Appendix L:
Livestock Screening Criteria

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L. Screening Criteria Checklist for Ten Year Grazing Permit / Lease Renewal and Transfers

To determine if a proposed renewal or transfer is applicable, the following screening criteria should be applied. If the answer to every question here is NO, the proposed renewal or transfer qualifies and NEPA compliance can be achieved by preparing a Documentation of NEPA Adequacy (DNA) that references the Billings/Pompeys Pillar RMP EIS. However, if the answer to any question is Yes, the proposal represents an exception and an individual Environmental Analysis (EA) should be prepared.

1. Do any of the Departmental Categorical Exclusion Exception Criteria apply?

Would the proposed action:

- Have significant adverse effects on public health or safety?
- Have adverse effects on such unique geographic characteristics as historic or cultural resources, park, recreation or refuge lands, wilderness areas, wild or scenic rivers, sole or principal drinking water aquifers, prime farmlands, wetlands, floodplains, or ecologically significant or critical areas, including those listed on the Department's National Register of Natural Landmarks?
- Have highly controversial environmental effects or involve unresolved conflicts concerning alternative uses of available resources?
- Have highly uncertain and potentially significant environmental effects or involve unique or unknown environmental risks?
- Establish a precedent for future action or represent a decision in principle about future actions with potentially significant environmental effects?
- Be directly related to other actions with individually insignificant but cumulatively significant environmental effects?
- Have adverse effects on properties listed or eligible for listing on the National Register of Historic Place?
- Have adverse effects on species listed or proposed to be listed on the List of Endangered or Threatened Species, or have adverse effects on designated Critical Habitat for these species?
- Have a disproportionately high and adverse effect on low income or minority populations (Executive Order 12898).
- Threaten to violate a Federal, State, local or tribal law or requirement imposed for the protection of the environment?
- Limit access to and ceremonial use of Indian sacred sites on Federal lands by Indian religious practitioners or significantly adversely affect the physical integrity of such sacred sites (Executive Order 13007).

- Contribute to the introduction, continued existence, or spread of noxious weeds or non-native invasive species known to occur in the area or actions that may promote the introduction, growth, or expansion of the range of such species (Federal Noxious Weed Control Act and Executive Order 13112)

2. **Is the proposed renewal or transfer on an allotment <u>not</u> meeting Range Health Standards? (This would vary by alternative.)**

3. **Will the proposed renewal or transfer require a change to the mandatory terms and conditions of the expiring or transferring permit / lease?**

4. **Would the proposed renewal or transfer negatively impact crucial/critical wildlife habitat?**

5. **Would the proposed renewal or transfer negatively impact any known Threatened or Endangered (BLM sensitive - special status?) species habitat?**

You must be able to provide documentation or rationale to support all **<u>No</u>** answers, if necessary.

Appendix M:
Coal Resources

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M. Coal Resources: Coal Development Potential and Unsuitability Criteria

M.1 Coal Resource Objectives and Planned Actions

The Billings Field Office planning area will be open for federal coal exploration license applications. Licenses to mine federal coal for domestic use will be available as long as production does not annually exceed 20 tons. Federal coal leasing by application (LBA) will remain available for both underground and surface mining considerations. The unsuitability criteria will be applied to the lease application area and a plan amendment to the current RMP will be prepared if necessary. Prior to approving exploration licenses, licenses to mine (domestic), and coal lease applications, a project-specific environmental review document will be prepared to assess impacts and develop mitigation measures.

The federal coal leasing decisions that were made in the previous RMP will be brought forward and adopted in this RMP:

- All federal coal that is minable by underground methods is suitable for further consideration for leasing or exchange, pending further study. Within the planning area, potential coal resource underground mining development areas occur in the Bull Mountain Coal Field located in Musselshell and Yellowstone counties and in the Red Lodge-Bearcreek Coal Field located in Carbon County. The coal unsuitability criteria will not be applied to the lands comprising the coal application area until a site-specific mine plan is filed that details the proposed locations of surface facilities.

- Within the planning area, surface coal mining development areas occur within the Bull Mountain Coal Field and are suitable for further consideration for leasing or exchange, pending further study. Within this area, federal coal with a strip ratio less than 10:1, that can be mined by surface methods must first be screened to determine their development potential, surface owner opposition to mining, the presence of unacceptable environmental conflicts (unsuitability criteria), and multiple use conflicts in accordance with the four coal screens. The application of the coal screens also includes the consideration of the unsuitability criteria.

In 1984, surface owners of land overlying federal coal in the Bull Mountain Coal Field in the Mammoth and McCleary beds (South Divide Resource Area) were consulted to determine their preference for or against leasing their land for surface mining. Due to the significant amount of time that has elapsed since the consultation was conducted, it was decided not to include that data in the RMP (see Chapter 3 – Coal).

Federal coal lease applications and exchange proposals will be considered on a case-by-case basis. The coal screening process will be applied to future lease application areas that have surface mine development potential.

M.2 Decision Rationale

This action was selected because it will enable the BLM to comply with the multiple use mandates established by FLPMA and the 43 CFR 1600 regulations governing multiple use planning. Furthermore, it will allow the BLM to comply fully with the Surface Mining Coal Reclamation Act (SMCRA) and the 43 CFR 3400 regulations established to govern the federal coal management program. Although development of federal coal resources by surface mining methods will be allowed in the Bull Mountain Coal Field, underground mining will be encouraged, because it is less environmentally disruptive. The decision to implement a 10:1 1 (overburden thickness to coal thickness) stripping ratio cutoff limit was based on the premise that it may limit the size of the surface mine.

M.3 Coal Screens and Unsuitability Criteria

The principle coal resource-related decision required in developing a land use plan (LUP) is the identification of areas that could be acceptable for further consideration for coal leasing. 43 CFR 3420.1 4(e) states:

"The major land use planning decision concerning coal resource development shall be the identification of areas acceptable for further consideration for leasing which shall be identified by the screening procedures."

