continued motorized vehicle intrusions from these routes.

Alternative B - Protection
All OHV use would be "limited" to designated routes and more routes that may contribute to resource damage or conflicts would be "closed" or "limited" than Alternatives C and D.
Alternative B strives to enhance non-motorized recreation opportunities including but not limited to hiking, mountain biking, and equestrian sports. Alternative B allows OHV access for private property and administrative purposes, including but not limited to maintenance of utility corridors, range improvements and mining claims. This would be the most restrictive to public access while providing maximum protection to natural, scenic and cultural values.

This alternative is not preferred because it would not recognize OHV access and travel as a valid recreation opportunity of BLM managed public land. This alternative places an over emphasis on non-motorized access without considering many users and visitors to public land are not able bodied and may experience one or more physical disability limiting their ability to participate in non-motorized access opportunity. This alternative designates 30 routes "open", 107 "closed" and 52 as "limited".

Alternative C - Proposed Action
More routes that have resource damage or conflicts would be "closed" or "limited" in use than Alternatives A and D. This alternative establishes a travel network that provides reasonable, safe, and environmentally prudent access to public land. The travel network includes opportunities for a variety of OHV access and a balance of resource values found on public lands. This alternative designates 86 routes "open", 84 "closed" and 19 as "limited".

Alternative D - Access
This alternative designates routes while closing the least number and miles of routes, providing a greater amount of access to OHV use when compared to Alternatives B and C. By allowing more OHV access and a larger route network, OHV opportunities would increase. However, this alternative would continue the trend of the No Action Alternative and not adequately address the resource impacts of increasing route proliferation from illegal cross-country travel and/or hill climbing. This alternative is not preferred because it could increase niches favorable to invasive and noxious weeds and not significantly reduce disturbance to vegetation, habitat and ground surfaces increasing erosion from soil loss. This alternative designates 117 routes "open", 67 "closed" and five (5) as "limited".

Vegetation

Common to All Alternatives except the No Action Alternative
Reducing the availability of "open" roads does not equate to a reduction in the number of OHV operators. By implementing a route network system, OHV operators will become more concentrated in greater numbers on the "open" routes. These routes will more likely increase in use, width and size overtime. These actions steadily disturb additional ground, removing more plants and significantly impeding any potential for recruitment. These areas can overtime essentially become void of any vegetation. Refer to Weeds (Invasive and Non-Native) and Wetlands/Riparian section for numbers of routes and designation.

Alternative A - No Action
Under the No Action Alternative, route management would occur as needed. There would be a greater distribution of OHV use over a larger area that would sustain the current TN and contribute to the proliferation of additional routes. Routes would also increase in use, width and size. This alternative would continue to disturb additional ground, remove more plants and significantly impede the potential for natural recruitment.

Alternative B - Protection
This alternative closes the greatest number and miles of roads. Under this alternative, vegetation would be the least impacted. Fragmentation of habitat would be reduced, habitat quality/quantity would be improved and the abundance and distribution of species would benefit.

Alternative C - Proposed Action
The intent of this alternative is to improve the TN balance for OHV access and reduce the disturbance to vegetation. Under this alternative, impacts and the loss of vegetation would be reduced. Fragmentation of habitat, habitat quality/quantity would be improved and the abundance and distribution of species would benefit.

Alternative D - Access
This alternative closes the least number and miles of routes while providing a greater amount of access to OHV use as compared to Alternatives B and C. This alternative does close a portion of the TN. However, disturbance to vegetation would remain similar to that of the No Action Alternative. A limited benefit to vegetation overall would be expected.

Visual Resource Management

Common to All Alternatives Except the No Action
Implementing route designations would control illegal cross-country travel and route proliferation. A change in visual effects could result as more riders shift to "open" areas. Over time, the shift in riders could modify visual resources because the "closed" routes will blend in with the surrounding environment.

Visual quality could be affected by the increased number of signs, route markers and man-made barriers. However, this impact would be mitigated using the appropriate desert environment colors for signs, decals and markers. All of the routes receiving designations occur in VRM Class III & IV areas.

Over time, the absence of OHV use on closed routes would promote natural reclamation, thereby increasing surface stability. Additional and increased vegetation would improve the natural appearance and visual quality.

A portion of the route closures would be rehabilitated and reclaimed. Rehabilitation efforts such as ripping route surfaces with a harrow or other equipment would create a more blended terrain and improved visual quality.

Alternative A - No Action
Under this alternative, the existing 261 routes would remain "open" to both motorized and non-motorized use. However, its presumed OHV use, both vehicles and users would continue to increase, or at a minimum remain at, or near present levels. This situation has failed to manage or control route proliferation produced by the increasing levels of OHV use and illegal cross-country travel, in turn causing the degradation in visual qualities.

Alternative B – Protection
This alternative designates 54 routes "open", 148 "closed" and 67 as "limited".

Alternative C – Proposed
This alternative designates 136 routes "open", 108 "closed" and 25 as "limited".

Alternative D – Access
This alternative designates 179 routes "open", 84 "closed" and six (6) as "limited".

Water Quality, Drinking or Ground

Common to All Alternatives Except the No Action
All the alternatives would close some routes. However, it is assumed that the OHV use would not change and riders would move to the routes designated "open". It is anticipated that no change to ground water quality will occur under any of the alternatives.

It is assumed that use of existing routes adjacent to the Colorado River adds sediment to the river. However, BLM has not determined the impacts from the sediment on the water quality of the Colorado River.

In the area near the river, the closure of some routes is expected to reduce the sediment load in the river. BLM anticipates that OHV use would move to routes designated "open". This change in location may increase the sediment load from these open routes to the river because of additional use. Overall, however, BLM anticipates that the sediment load added to the river will not change. Thus, the water quality of the river will not change from the No Action condition.

Alternative A - No Action
This alternative would not close routes. Therefore, there would be no change to ground water or Colorado River water quality.

Weeds (Invasive and Non-Native)

Common to All Alternatives Except the No Action Alternative
Reducing the availability of "open" routes does not equal a reduction in the amount of OHV use. By implementing a route network, OHV use will become more concentrated on "open" routes. These routes will likely increase in use, width and size. These actions may disturb additional ground, removing more plants and impede any potential for recruitment. These areas can overtime become void of any vegetation and create areas highly susceptible to invasive and noxious weeds.

Alternative A - No Action
Under this alternative, route management would occur in a custodial manner as needed. There would be a greater distribution of OHV use over a larger area that would sustain the current route network and the proliferation of routes would continue. This alternative would continue disturbing additional ground, removing more plants and any potential for natural recruitment. This alternative creates niches favorable to invasive and noxious weeds. This alternative would allow the existing 261 routes to remain as "open" access with the potential for continued motorized vehicle intrusions from these routes.

Alternative B - Protection
This alternative closes the greatest number and miles of routes overall. Under this alternative, vegetation would be least impacted. Fragmentation of habitat would be reduced, habitat quality/quantity would improve, and the abundance and distribution of species would benefit. Although the risk of invasive and

noxious weeds becoming established is still present, the likelihood is decreased. This alternative designates 23 routes "open", 51 "closed" and 19 as "limited".

Alternative C - Proposed Action
The intent of this alternative is to improve the TN to balance OHV access and reduce the disturbance to vegetation. Under this alternative, impacts and the loss of vegetation would be reduced. Fragmentation of habitat would be reduced, habitat quality/quantity would be improved and the abundance and distribution of species would benefit. Although the risk of invasive and noxious weeds becoming established is still present, the likelihood is decreased. This alternative designates 36 routes "open", 50 "closed" and seven (7) as "limited".

Alternative D - Access
This alternative closes the least number and miles of routes while providing a greater amount of access to OHV use as compared to Alternatives B and C. This alternative does close a portion of the current route network and disturbance to vegetation would remain similar to that of the No Action Alternative. This alternative would continue to disturb additional ground, removing more plants and impede potential for natural recruitment. This alternative overtime, would create niches favorable to invasive and noxious weeds.

Wetlands/Riparian Zones

Common to All Alternatives except the No Action Alternative
Reducing the availability of "open" routes does not equate to a reduction in the amount of OHV use. By implementing a route network, OHV use will become more concentrated in greater numbers on "open" routes. These routes will more than likely increase in use, width and size overtime. Actions steadily disturb additional ground, removing more plants and impeding potential for recruitment.

Alternative A - No Action
Under this alternative, route management would occur in a custodial manner or on an as needed basis. There would be a greater distribution of OHV use over a larger area that would sustain the current route network and create additional routes overtime. Current routes would increase in use, width and size. This alternative would continue to disturb additional ground, remove more plants and impede potential for recruitment. This alternative creates "open" areas and contributes to the degrading of wetland/riparian function overtime.

Table 20
Wetlands / Riparian Zones
Number of Routes
Alternative A

	Multi Species Conservation Plan (MSCP) Habitat	Riparian Vegetation
Open	14	82
Closed	0	0
Limited	0	0

Alternative B - Protection
This alternative closes the greatest number and miles of routes. Under this alternative, riparian areas would be least impacted. Fragmentation of habitat would be less, habitat quality/quantity would be improved and the abundance and distribution of species would benefit. This alternative maintains healthy functioning blocks of wet/riparian habitat.

Table 21
Wetlands / Riparian Zones
Number of Routes
Alternative B

	MSCP Habitat	Riparian Vegetation
Open	8	25
Closed	6	36
Limited	0	21

Alternative C - Proposed Action
The intent of this alternative is to improve the TN to balance OHV access and reduce disturbance to vegetation overall. Under this alternative the impacts and the loss of riparian habitat would be less. Fragmentation of habitat would be reduced, habitat quality/quantity would increase and the abundance and distribution of species would improve. This alternative sustains healthy functioning blocks of wetland/riparian habitat.

Table 22
Wetlands / Riparian Zones
Number of Routes
Alternative C

	MSCP Habitat	Riparian Vegetation
Open	9	42
Closed	5	35
Limited	0	5

Alternative D - Access
This alternative closes the least number and miles of routes thus allowing for more OHV access as compared to Alternatives B and C. Although this alternative does close a portion of the TN, disturbance to riparian areas would remain similar to that of the No Action Alternative. Less benefits to health and function of wetland/riparian areas overall would be experienced.

Table 23
Wetlands / Riparian Zones
Number of Routes
Alternative D

	MSCP Habitat	Riparian Vegetation
Open	10	52
Closed	4	27

Limited	0	3

Wilderness

Common to All Alternatives
Reducing the availability of "open" routes does not equal a reduction in the amount of OHV use. By implementing a route network, OHV use will become more concentrated on "open" routes. These routes will more than likely increase in use, width, and size overtime. Reducing the availability of routes will reduce the potential for unauthorized motorized vehicle intrusion locations into wilderness.