Four coal screens were applied to areas within the planning area that contain federal coal that could be potentially developed by surface mining methods. The four coal screens (43 CFR 3420.1-4) are explained below:

- **Identification of Area with Coal Development Potential** – Areas being considered for development must have a coal resource that has the potential to be developed by surface mining methods. Areas could be eliminated from further consideration if they do not contain a coal resource with development potential;

- **Surface Owner Consultation** – Surface owners in areas that have the potential to be developed must by consulted to determine their view of surface mining. Negative surface owner consent could result in lands being eliminated from further consideration for development;

- **Application of Unsuitability Criteria** – A list of 20 coal unsuitability criteria are applied to areas that have coal development potential. Areas can be eliminated from further consideration for development if they fail to meet any of the 20 unsuitability criteria; and

- **Multiple Use Conflict Analysis** – The value of other federal resources that are present in coal development areas must be also be considered. Areas with coal development potential may be eliminated from further consideration based on multiple use considerations if other federal resource values are determined to be superior to the coal resource.

Once the coal screens have been applied to prospective coal resource areas via the LUP, the unsuitability criteria are generally reviewed and possibly readjusted during the environmental review process for subsequent coal lease applications.

Provided below is a description of the 20 unsuitability criteria for assessing lands suitable for all or certain stipulated methods of coal mining:

Criterion Number 1: All federal lands included in the following land systems or categories shall be considered unsuitable: National Park System, National Wildlife Refuge System, National System of Trails, National Wilderness Preservation System, National Wild and Scenic Rivers System, National Recreation Areas, lands acquired with money derived from the Land and Water Conservation Fund, National Forests, and federal lands in incorporated cities, towns and villages.

> Exceptions: (i) A lease may be issued within the boundaries of any National Forest if the Secretary finds no significant recreational, timber, economic or other values which may be incompatible with the lease; and (A) surface operations and impacts are incident to an underground coal mine or (B) where the Secretary of Agriculture determines, with respect to lands which do not have significant forest cover within those National Forests west of the 100th meridian, that surface mining may be in compliance with the Multiple-Use Sustained-Yield Act of 1960, the Federal Coal Leasing Amendments Act of 1976, and the Surface Mining Control and Reclamation Act of 1977. (ii) A lease may be issued within the Custer National Forest with the consent of the Department of Agriculture as long as no surface coal mining operations are permitted.
>
> Exemptions: The application of this criterion to lands within the listed land systems and categories is subject to valid existing rights, and does not apply to surface coal mining operations existing on August 3, 1977.

Criterion Number 2: Federal lands that are within rights-of-way or easements or within surface leases for residential, commercial, industrial, or public purposes on federally owned surface shall be considered unsuitable.

> Exceptions: A lease may be issued, and mining operations approved in such areas if the surface management agency determines that:
>
> i. All or certain types of coal development (e.g., underground mining) will not interfere with the purpose of the right-of-way or easement; or
>
> ii. The right-of-way or easement was granted for mining purposes; or
>
> iii. The right-of-way or easement was issued for a purpose for which it is not being used; or
>
> iv. The parties involved in the right-of-way or easement agree, in writing, to leasing; or

v. It is impractical to exclude such areas due to the location of coal and method of mining and such areas or uses can be protected through appropriate stipulations.

Exemptions: This criterion does not apply to lands: to which the operator made substantial legal and financial commitments prior to January 4, 1977; on which surface coal mining operations were being conducted on August 3, 1977; or which include operations on which a permit has been issued.

Criterion Number 3: The terms used in this criterion have the meaning set out in the Office of Surface Mining Reclamation and Enforcement regulations at Chapter VII of Title 30 of the Code of Federal Regulations. Federal lands affected by section 522(e) (4) and (5) of the Surface Mining Control Act of 1977 shall be considered unsuitable. This Includes lands within 100 feet of the outside line of the right-of-way of a public road or within 100 feet of a cemetery, or within 300 feet of a public building, school, church, community or institutional building, or public park, or within 300 feet of an occupied dwelling.

Exceptions: A lease may be issued for lands:

i. Used as mine access roads or haulage roads that join the right-of-way for a public road;

For which the Office of Surface Mining Reclamation and Enforcement has issued a permit to have public roads relocated;

If, after public notice and opportunity for public hearing in the locality, a written finding is made by the authorized officer that the interests of the public and the landowners affected by mining within 100 feet of a public road will be protected;

For which owners of occupied buildings have given written permission to mine within 300 feet of their dwellings.

Exemptions: The application of this criterion is subject to valid existing rights, and does not apply to surface coal mining operations existing on August 3, 1977.

Criterion Number 4: Federal lands designated as wilderness study areas shall be considered unsuitable while under review by the Administration and the Congress for possible wilderness designation. For any federal land which is to be leased or mined prior to completion of the wilderness inventory by the surface management agency, the environmental assessment or impact statement on the lease sale or mine plan shall consider whether the land possesses the characteristics of a wilderness study area. If the finding is affirmative, the land shall be considered unsuitable, unless issuance of noncompetitive coal leases and mining on leases is authorized under the Wilderness Act and the Federal land Policy and Management Act of 1976.

Exemption: The application of this criterion to lands for which the Bureau of Land Management is the surface management agency and lands in designated wilderness areas in National Forests is subject to valid existing rights.

Criterion Number 5: Scenic federal lands designated by visual resource management analysis as Class I (an area of outstanding scenic quality or high visual sensitivity) but not currently on the National Register of Natural Landmarks shall be considered unsuitable.

Exception: A lease may be issued if the surface management agency determines that surface coal mining operations will not significantly diminish or adversely affect the scenic quality of the designated area.

> Exemptions: This criterion does not apply to lands: to which the operator made substantial legal and financial commitments prior to January 4, 1977; on which surface coal mining operations were being conducted on August 3, 1977: or which include operations on which a permit has been issued.