Alternative A – No Action
Under this alternative, route management would occur in a custodial manner as needed. There would be greater distribution of OHV use over a larger area that would sustain the current route network and the proliferation of routes would continue. This alternative would continue to disturb additional ground outside of designated wilderness. This alternative would allow the existing 10 routes to remain as "open" access leading to wilderness with the potential for continued motorized vehicle intrusions from these routes. However, the existing six (6) "closed" and two (2) "limited" routes would not change designation.

Alternative B – Protection
This alternative closes the greatest number and miles of roads leading to wilderness. Under this alternative, wilderness would be the least impacted by motorized vehicle intrusions. This alternative designates four (4) routes "open", three (3) "closed" and three (3) routes as "limited".

Alternative C – Proposed
The intent of this alternative is to improve the road network to allow OHV access and reduce the degree of disturbance to wilderness. This alternative designates six (6) routes "open", three (3) "closed" and one (1) route as "limited".

Alternative D – Access
This alternative designates six (6) routes as "open", three (3) "closed" and one (1) route as "limited". This alternative allows for less restrictive OHV controls while increasing the potential for motorized vehicle intrusions to wilderness.

Wild Horse and Burros

Alternative A – No Action
This alternative would allow the existing 261 routes to remain as "open" access within both the herd area and the herd management area.

Alternative B – Protection
This alternative designates 29 routes "open", 59 "closed" and 26 as "limited" within both the herd area and herd management area.

Alternative C – Proposed
This alternative designates 66 routes "open", 36 "closed" and 12 as "limited" within both the herd area and herd management area.

Alternative D – Access
This alternative would designate 80 routes "open", 29 "closed" and four (4) as "limited" within both the herd area and herd management area.

Wildlife Resources (including Migratory Birds)

Common to All Alternatives
Reducing the availability of "open" routes does not equate to reducing the number of OHV use. By implementing a route network, OHV use will become concentrated "open" routes. These routes will more likely increase in use, width and size overtime. Creating localized impacts to habitat quality/quantity as routes become larger, wider and more braided.

Alternative A - No Action
Under this alternative, route management would occur in a custodial manner as needed. There would be a greater distribution of OHV use over a larger area that would sustain the current route network and create additional routes overtime. The current 261 routes would increase in use, width and size overtime. Disturbance to species would occur more frequently and the fragmenting of habitat would be significant. Habitat quality/quantity providing cover, forage and space would decrease over time.

Alternative B - Protection
This alternative closes the greatest number and miles of routes. Cover, forage and space would be more available and habitat fragmentation would be reduced. Habitat quality/quantity would improve and the abundance and distribution of species would increase. This alternative designates 25 routes "open", 55 "closed" and 30 as "limited" within both the herd area and herd management area.

Alternative C - Proposed Action
The intent of this alternative is to improve the TN to balance OHV access and reduce the disturbance to wildlife overall. Cover, forage and space should become greater in availability and habitat fragmentation reduced. Habitat quality/quantity and increased abundance and distribution of species would occur. This alternative designate 49 routes "open", 48 "closed" 48 and 13 as "limited" within both the herd area and herd management area.

Alternative D - Access
This alternative closes the fewest roads while providing greater access to OHV use than Alternatives B and C. Although this alternative does close some routes, disturbance to wildlife would remain similar to the No Action Alternative. Limited benefits to wildlife overall would be experienced. This alternative designates 67 routes "open", 38 "closed" and five (5) as "limited" within both the herd area and herd management area.

B. Mitigating Measures for the Proposed Action

The selection of the Proposed Action is designed to have a positive impact to biological and cultural resources. The action is also designed to reduce negative effects of road closures on recreation and access by concentrating closures on routes that duplicate access provided by routes left open.

By leaving approximately 97 miles of roads open, the proposed action leaves some cultural sites, including those that will be identified in the future, vulnerable to impacts. When unprotected sites that merit protection are discovered, primary mitigation will be preservation in place through avoidance. However, this mitigation strategy requires long-term, systematic monitoring. Excavation or data recovery, in cases where avoidance is not feasible, is an acceptable form of mitigation, if it is conducted under an approved research design.

Impacts from increased concentration of use on some routes due to closure of others will be addressed by maintenance when necessary. Impacts from non-compliance with route designations will be addressed by blocking or obscuring closed routes.

C. **Cumulative Impacts**

Cumulative impacts are the effects on the environment that may result from the incremental impact of the alternatives in combination with other past, present, and reasonably foreseeable future actions on BLM-administered public lands, as well on those lands under other jurisdictions that are adjacent to or within BLM boundaries. Cumulative impacts must consider the likely effect of the any alternative when combined with these additional actions.

Past and Present Actions
Bullhead City is one of the fastest growing communities in Arizona. Recent housing development, coupled with close proximity to public land has increased demand for OHV opportunities. Of the six TMP planning units within LHFO, the Bullhead area has experienced the most intense pressure on natural and cultural resources.

Reasonably Foreseeable Development
Motorized OHV use and other forms of outdoor recreation are expected to continue increasing with the population, and may contribute to user conflicts in some recreation areas. Designation of a transportation network of routes "open", "closed", and "limited" is expected to address public and administrative access needs, protect resources, promote public safety, and minimize conflicts among the various uses of public lands. Implementing the Bullhead TMP would end the slow process of resource degradation, which if not attended to, will have long-term impacts in this desert ecosystem. The overall effect of implementing the Bullhead TMP would be higher quality wildlife habitat, higher quality visual resources, and higher quality OHV opportunities. As the OHV designations in the RMP are implemented, there would be an increase in limitations on OHVs and increased enforcement of the designations. Cumulatively, this would increase management presence throughout the Bullhead TMA in the form of signs, markers, law enforcement, staff and volunteer monitoring.

Cumulative Effects to Resources
This analysis addresses the cumulative effects to resources described in the Environmental Consequences section above.

Management designation of a transportation network of routes "open", "closed", and "limited" is expected to address public and administrative access needs, protect resources, promote public safety, and minimize conflicts among the various uses of public lands. Implementing the Bullhead TMP would end the slow process of resource degradation, which if not attended to, will have long-term impacts in this desert ecosystem. The overall effect of implementing the Bullhead TMP would be higher quality wildlife

habitat, higher quality visual resources, and higher quality OHV opportunities. Motorized OHV use and other forms of outdoor recreation are expected to continue increasing with the population, and may contribute to user conflicts in some recreation areas. As the OHV designations are implemented, there will be an increase in limitations on OHVs and increased enforcement of the designations. Cumulatively, this would increase management presence throughout the Bullhead TMA in the form of signs, markers, law enforcement, staff and volunteer monitoring.

Cumulative effects are not anticipated for Environmental Justice, Farm Lands (Prime or Unique), Fuels/Fire Management, Human Health and Public Safety, Lands and Realty, Minerals, Rangeland, Socio-economics, Wastes (Hazardous or Solid), Water Quality (Drinking), Wild and Scenic Rivers, Wilderness or Wild Horses/Burros.

Alternative A - No Action
Alternative A would be a continuation of existing conditions. Route designation would not occur and a transportation network of routes, closures and rehabilitation activities would not be established. This would leave the Bullhead area susceptible to route proliferation and the creation of illegal routes (i.e. cross-country travel, hill climbing) and the associated ground disturbances. This will in turn continue to increase route densities, which in turn could affect upland health standards by impacting soils, air quality, ground water quality, floodplains, vegetation, visual resources, wildlife, threatened, endangered and special status species, riparian areas, flood plains, fish and wildlife habitat, and cultural resources through continued resource damage. Potential for noxious weed spread increases as vehicle use increases and route proliferation continues. Issues related to resource protection, public safety, and conflicts between various uses of public lands would not be addressed.

Alternative A would leave the cultural and natural resources within the Bullhead Bajada and Beale Slough Areas of Environmental Concern susceptible to threats and potential conflicts from natural and human-caused deterioration.

Federal agencies are responsible for informing tribes of proposed actions that could restrict future access to or ceremonial use of, or adversely affect the physical integrity of sacred sites. The Bullhead Bajada and Beale Slough ACECs contain significant cultural resources as well as places of traditional Native American importance; thus, Alternative A would leave the cultural resources and Traditional Cultural Places within the ACEC susceptible to threats and potential conflicts from natural and human-caused deterioration.

Alternative B - Protection
Alternative B is intended to provide the greatest protection of resources by reducing the number of roads available to OHV users. It is anticipated that by significantly reducing the number of roads through closures and rehabilitation, upland health standards will be maintained and impact to vegetation, visual resources, wildlife, and cultural resources would be reduced. This will more than likely occur in areas where roads are “closed” and rehabilitated. However, it cannot be assumed that the numbers of OHV users will be reduced. It is reasonable to assume that OHV users will be concentrated on fewer remaining “open” roads and staging areas. Impacts to resources as discussed in Alternative A will occur, but more localized route proliferation could occur at a greater rate. Alternative B also increases the potential for effects on threatened, endangered, special status species and other wildlife species habitat on adjacent state, private lands, and public lands managed by other agencies by redirecting OHV users.

Unauthorized (illegal) routes and activities (i.e. cross-country travel, hill climbing) have the potential to occur. Any new routes have the potential to degrade upland health standards by increasing the potential impacts to riparian areas and fish and wildlife habitat. There would still be a potential for noxious weed

spread as vehicle use is concentrated on fewer roads and route proliferation continues. These illegal routes and activities would create new impacts to soils, floodplains, air, and possibly water quality.

Alternative B would provide the greatest protection to cultural and natural resources by reducing the number of roads available to OHV use within the Bullhead Bajada and Beale Slough ACECs. Traditional Cultural Places and other areas of Native American Religious Concerns would also be afforded the greatest protection.

Alternative C - Proposed Action
Alternative C is intended to provide a substantial amount of resource protection while still providing an optimal TN for OHV users. The impacts to resources have the potential to be similar to those discussed in Alternative B, but not to the extent of Alternative D. It is anticipated that through a significant reduction in the number routes and miles through closures and rehabilitation, upland health will be maintained and impact to vegetation, visual resources, wildlife, and cultural resources would be reduced. These benefits will occur in any area where routes are "closed" and/or rehabilitated. However, it cannot be assumed that the numbers of OHV use will be reduced. It is reasonable to assume that OHV users will, therefore, be concentrated on the remaining routes.