Criterion Number 6: Federal lands under permit by the surface management agency, and being used for scientific studies involving food or fiber production, natural resources or technology demonstrations and experiments shall be considered unsuitable for the duration of the study, demonstration, or experiment, except where mining could be conducted in such a way as to enhance or not jeopardize the purposes of the study, as determined by the surface management agency, or where the principal scientific user or agency gives written concurrence to all or certain methods of mining.

> Exemptions: This criterion does not apply to lands: to which the operator made substantial legal and financial commitments prior to January 4, 1977; on which surface coal mining operations were being conducted on August 3, 1977; or which include operations on which a permit has been issued.

Criterion Number 7: All publicly or privately owned places which are included in the National Register of Historic Places shall be considered unsuitable. This shall include any areas that the surface management agency determines, after consultation with the Advisory Council on Historic Preservation and the State Historic Preservation Officer, are necessary to protect the inherent values of the property that made it eligible for listing in the National Register.

> Exemptions: This criterion does not apply to lands: to which the operator made substantial legal and financial commitments prior to January 4, 1977; on which surface coal mining operations were being conducted on August 3, 1977; or which include operations on which a permit has been issued.

Criterion Number 8: Federal lands designated as natural areas or as National Natural Landmarks shall be considered unsuitable.

> Exceptions: A lease may be issued and mining operation approved in an area or site if the surface management agency determines that:
>
> ii. The use of appropriate stipulated mining technology will result in no significant adverse impact to the area or site; or
>
> The mining of the coal resource under appropriate stipulations will enhance information recovery (e.g. paleontological sites).

Exemptions: This criterion does not apply to lands: to which the operator made substantial legal and financial commitments prior to January 4, 1977; on which surface coal mining operations were being conducted on August 3, 1977; or which includes operations on which a permit has been issued.

Criterion Number 9: Federally designated critical habitat for listed threatened or endangered plant and animal species, and habitat for federal threatened or endangered species which is determined by the Fish and Wildlife Service and the surface management agency to be of essential value and where the presence of threatened or endangered species has been scientifically documented, shall be considered unsuitable.

Exception: A lease may be issued and mining operations approved if, after consultation with the Fish and Wildlife Service, the Service determines that the proposed activity is not likely to jeopardize the continued existence of the listed species and/or its critical habitat.

Exemptions: This criterion does not apply to lands: to which the operator made substantial legal and financial commitments prior to January 4, 1977; on which surface coal mining operations were being conducted on August 3, 1977; or which include operations on which a permit has been issued.

Criterion Number 10: Federal lands containing habitat determined to be critical or essential for plant or animal species listed by a state pursuant to state law as endangered or threatened shall be considered unsuitable.

Exception: A lease may be issued and mining operations approved if, after consultation with the state, the surface management agency determines that the species will not be adversely affected by all or certain stipulated methods of coal mining.

Exemptions: This criterion does not apply to lands: to which the operator made substantial legal and financial commitments prior to January 4, 1977; on which surface coal mining operations were being conducted on August 3, 1977; or which include operations on which a permit has been issued.

Criterion Number 11: A bald or golden eagle nest or site on federal lands that is determined to be active and an appropriate buffer zone of land around the nest site shall be considered unsuitable. Consideration of availability of habitat for prey species and of terrain shall be included in the determination of buffer zones. Buffer zones shall be determined in consultation with the Fish and Wildlife Service.

Exceptions: A lease may be issued if:

iii. It can be conditioned in such a way, either in manner or period of operation, that eagles will not be disturbed during breeding season; or

iv. The surface management agency, with the concurrence of the Fish and Wildlife Service, determines that the golden eagle nest(s) will be moved;

v. Buffer zones may be decreased if the surface management agency determines that the active eagle nests will not be adversely affected.

Exemptions: This criterion does not apply to lands: to which the operator made substantial legal and financial commitments prior to January 4, 1977; on which surface coal mining operations were being conducted on August 3, 1977; or which include operations on which a permit has been issued.

Criterion Number 12: Bald and golden eagle roost and concentration areas on federal lands used during migration and wintering shall be considered unsuitable.

Exception: A lease may be issued if the surface management agency determines that all or certain stipulated methods of coal mining can be conducted in such a way, and during such periods of time, to ensure that eagles shall not be adversely disturbed.

Exemptions: This criterion does not apply to lands: to which the operator made substantial legal and financial commitments prior to January 4, 1977; on which surface coal mining operations were being conducted on August 3, 1977; or which include operations on which a permit has been issued.

Criterion Number 13: Federal lands containing a falcon (excluding kestrel) cliff nesting site with an active nest and a buffer zone of federal land around the nest site shall be considered unsuitable. Consideration of availability of habitat for prey species and of terrain shall be included in the determination of buffer zones. Buffer zones shall be determined in consultation with the Fish and Wildlife Service.

Exception: A lease may be issued where the surface management agency, after consultation with the Fish and Wildlife Service, determines that all or certain stipulated methods of coal mining will not adversely affect the falcon habitat during the periods when such habitat is used by the falcons.

Exemptions: This criterion does not apply to lands: to which the operator made substantial legal and financial commitments prior to January 4, 1977; on which surface coal mining operations were being conducted on August 3, 1977; or which include operations on which a permit has been issued.

Criterion Number 14: Federal lands which are high priority habitat for migratory bird species of high federal interest on a regional or national basis, as determined jointly by the surface management agency and the Fish and Wildlife Service, shall be considered unsuitable.

Exception: A lease may be issued where the surface management agency, after consultation with the Fish and Wildlife Service, determines that all or certain stipulated methods of coal mining will not adversely affect the migratory bird habitat during the periods when such habitat is used by the species.

Exemption: This criterion does not apply to lands: to which the operator made substantial legal and financial commitments prior to January 4, 1977; on which surface coal mining operations were being conducted on August 3, 1977; or which include operations on which a permit has been issued.

Criterion Number 15: Federal lands which the surface management agency and the state jointly agree are habitat for resident species of fish and wildlife and plants of high interest to the state and which are essential for maintaining these priority wildlife species shall be considered unsuitable.