Some impacts to resources discussed in Alternative A will occur. Illegal routes and activities (i.e. cross country travel, hill climbing) may still occur, although they will be more localized, and are likely to be controlled by signing and increased availability of information on proper use of the TMA. There would be a potential for noxious weed spread as OHV use is concentrated on fewer roads and if route proliferation continues. Despite potential localized impacts, the overall cumulative impacts of the proposed route network would be reduced due to the positive effects of road closures in areas of important wildlife habitat and cultural sites.

The Bullhead Bajada and Beale Slough ACECs will be managed to protect and prevent irreparable damage to the historic Beale's Wagon Road and Sonoran Desert tortoise habitat that may be caused by cumulative impacts from the area's use. In regard to Native American Religious Concerns, motorized use will not be permitted on cultural resource sites as public access will be restricted to designated "open" roads and trails. The BLM will review requests for vehicular access by tribal members to sacred areas not normally "open" to vehicles and consider authorizing such use on a case-by-case basis. BLM will consult with American Indian tribes in accordance with policy. Tribal concerns will be given due consideration. Consultation will include the consideration of any cumulative impacts.

Alternative D - Access
Alternative D allows the route network with the greatest amount of access that likely would provide least amount of resource protection. The impacts would be similar to Alternative A. Under Alternative D, a smaller number of roads will be "closed", "limited" or rehabilitated. Unauthorized (illegal) routes, the result of route proliferation (i.e. cross-country travel, hill climbing) would create more routes. The number of unauthorized routes and associated resource impact would increase. This situation would augment the impacts to air quality, flood plains, soils, vegetation, visual resources, wildlife, threatened, endangered and special status species, cultural resources and possibly to ground water quality. Upland health standards will likely degrade overtime. Potential for noxious and invasive weed spread increases with the greater number of routes and miles available to access.

Alternative D provides the least protection for the cultural and natural resources of the area. This is also true regarding Native American religious concerns over access to Traditional Cultural Places. The route network within the Bullhead Bajada and Beale Slough ACECs would remain "open"

5. TRIBES, INDIVIDUALS, ORGANIZATIONS OR AGENCIES CONSULTED

Tribes

The BLM included all Tribes within the area during the public involvement process.

The Public, Individuals and Organizations

BLM held public meetings in the fall of 2006. In November, two public scoping meetings were held in Bullhead City to help gather and collect data, comments, issues and concerns. Over 100 people participated in these meetings and expressed strong opinions for the importance of protecting public access to and across public land. In September 2006 and again in September 2007 meetings were held with representatives and officers of OHV clubs including the Havasu, Bullhead, Hualapai and Parker 4-Wheelers to better inform organized user groups of the planning process and the purpose of the TMP.

In March 2008, the three action alternative maps were posted to BLM's Arizona State website at http://www.blm.gov/az/st/en/prog/travel_mgmt/bullhead.html. The alternatives are described as No Action, Protection, Proposed and Access. The public was invited to comment for 30 days on the alternatives (Evaluation Phase). Sixteen comments were received and considered for the compilation of this environmental assessment.

On December 2, 2008, the Bullhead TMP EA and the associated implementation plan were posted to the BLM's Arizona website at: http://www.blm.gov/az/st/en/prog/travel_mgmt/bullhead.html. The public was invited to comment for 30 days on the EA. BLM received two comments. Neither comment was content related. BLM also reviewed the EA and TMP for accuracy, format, clarity and level of detail. Consequently, BLM 1) revised the format to consolidate information that was previously mentioned in several places 2) provided additional information to clarify process and intent and 3) provided a final proof-reading.

Agencies - Interdisciplinary Team

Bureau of Land Management (BLM Lake Havasu FO)

Jill Miller-Allert, Wilderness Coordinator (retired)
Myron McCoy, Outdoor Recreation Planner
Cindy Barnes, GIS Specialist
Sarah C. Murray, Archaeologist
Angela Gatto, Wildlife Biologist
Cory Bodman, Realty Specialist
Amanda Dodson, Geologist
Gina Trafton, Planning & Environmental Coordinator
Jim Priest, Wildlife Biologist
Dr. George Shannon, Archaeologist
Doug Adams, Fisheries Biologist

Bureau of Land Management Kingman Field Office

Len Marceau, Outdoor Recreation Planner
Bruce Asbjorn, Outdoor Recreation Planner

Bureau of Land Management Needles Field Office

David Roan, Outdoor Recreation Planner

Arizona Game & Fish Department

Bill Knowles, Habitat Specialist, Region IV
Steve Goodman, Wildlife Biologist, Region III
Brian Cary, Wildlife Biologist, Region III

Arizona Dept of Transportation

Julie Alpert, District Environmental Coordinator

IDP Contractor, Advanced Resource Solutions (ARS)

Les Weeks, President
Les Allert, GIS/IT Support
Harold Johnson, IT Support

FINDING OF NO SIGNIFICANT IMPACT

AND

DECISION RECORD

LAKE HAVASU FIELD OFFICE

Bullhead Travel Management Plan Environmental Assessment
DOI-BLM-AZ-C030-2007-0050-EA
(Formerly EA-AZ330-2007-050)

FONSI
I have reviewed this environmental assessment including the discussion of environmental impacts. I have determined that the Proposed Action with the mitigation measures described below will not have any significant impacts on the human environment and that an Environmental Impact Statement is not required. I have determined that the proposed project is in conformance with the approved land use plan.

Decision
It is my decision to authorize the Proposed Action as described in Environmental Assessment DOI-BLM-AZ-C030-2007-0050-EA. The Proposed Action will be subject to the stipulations attached to this environmental assessment.

The area covers Townships 8 – 11 North and Ranges 22 – 23 East of the San Bernardino Meridian in California and Townships 16 - 21 North and Ranges 20 – 21 West of the Gila & Salt River Meridian in Arizona.

Monitoring for compliance, management effectiveness, and resource condition will periodically be performed by members of the Lake Havasu Field Office Recreation and Resources Staff.

Rationale
My decision to approve the Proposed Action analyzed in DOI-BLM-AZ-C030-2007-0050-EA is based on the following:

The Proposed Action has been analyzed, with no apparent serious impacts anticipated. The environmental assessment adequately covers all affected resource values.

The decision to allow the Proposed Action does not result in any undue or unnecessary environmental degradation, and is in conformance with the *Lake Havasu Field Office Resource Management Plan* (RMP), approved in May 2007. The Proposed Action is specifically provided for in the following RMP decisions:

WF-6. Within WHAs, the route designation process will determine route closures and/or limitation to meet habitat objectives.

TM-1. Designations will be made and management implemented for a balance of opportunities for the entire range of motorized and non-motorized access needs, while in balance with other resource values found on public lands.

TM-2. Reasonable, safe, and environmentally sound access will be provided to visitors, local residents, licensed or permitted activities, and property owners. Lake Havasu Field Office will be linked with other state, regional, and land management agencies or interest groups to better facilitate travel management.

TM-3. Travel between communities within the planning area will be made safer.

TM-4. Public access easements will be acquired across private or state lands where public access to federal lands and waterways is not available.

TM-5. Instill and strengthen a more effective and responsible user ethic through public outreach programs for motorized and non-motorized users.

TM-6. The BLM will continue to provide motorized and non-motorized access across public lands, with emphasis on development of non-motorized trails and trailheads.

TM-8. Opportunities for "touring" and "loop" travel beyond the boundaries of the planning area will be maintained or enhanced when creating the travel management network for the planning area.

TM-9. OHV area designations are shown in Table 8 and on Map 31 (LHFO RMP). Generally, the planning area will be classified as "limited to existing roads and trails" for motorized travel, unless a specific classification has been applied to the area as in Table 8. Existing roads and trails for motorized use will be defined as those routes and trails found on route inventories completed in the period between 1990 and 2004 and shown on the Lake Havasu Field Office inventory maps (Map 32, LHFO RMP)

TM-10. Washes in areas designated Open, are available for motorized travel. In areas designated "existing road or trails" only washes with routes shown on inventory maps will be open to motorized travel. After the TMP is completed only washes with designated routes will be open for travel. All other washes will be closed to motorized travel unless at a later date reviewed as a new route or trail and evaluated under the route evaluation process as outlined in Appendix L (LHFO RMP).

TM-12. "Limited to Existing Roads and Trails" areas will be converted to "Limited to Designated Roads and Trails" following the Travel Management Network Plan.

TM-13. Wheeled non-motorized carts will be allowed except in WAs.

TM-14. Motorized vehicles may be allowed to pull off an existing/designated route 100 feet either side of centerline. This use shall be monitored on a continuing basis. If monitoring results show effects that exceed limits of acceptable change, motorized vehicles will not be allowed to pull off a designated route 100 feet either side of centerline in those areas where resource damage has exceeded limits of acceptable change.

TM-15. Technical Vehicle Specialized Sport Sites could be identified and managed as an RMZ or specific sites within RMZ or the ERMA and not part of the travel management network.

TM-16. Foot and equestrian cross-country travel will be allowed on public lands. California and Arizona state laws consider bicycles vehicles and cross-country travel will not be allowed except in designated open areas. Except in WAs, all roads and trails will be open to bicycles unless designated otherwise.

TM-25. The Southern bluff RMZ above the Colorado River in the Colorado River Nature Center SRMA will be limited to authorized use for motorized vehicles.

TM-29. The BLM will require permittees (e.g., for hunting, wood gathering, livestock operators) to comply with field office route designations. Exceptions may be authorized on a case-by-case basis.

TM-30. Impacts of motorized activity (except for authorized vehicles) will be evaluated and the areas converted to limited to administrative access to motorized vehicles within 0.25 mile of any spring. If necessary to maintain access, a new route may be established.

TM-33. Upon completion of the TMP process, the route network will be limited to *designated* roads, primitive roads, and trails. Upon completion of each TMP, a map will be published showing the status, maintenance intensity, and other relevant information for all roads, primitive roads, and trails within each respective Travel Management Area.

TM-34. The BLM will not develop, endorse, or establish route or trail ratings. The BLM may describe physical characteristics of a route.

TM-35. Proposals for new roads, routes, or trails (including but not limited to ROWs and/or administrative needs) will be evaluated and the route designated in conjunction with the NEPA process.

TM-36. Use of authorized ROWs will be managed for public access and through the TMPs designated either open or limited.

TM-37. On BLM published maps, areas designated as limited to authorized users will be shown as closed to general motorized use.

TM-38. All rockcrawling activities will be limited to locations away from special status species. This will be a consideration in the Route Evaluation Process.

TM-39. Prior to completing the TMP and route designation process, any vehicle routes not represented on the route inventory maps will be subject to restoration actions as described in *Administrative Actions and Standard Operating Procedures,* Appendix B (LHFO RMP). After site-specific cultural and wildlife clearances are accomplished, the restoration action could be completed without further NEPA or public notice.