Examples of such lands which serve a critical function for the species involved include:

vi. Active dancing and strutting grounds for sage grouse, sharp-tailed grouse, and prairie chicken;

Winter ranges crucial for deer, antelope, and elk;

Migration corridors for elk;

Extremes of range for plant species; and

A lease may be issued if, after consultation with the state, the surface management agency determines that all or certain stipulated methods of coal mining will not have a significant long-term impact on the species being protected.

Exemptions: This criterion does not apply to lands: to which the operator made substantial legal and financial commitments prior to January 4, 1977; on which surface coal mining operations were being conducted on August 3, 1977; or which include operations on which a permit has been issued.

Criterion Number 16: Federal lands in riverine, coastal, and special floodplains (l00-year recurrence interval) on which the surface management agency determines that mining could not be undertaken without substantial threat of loss of life or property shall be considered unsuitable for all or certain stipulated methods of coal mining.

Exemptions: This criterion does not apply to lands: to which the operator made substantial legal and financial commitments prior to January 4, 1977; on which surface coal mining operations were being conducted on August 3, 1977; or which include operations on which a permit has been issued.

Criterion Number 17: Federal lands which have been committed by the surface management agency to use as municipal watersheds shall be considered unsuitable.

Exception: A lease may he issued where the surface management agency in consultation with the municipality (incorporated entity) or the responsible governmental unit determines, as a result of studies, that all or certain stipulated methods of coal mining will not adversely affect the watershed to any significant degree.

Exemptions: This criterion does not apply to lands: to which the operator made substantial legal and financial commitments prior to January 4, 1977; on which surface coal mining operations were being conducted on August 3, 1977; or which include operations on which a permit has been issued.

Criterion Number 18: Federal lands with National Resource Waters, as identified by states in their water quality management plans, and a buffer zone of federal lands ¼ mile from the outer edge of the far banks of the water, shall be unsuitable.

Exception: The buffer zone may be eliminated or reduced in size where the surface management agency determines that it is not necessary to protect the National Resource Waters.

Exemptions: This criterion does not apply to lands: to which the operator made substantial legal and financial commitments prior to January 4, 1977; on which surface coal mining operations were being conducted on August 3, 1977; or which include operations on which a permit has been issued.

Criterion Number 19: Federal lands identified by the surface management agency, in consultation with the state in which they are located, as alluvial valley floors according to the definition in §3400.0-5(a) of this title, the standards in 30 CFR Part 822, the final alluvial valley floor guidelines of the Office of Surface Mining Reclamation and Enforcement when published, and approved state programs under the Surface Mining Control and Reclamation Act of 1977, where mining would interrupt, discontinue or preclude farming, shall be considered unsuitable. Additionally, when mining federal land outside an alluvial valley floor would materially damage the quantity or quality of water in surface or underground water systems that would supply alluvial valley floors, the land shall be considered unsuitable.

Exemptions: This criterion does not apply to surface coal mining operations which produced coal in commercial quantities in the year preceding August 3, 1977, or which had obtained a permit to conduct surface coal mining operations.

Criterion Number 20: Federal lands in a state to which is applicable a criterion (i) proposed by that state or Indian tribe located in the planning area, and (ii) adopted by rulemaking by the Secretary, shall be considered unsuitable.

Exceptions: A lease may be issued when:

vii. Such criterion is adopted by the Secretary less than 6 months prior to the publication of the draft comprehensive land use plan or land use analysis plan, or supplement to a comprehensive land use plan, for the area in which such land is included; or

After consultation with the state, the surface management agency determines that all or certain stipulated methods of coal mining will not adversely affect the value which the criterion would protect.

Exemptions: This criterion does not apply to lands: to which the operator made substantial legal and financial commitments prior to January 4, 1977; on which surface coal mining operations were being conducted on August 3, 1977; or which include operations on which a permit has been issued.

Underground mining exemption from criteria:

a) Federal lands with coal deposits that would be mined by underground mining methods shall not be assessed as unsuitable where there would be no surface coal mining operations, as defined in §3400.0-5 of this title, on any lease, if issued.

b) Where underground mining will include surface operations and surface impacts on federal lands to which a criterion applies, the lands shall be assessed as unsuitable unless the surface management agency finds that a relevant exception or exemption applies. Source: 43 CFR 3461.1, BLM, 1987

Appendix N:
Special Recreation Management Areas (SRMA) and Extensive Recreation Management Areas (ERMA) Tables

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N. SRMA and ERMA Tables

Special Recreation Management Areas

Four Dances Natural Area and ACEC Special Recreation Management Area		
Management Objectives:	• Provide dispersed recreation experiences accessible from Billings and the local community. • Provide wildlife habitat • Balance the widest range of beneficial uses with the least amount of degradation, possible without risking health and safety, and with a minimum of other undesirable or unintended consequences on other resources. • Protect historic, cultural and scenic values (Historic Will James Cabin)	
Outcomes		
Primary Activities: • Hiking • Running • Cross country skiing • Bird watching • Picnicking • Fishing • Exercising pets • Scenery and wildlife viewing • Yellowstone River access	**Experiences:** **Enjoying:** • Solitude • Family Recreation • Fishing • Exercise • Scenery • Escaping everyday responsibilities for awhile • Viewing historic building (Will James Cabin) • having access to close-to-home outdoor amenities • Appreciation of historic and pre-historic cultural resources.	**Benefits:** **Personal:** • Improved physical fitness • Restored mind from unwanted stress • Greater sense of overall wellness • Enhanced cultural resource stewardship ethic **Household and Community:** • Improved quality of life • Greater awareness of and appreciation for our cultural heritage • Greater appreciation for the area and outdoor-oriented lifestyle • Involvement in recreation and other land use decisions • Increased desirability as a place to live or retire. **Economic:** • Positive contributions to local-regional economic stability • Increased work productivity • Reduced health maintenance costs **Environmental:** • Increased resource stewardship and protection by communities

Four Dances Natural Area and ACEC Special Recreation Management Area

Setting Prescriptions

Physical:

- The area is Rural. The surrounding character of the landscape is considerably modified (20-40 acre ranchettes, communications towers and two private in-holdings within the boundaries). The most natural area occurs along the western edge of the SRMA with views of the urban/industrial core area of Billings easily accessible. The historic/rustic Will James cabin lies on the northern edge. Facilities include an unpaved parking lot, vault toilet and kiosk. One caretakers' residence could be allowed but could not disturb more than ½ acre nor change the VRM, Recreational Opportunity Spectrum (ROS) or ACEC Scenic values.