Additionally, the Proposed Action is in conformance with the RMP, because it is clearly consistent with the following:

Travel Management (page 112): The BLM will designate a Travel Management Network (TMN) for the planning area within 5 years of adoption of this Approved RMP through the TMP. The TMP will evaluate and designate all individual routes/trails for use within the planning area unless specified elsewhere in this Approved RMP. The BLM will follow the process as listed in Appendix B, *Administrative Actions and Standard Operating Procedures*, of this Approved RMP, when creating the TMN, including evaluating routes using the criteria listed in the Route Evaluation Tree in Appendix L (LHFO RMP).

Monitoring (page 117): TMPs will be developed and include prescriptions and monitoring strategies. In the 5 years prior to the completion of the TMP, monitoring of OHV use on the interim route network will be completed in conjunction with other resource programs. Mitigation measures in Appendix L (LHFO RMP), *Travel Management* may be initiated where impacts from OHV use impacts sensitive resources.

The interim route network includes the "Existing Roads and Trails" as defined by the Route Inventory Maps. The inventory maps include routes already designated in previous activity plans and these designations still apply. These areas/routes will be monitored for compliance. Land health assessments will determine upland conditions as a part of all TMPs and provide a baseline measure for monitoring required to measure progress toward the objectives of the TMPs. Management actions to meet objectives will include signing, route information and other outreach, patrols and law enforcement, and in some cases, restoration of closed routes. Monitoring results that show insufficient progress from implementation of specific management actions will be evaluated and new actions will be considered. New proposals will be addressed as required by NEPA. A travel management data base will be developed for management of monitoring, compliance, enforcement and safety data.

Abandoned mines exist at the end of many roads and trails and pose a safety risk to visitors to the Bullhead TMA. Abandoned mine lands identified through travel management will be reported in the abandoned mine land database, AMLIS. Sites with high risk factors will be included in the Annual Planning Update Report and Summary.

Alternatives Considered

Alternative A - No Action (Map A)

This alternative would be a continuation of existing conditions. Travel would be allowed on the approximately 142 miles of existing roads and trails without specific route designation, or any mitigation or rehabilitation efforts. A network of OHV routes would not be analyzed and designated. This would leave the area susceptible to route proliferation and illegal cross-country travel. The increasing OHV use and visitation would continue contributing to the diminishing resource conditions.

OHV management necessary to address public and administrative access needs, protect resources, promote public safety and minimize conflicts among various uses of public lands would not be implemented. The OHV designations decision in the RMP of "limited to designated roads and trails" would not be implemented. This alternative is not preferred for the stated criteria and because it would not be in conformance with the RMP.

Alternative B - Protection (Map B)

This alternative's primary management emphasis would be the protection and enhancement of natural and cultural resource values through a significant reduction in the miles and routes of travel available for OHV use. The approximately 142 miles available for OHV use would be reduced by 86 miles (60%). Approximately 56 miles of routes would be designated "open" for motorized recreation when compared to the No Action Alternative (Alternative A). Alternative B would provide for a minimum of OHV routes and miles within a "limited to designated roads and trails" management setting. Reclamation of closed routes would be prioritized based on wildlife habitat, soil loss potential, cultural resource impacts, or other resource protection needs

Alternative B strives for non-motorized recreation opportunities such as hiking, mountain biking, and equestrian sports. Alternative B allows OHV access for administrative purposes including, maintenance of utility corridors, range improvements and mining claims. This alternative would be the most restrictive to public access while providing maximum protection to natural, scenic and cultural values.

This alternative is not preferred because it restricts OHV access and recreational opportunities on BLM-administered public land. Alternative B places a greater emphasis resource protection and non-motorized access. This alternative restricts access to users with physical disabilities, thus limiting their recreational opportunities.

Alternative C - Proposed Action (Map C)
Recognizing the popularity of motorized and non-motorized travel, BLM's Proposed Action strives to balance the protection of natural and cultural resources while providing opportunity for motorized and non-motorized travel. Through a significant reduction in the number routes and miles through closures and some restoration, land health would be maintained or improved and impact to natural and cultural resources would be reduced.

The number of OHV route miles "closed" (approximately 28 miles) and "limited" (approximately 17 miles) represents a combined 31.6% of the approximate 142 miles of existing routes. Approximately 96.6 miles (68%) of the 142 miles travel routes would be designated "open" and available for OHV use. Some increase in use is likely to occur on the open routes as OHV riders begin to comply with route designations, and travel is concentrated on open routes. Mitigation of these impacts through occasional maintenance is proposed. Overall impacts to the TMA would be reduced by the anticipated improvement in condition on and adjacent to closed routes. This alternative provides the most effective balance between popular use and the need to protect resources.

The Proposed Action would be implemented through the Bullhead TMP. The TMP identifies on the ground management actions and projects including, but not limited to: signage, publication of route guide map of designated routes, law enforcement, public outreach, maintenance and improvement of vegetation cover, actions addressing special status species and cultural resources, monitoring and evaluation.

Alternative D - Access (Map D)
This alternative would provide the most open routes for OHV travel. The number of miles available for motorized use would be reduced by about 23 miles (16%). Approximately, 119 miles (84%) of travel routes would be designated "open" for motorized recreation when compared to the No Action Alternative. Alternative D would be the least restrictive and allows the most public access.

A network of OHV travel routes would be designated that would reduce route proliferation and illegal cross-country travel. However, the increasing OHV use and visitation is likely to continue contributing to the decline of resource conditions. This alternative is not preferred because of the increased level of OHV management required by the additional, often duplicative access, the increased exposure of natural and cultural resources to damage, the increased risk to public safety, and the probability of increased conflict among users.

Public Involvement
BLM held public meetings to begin work on the plan in the fall of 2006. In November, two public scoping meetings were held in Bullhead City to help gather and collect data, comments, issues and concerns. Over 100 people participated in these meetings and expressed strong opinions for the importance of protecting public access to and across public land. In September 2006 and again in September 2007 meetings were held with representatives and officers of OHV clubs including the

Havasu, Bullhead, Hualapai and Parker 4-Wheelers to better inform organized user groups of the planning process and the purpose of the TMP.

In March 2008, the three action alternative maps were posted to BLM's Arizona State website at http://www.blm.gov/az/st/en/prog/travel_mgmt/bullhead.html. The alternatives were described as No Action, Protection, Proposed and Access. The public was invited to comment for 30 days on the alternatives (Evaluation Phase). Sixteen comments were received and considered for the compilation of this environmental assessment.

On December 2, 2008, the Bullhead TMP EA and the associated implementation plan were posted to the BLM's Arizona website at: http://www.blm.gov/az/st/en/prog/travel_mgmt/bullhead.html. The public was invited to comment for 30 days on the EA. BLM received two comments. Neither comment was content related. BLM also reviewed the EA and TMP for accuracy, format, clarity and level of detail. Consequently, BLM 1) revised the format to consolidate information that was previously mentioned in several places 2) provided additional information to clarify process and intent and 3) provided a final proof-reading. For example:

- TMP:
    - Measureable goals and objectives were added. This text is consistent with the intent of the EA, TMP and RMP.
    - In TMP Section I: Replaced "Following approval by decision of the Field Manager, a notice of use restrictions pursuant 43CFR8342 will be published in the Federal Register to establish rules necessary to implement the travel management designations" with "*If special use restrictions are required for minimum equipment standards, a Federal Register Notice will be published."*
    - Added standard BLM-Arizona Travel Management Plan procedure text to Section VI.
    - Added section: Plan Revision and Amendment.
    - The TMP stated routes would be renumbered (i.e. assigned BLM agency standard transportation numbers). TMP text indicates this task was accomplished. Map 3 reflects the renumbered routes. During the process of renumbering, some routes were combined and some were split to improve route identification.
    - Edited Tables 2 – 4. LHFO discovered an additional 0.5 mile route as the result of the adjoining BLM Kingman Field Office conducting their TMP inventory.
- Insured all mentions of total number routes (269) and "open" routes (261) and miles (142) were consistent in text and tables.
- Text references to the "Travel Management Plan" were replaced with "TMP" after the first reference.
- Added definitions to the Glossary Appendix O.

These changes did not affect the analysis or the decision.

Stipulations

1. Permittees (e.g. for hunting, wood gathering, livestock operators) must comply with TMP route designations. Exceptions may be made by the authorized officer.
2. There shall be no motorized access to harvested game off of the designated route, although use of mechanized game carrier off of the designated route is permitted outside of designated wilderness areas.
3. Use of motorized or mechanized vehicles off of the designated route for the purpose of working livestock is prohibited.
4. Camping within ¼ mile of a natural water hole or human-made watering facility that denies livestock access to the only reasonably available water is unlawful.
5. State vehicle laws apply to motor vehicle use.
6. There are no posted speed limits on BLM roads, primitive roads or trails. The speed on primitive roads will be 15 – 25 miles per hour.
7. BLM does not develop, endorse or publish road or trail ratings. BLM may describe physical characteristics of a route.

Appeals

This decision may be appealed to the Interior Board of Land Appeals, Office of the Secretary, in accordance with the regulations contained in 43 CFR, Part 4. If an appeal is taken, your notice of appeal must be filed in the Lake Havasu Field Office, 2610 Sweetwater Avenue, Lake Havasu City, AZ 86406 within 30 days from receipt of this decision. The appellant has the burden of showing that the decision appealed from is in error.

If you wish to file a petition (request) pursuant to regulation 43 CFR 2801.10 or 43 CFR 2881.10 for a stay (suspension) of the effectiveness of this decision during the time that your appeal is being reviewed by the Board, the petition for a stay must accompany your notice of appeal. A petition for a stay is required to show sufficient justification based on the standards listed below. Copies of the notice of appeal and petition for a stay must also be submitted to each party named in this decision and to the Interior Board of Land Appeals and to the appropriate Office of the Solicitor (see 43 CFR 4.413) at the same time the original documents are filed with the Lake Havasu Field Office. If you request a stay, you have the burden of proof to demonstrate that a stay should be granted.

Standards for Obtaining a Stay

Except as otherwise provided by law or other pertinent regulation, a petition for a stay of a decision pending appeal shall show sufficient justification based on the following standards:

(1) The relative harm to the parties if the stay is granted or denied,
(2) The likelihood of the appellant's success on the merits,
(3) The likelihood of immediate and irreparable harm if the stay is not granted, and
(4) Whether the public interest favors granting the stay.

Approved

/s/ James Renthal – authenticated by Gina Trafton — 03-04-09
James Renthal — Date
Acting Field Manager
Lake Havasu Field Office
Authorized Officer