Social:

- Mostly small groups of 1-5 with occasional large group activities including Native American ceremonies.
- Could encounter 1-10 persons per day on weekends and 1-5 persons during week days.

Administrative:

- Day use only
- Closed to: horseback riding
- Closed to atvs/snowmobiles
- Closed to fireworks discharge
- OHV use limited to administrative use only
- Closed to hang gliding
- Closed to rock climbing
- Closed to paint ball
- Closed to discharging of firearms
- Closed to exercising pets off leash
- Closed to driving off road/cross country.
- Compliance with terms of conservation easments

Management Actions and Allowable Use Decisions

Recreation and Visitor Services:

- Facilitate targeted recreation opportunities:
  - Implement current travel management decisions.
- Maintain setting:
  - Developments would be managed to VRM class III
- Health, safety, resource protection, user conflict resolution
  - Closed to OHV
  - Closed to equestrian use
  - Closed to rock climbing
  - Closed to hang gliding
  - No discharge of firearms
  - No fuel-wood collection
  - No fireworks
  - The area may be closed during high fire danger
- Special Recreation Permit criteria:
  - Archery hunting may be allowed, if deemed necessary for wildlife population control by MTFWP. (An authorization from BLM would also be required).
  - Large Native American events for traditional uses may be allowed under BLM authorization, if not in conflict with basic management
  - Other permits considered if not in conflict with basic management.

Other Programs:

- Surface Use Controls:
  - Withdrawn from location or entry under US mining laws for 20 years.
  - No geophysical exploration
  - Closed to mineral leasing, exploration and development
  - Closed to mineral deposit
- Range Management:
  - Grazing would only be allowed to meet other resource objectives
- Fire and Fuels Management:
  - May be subject to closure during high fire danger
  - May be subject to fire and fuels management activities to restore and maintain forest health, reduce fire hazards, and maintain wildlife habitat.
- Visual Resource Management:
  - Manage as VRM class II
- Cultural Resource Management
  - Large Native American events for traditional uses may be allowed under BLM authorization, if not in conflict with basic management

Four Dances Natural Area and ACEC Special Recreation Management Area

Implementation Decisions			
Management: • A recreation area management plan (RAMP) will be developed. • The Will James cabin will be maintained according t the Secretary of Interior Standards • Develop system of multiple use trails. (Bicycle, foot, X-C ski) • Pets off-leash allowed in outside of concentrated use area (parking lot and restroom/trailhead.	**Administrative:** • All motorized/mechanized use limited to specifically administrative use	**Information and Education:** • A comprehensive sign plan including information kiosks and route designation would be developed and implemented as part of the RAMP for this SRMA.	**Monitoring:** • Assure objectives are being met and prescribed settings are being maintained. • Monitor implemented actions and evaluate.

Sundance Lodge Special Recreation Management Area

Management Objectives:	Manage to minimize user conflicts and impacts to resources while providing opportunities for non-motorized activities. • Provide wildlife habitat • Protect historic, cultural, and scenic values. • Balance the widest range of beneficial uses with the least amount of degradation, possible without risking health and safety, and with a minimum of other undesirable or unintended consequences on other resources. • Provide dispersed recreation experiences accessible from Billings and surrounding local communities.

Outcomes

Primary Activities:	Experiences:	Benefits:
• Fishing • Hunting (archery and shotgun) • Canoeing • Hiking • Running • Cross country skiing • Bird watching • Horseback riding • Picnicking • Exercising pets off leash • Access to the Clark's Fork of the Yellowstone River • Wildlife viewing	**Enjoying:** • Solitude • Family Recreation • Fishing • Canoeing • Exercise • Exercising pets off leash • Scenery • Escaping everyday responsibilities for awhile • Having access to close-to-home outdoor amenities • Appreciation of historic and pre-historic cultural resources.	**Personal:** • Improved physical fitness • Restored mind from unwanted stress • Greater sense of overall wellness • Enhanced cultural resource stewardship ethic **Household and Community:** • Improved quality of life • Greater awareness of and appreciation for our cultural heritage • Greater appreciation for the area and outdoor-oriented lifestyle • Involvement in recreation and other land use decisions • Increased desirability as a place to live or retire. **Economic:** • Positive contributions to local-regional economic stability • Increased work productivity • Reduced health maintenance costs **Environmental:** • Increased resource stewardship and protection by communities

Sundance Lodge Special Recreation Management Area

Setting Prescriptions

Physical:

- The area has a "Rural Recreation" Rural Recreation Opportunity Spectrum management direction.
- The BLM maintains a storage barn/shop and equipment and supplies storage yard.
- The public use area contains a parking lot, trailhead kiosk, Block Management sign-in station, vault toilet and barriers and fences to exclude OHVs from the trail system. Open area are subject cultivation to provide wildlife habitat and maintain land use pattern.

Social:

- Mostly small groups of 1-5 with occasional large group activities including Native American ceremonies.
- Could encounter 1-10 persons per day on weekends and 1-5 persons during week days.

Administrative:

- OHV use including bicycles limited to administrative and authorized use only.
- Closed to discharge of rifles and pistols
- Closed to paintball activities
- Permanent tree stands prohibited
- Day use only
- Open campfires only in designated sites.
- Closed to fireworks discharge
- Closed to driving off road/cross country.

Management Actions and Allowable Use Decisions

Recreation and Visitor Services:

- Facilitate targeted recreation opportunities:
  - Cooperative management with Pheasants Forever facilitates bird populations and hunting
  - Cooperative management with Montana Fish Wildlife and Parks as a Block Management area close to urban populations.
- Maintain setting:
  - Day use only
- Health, safety, resource protection, user conflict resolution
  - OHV use including bicycles limited to administrative and authorized use only.
  - Closed to discharge of rifles and pistols
  - Closed to paintball activities
  - Permanent tree stands prohibited
  - May be subject to closure during high fire danger
- Special Recreation Permit criteria:
  - Use of shotguns, driving off highway vehicles, overnight camping and competitive events require approval from the Billings Field Office Manager

Other Programs:

Surface Use Controls:

- BLM does not have mineral rights for Sundance Lodge. NEPA for future development could address access routes, mining/drilling locations, but cannot deny access.
  - A surface use plan must be approved prior to permitting any surface disturbing activities.
- Range Management:
  - Grazing may be authorized for the purposes of weed control, vegetative management to reduce hazardous fuels, or to provide short-grass habitat and habitat diversity for wildlife.
- Fire and Fuels Management:
  - Fireworks are prohibited
  - Aggressive fire suppression would be used
  - Open campfires may be allowed in designated sites only.
  - Subject to fire and fuels management activities to restore and maintain forest health, reduce fire hazards, and maintain wildlife habitat.
- Visual Resource Management:
  - Managed as a VRM Class II criteria.

Sundance Lodge Special Recreation Management Area

Implementation Decisions

Management:	Administrative:	Information and Education:	Monitoring:
• A recreation area management plan (RAMP) will be developed. • Prescribed fire, livestock grazing and vegetative thinning would be used to reduce hazardous fuels • Parking lot may be modified • Installation of a vault toilet – • Use of BMPs • Use of shotguns, driving off highway vehicles, overnight camping and competitive events require approval from the Billings Field Office Manager • In-holdings may be eliminated if an opportunity for land tenure consolidation is presented. • Farming may continue under the Cooperative habitat Agreement • Area is available for environmental education programs.	• Bee keeping will require a permit. • Farming may continue on cultivated areas • Continue the agreement with Pheasants Forever and Montana Department of Fish Wildlife and Parks. • Developments may include a parking lot, fully accessible toilet, a boat ramp • Harvest of dead and down material will be permitted for personal use only if the material creates a safety/fire hazard or obstructs a trail, road, or parking area. • Any visual alterations must meet VRM Class III criteria. • Right away avoidance area	• interpretive signs • meeting facility	• A trespass prevention, detection and abatement program will be developed consistent with laws and land use planning.

Shepherd Ah-Nei Special Recreation Management Area – OHV Use Area (RMZ 1) (976 acres)

Management Objectives:	**The objective of area management is to continue to provide opportunities for non-competitive motorized or mechanized trail riding for all ability levels local to the most populous urban area in Montana.** This area meets the criteria for unique value as the only lands within the BIFO managed to provide specifically designated ATV trails. It meets the importance criteria for its close proximity the Montana's most populous urban area. (RMZ 1) has a developed parking area and OHV trailhead and provides access to over 50 miles of designated OHV trails.

Outcomes

Primary Activities:	Experiences:	Benefits:
• OHV trail riding, • mountain biking,	• Developing skills and abilities • Testing endurance • Enjoying risk-taking adventure • Enjoying the closeness of friends and family • Escaping everyday responsibilities for awhile • Enjoying having access to close-to-home outdoor amenities	**Personal:** • Improved physical fitness • Better health maintenance • Restored mind from unwanted stress • Greater cultivation of outdoor-oriented lifestyle • Improved outdoor knowledge, skills, and self-confidence • Greater environmental awareness and sensitivity • More well-informed and responsible visitors. **Household and Community:** • Involvement in recreation and other land use decisions • Improved cultivation of aesthetic appreciation for the area and an outdoor-oriented lifestyle. • Heightened sense of community satisfaction. **Economic:** • Positive contributions to local-regional economic stability. • Increased desirability as a place to live or retire. • Enhanced ability for visitors to find areas providing wanted recreation experiences and benefits. • Increased local tax revenue from visitors. **Environmental:** • Greater retention of distinctive natural landscape features. • Increased resource stewardship and protection by users

Shepherd Ah-Nei Special Recreation Management Area – OHV Use Area (RMZ 1) (976 acres)

Setting Prescriptions

Physical: Front country.

- mostly natural in appearance with structures limited to natural surface trails, fences, cattle guards, and stock tank/ troughs. Signs limited to route designations. Closed travel routes are blocked with buck and pole barricades.

Social: Front country.

- Group sizes less than 10, typically 5 or less per group.
- Could encounter up to 25-50 persons per day on weekends, +/- 10 persons on weekdays.

Administrative: Front country.

- Rules are posted and use may be temporarily restricted due to permitted events or resource concerns due to weather.
- Area accommodates multiple-use including grazing, OHV.
- OHVs restricted to designated routes per travel management plan.
- Day use only.
- Target shooting prohibited, hunting allowed.

Management Actions and Allowable Use Decisions

Recreation and Visitor Services:

- Facilitate targeted recreation opportunities:
  - Manage to provide OHV riding opportunities for all levels of non-competitive riding vehicles 50 inches wide or less.
  - Hunting allowed in conformance with MTFWP regulations.
  - Implement current travel management decisions.
- Maintain setting:
  - Restrict facilities development to OHV Use Area Parking area unless modified by RAMP.
  - Use on roads or certain non-motorized activities may be temporarily, seasonally or permanently curtailed as a result of identified emergent conditions or excessive resource damage.
- Health, safety, resource protection, user conflict resolution:
  - Close and restore all non-designated trails
  - Trapping prohibited.
  - No wood cutting.
  - No target shooting.
- Special Recreation Permit criteria:
  - Applications for SRPs may be delayed or denied and activities may be relocated when environmental analysis identifies unacceptable levels of change to resources or conflicts with other users that would result from permitted activities.
  - Until completion of the RAMP SRP applications will be considered on an individual basis.

Other Programs:

- Surface Use Controls:
- Oil and gas leasing, exploration and development would be allowed with an NSO stipulation
- Range Management:
- Surface disturbing activities related to facility development and maintenance would be subject to mitigation guidelines.
- Fire and Fuels Management:
- Area may be subject to fire and fuels management activities to restore and maintain forest health, reduce fire hazards, and maintain wildlife habitat
- Visual Resource Management:
  - Manage as Class II in RMZ 2 (3,664 acres), Class III in RMZ 1 (976 acres (OHV area))

Shepherd Ah-Nei Special Recreation Management Area – OHV Use Area (RMZ 1) (976 acres)

Implementation Decisions

Management:	Administrative:	Information and Education:	Monitoring:
• A recreation area management plan (RAMP) will be developed. • Specific SRP criteria will be developed in the RAMP.	• Designated uses for existing trails. • All motorized/mechanized use limited to specifically designated trails & roads only.	• A comprehensive sign plan including information kiosks and route designation would be developed and implemented as part of the RAMP for this SRMA.	• Assure objectives are being met and prescribed settings are being maintained. • Monitor implemented actions and evaluate.

Shepherd Ah-Nei Special Recreation Management Area – Equestrian/Non-Motorized Use Area (RMZ 2) (3,664 acres)

Management Objectives:	The objective of area management is to continue to provide and enhance opportunities for mountain biking equestrian riding, and hiking local to the most populous urban area in Montana. This area meets the criteria for unique value as the only lands within the BIFO with an extensive and existing system and use. It meets the importance criteria for its close proximity the Montana's most populous urban area. (RMZ 2) has a developed parking area and equestrian trailhead and provides access to over XXX acres of open ponderosa pine savannah with trails along previously existing closed motor vehicle routes

Outcomes

Primary Activities:	Experiences:	Benefits:
• Equestrian trail and cross country riding. • Hiking • Mountain biking • Hunting	• Developing skills and abilities • Testing endurance • Enjoying risk-taking adventure • Enjoying the closeness of friends and family • Escaping everyday responsibilities for awhile • Enjoying having access to close-to-home outdoor amenities	• Personal: – Improved physical fitness – Better health maintenance – Restored mind from unwanted stress – Greater cultivation of outdoor-oriented lifestyle – Improved outdoor knowledge, skills, and self-confidence – Greater environmental awareness and sensitivity – More well-informed and responsible visitors • Household and Community: – Involvement in recreation and other land use decisions – Improved cultivation of aesthetic appreciation for the area and an outdoor-oriented lifestyle. – Heightened sense of community satisfaction • Economic: – Positive contributions to local-regional economic stability. – Increased desirability as a place to live or retire. – Enhanced ability for visitors to find areas providing wanted recreation experiences and benefits. – Increased local tax revenue from visitors • Environmental: – Greater retention of distinctive natural landscape features. – Increased resource stewardship and protection by users

Setting Prescriptions

Physical: Back and middle country.	Social: Middle country.	Administrative: Front and middle country.
• Mostly natural in appearance with structures limited to fences, cattle guards, and stock tank/ troughs.	• Group sizes less than 10, typically 5 or less per group. • Could encounter up to 10-15 persons per day on weekends, +/- 5 persons on weekdays.	• Rules are posted and use may be temporarily restricted due to permitted events or resource concerns due to weather. • Area accommodates multiple-use including grazing, OHV. • OHVs restricted to designated routes per travel management plan. • Day use only. • Target shooting prohibited, hunting allowed.

Shepherd Ah-Nei Special Recreation Management Area – Equestrian/Non-Motorized Use Area (RMZ 2) (3,664 acres)

Management Actions and Allowable Use Decisions

Recreation and Visitor Services:

- Facilitate targeted recreation opportunities:
  - Hunting allowed in conformance with MTFWP regulations.
  - Implement current travel management decisions.
- Maintain setting:
  - Restrict facilities development to Entrance Parking Loop area unless modified by RAMP.
  - Use on roads or certain non-motorized activities may be temporarily, seasonally or permanently curtailed as a result of identified emergent conditions or excessive resource damage.
  - Continue cooperation with the Backcountry Horseman group and other interested parties to protect and enhance riding experiences.
- Health, safety, resource protection, user conflict resolution:
  - Close and restore all non-designated trails, improve designated trails to ensure they meet current management standards
  - Trapping prohibited.
  - No wood cutting.
  - No target shooting.
- Special Recreation Permit criteria:
  - Applications for SRPs may be delayed or denied and activities may be relocated when environmental analysis identifies unacceptable levels of change to resources or conflicts with other users that would result from permitted activities.
  - Until completion of the RAMP SRP applications will be considered on an individual basis.

Other Programs:

- Surface Use Controls:
  - Oil and gas leasing, exploration and development would be allowed with an NSO stipulation
- Range Management:
  - Surface disturbing activities related to facility development and maintenance would be subject to mitigation guidelines.
- Fire and Fuels Management:
  - Area may be subject to fire and fuels management activities to restore and maintain forest health, reduce fire hazards, and maintain wildlife habitat
- Visual Resource Management:
  - Manage as Class II in RMZ2 (3,664 acres), Class III in RMZ 1 (976 acres (OHV area))

Implementation Decisions

Management:

- A recreation area management plan (RAMP) will be developed.
- Specific SRP criteria will be developed in the RAMP.
- Non-motorized, mechanized or un-mechanized multiple use trails may be developed as part of implementation level planning through a Recreation Area Management Plan (RAMP)

Administrative:

- Designated uses for existing trails.
- All motorized/mechanized use limited to specifically administrative use, including grazing permittees engaged in grazing maintenance work.

Information and Education:

- A comprehensive sign plan including information kiosks and route designation would be developed and implemented as part of the RAMP for this SRMA.

Monitoring:

- Assure objectives are being met and prescribed settings are being maintained.
- Monitor implemented actions and evaluate.

Acton Special Recreation Management Area (3,697 acres)

Management Objectives:	**Objectives for the SRMA are to provide general unconfined recreational opportunities while protecting resources and controlling conflicts between user groups.** This area meets the criteria for importance as a large block of undeveloped land proximate to Montana's most populous urban area. It provides opportunities for hiking, mountain biking, big game and upland bird hunting, and limited primitive camping. The area topography provides for expansive views of undeveloped/rural landscapes as well as ample visual screening allowing for use by multiple individuals or groups without significant disturbance or conflict.

Outcomes

Primary Activities:	Experiences:	Benefits:
• OHV on roads, • hiking, • wildlife watching • hunting for upland birds and big game, • mountain bike riding, • camping, • paint-ball games. • equestrian use • Extreme Sports	• Enjoying frequent exercise • Access to a range of physical challenge, including high risk. • Escaping everyday responsibilities for a while • Enjoying easy access to diverse recreation • Developing skills, abilities and self-confidence • Enjoying nature • Autonomy • Socializing • Achievement • Learning • Escape pressures	• Personal: – Improved physical fitness – Better health maintenance – Restored mind from unwanted stress – Greater cultivation of outdoor-oriented lifestyle – Improved outdoor knowledge, skills, and self-confidence – Greater environmental awareness and sensitivity – More well-informed and responsible visitors • Household and Community: – Involvement in recreation and other land use decisions – Improved cultivation of aesthetic appreciation for the area and an outdoor-oriented lifestyle. – Heightened sense of community satisfaction • Economic: – Positive contributions to local-regional economic stability. – Increased desirability as a place to live or retire. – Enhanced ability for visitors to find areas providing wanted recreation experiences and benefits. – Increased local tax revenue from visitors • Environmental: – Greater retention of distinctive natural landscape features. – Increased resource stewardship and protection by users

Acton Special Recreation Management Area (3,697 acres)

Setting Prescriptions

Physical: Back and middle country.

- Mostly natural in appearance with structures limited to fences, cattle guards, and stock tank/ troughs. Signs limited to route designations. Closed travel routes are blocked with buck and pole barricades. Dispersed campsites located throughout area receive light use.

Social: Middle Country.

- Group sizes less than 10, typically 3 or less per group.
- Could encounter up to 20-30 persons per day on weekends, +/- 5 persons on weekdays.

Administrative: Backcountry.

- Rules are posted and use may be temporarily restricted due to permitted events or resource concerns due to weather.
- Area accommodates multiple-use including grazing.
- OHVs restricted to designated routes per travel management plan.
- This area can be accessed in the front country area by ordinary highway vehicles; middle and backcountry areas are accessible by 4-wheel drive and ATVs UTVs and motorcycles.

Management Actions and Allowable Use Decisions

Recreation and Visitor Services:

- Facilitate targeted recreation opportunities:
  - Hunting allowed in conformance with MTFWP regulations.
  - Implement current travel management decisions.
- Maintain setting:
  - Restrict facilities development to Entrance Parking Loop area unless modified by RAMP.
  - Use on roads or certain non-motorized activities may be temporarily, seasonally or permanently curtailed as a result of identified emergent conditions or excessive resource damage.
- Health, safety, resource protection, user conflict resolution:
  - Close and restore all non-designated trails, improve designated trails to meet current management standards
  - Trapping prohibited.
  - No wood cutting.
  - No target shooting.
- Special Recreation Permit criteria:
  - Applications for SRPs may be delayed or denied and activities may be relocated when environmental analysis identifies unacceptable levels of change to resources or conflicts with other users that would result from permitted activities.
  - Until completion of the RAMP SRP applications will be considered on an individual case-by-case basis.
- Develop mountain biking opportunities for a range of skill levels. Include corss-country and gravity fed (downhill) trails with appropriate facilities.

Other Programs:

- Surface Use Controls:
  - Oil and gas leasing, exploration and development would be allowed with an NSO stipulation
- Range Management:
  - Surface disturbing activities related to facility development and maintenance would be subject to mitigation guidelines.
- Fire and Fuels Management:
  - Area may be subject to fire and fuels management activities to restore and maintain forest health, reduce fire hazards, and maintain wildlife habitat
- Visual Resource Management:
  - Manage as Class II in back and middle country, Class III in front country area.

Yellowstone River Corridor Special Recreation Management Area (6959 acres surface and minerals) – Main Stem River, RMZ 1

Management Objectives:	The goal is to manage these lands for a variety of sustainable visitor experiences in mostly primitive and natural landscapes. • Provide wildlife habitat • Protect historic, cultural, and scenic values. • Balance the widest range of beneficial uses with the least amount of degradation, possible without risking health and safety, and with a minimum of other undesirable or unintended consequences on other resources. • Provide dispersed recreation experiences. The SRMA will be managed to protect and preserve the remarkable scenic, recreational, geological, fish and wildlife, historic, cultural, and other values along the longest free-flowing river in the lower 48 states.

Outcomes

Primary Activities:	Experiences:	Benefits:
• Boating • Fishing • Hiking • Hunting • Sightseeing • Viewing wildlife	• Access to a range of physical challenge • Escaping everyday responsibilities for a while • Enjoying easy access to diverse recreation • Developing skills, abilities and self-confidence • Enjoying nature • Autonomy • Socializing	• Personal: – Improved physical fitness – Better health maintenance – Restored mind from unwanted stress – Greater cultivation of outdoor-oriented lifestyle – Improved outdoor knowledge, skills, and self-confidence – Greater environmental awareness and sensitivity – More well-informed and responsible visitors • Household and Community: – Involvement in recreation and other land use decisions – Improved cultivation of aesthetic appreciation for the area and an outdoor-oriented lifestyle. – Heightened sense of community satisfaction • Economic: – Positive contributions to local-regional economic stability. – Increased desirability as a place to live or retire. – Enhanced ability for visitors to find areas providing wanted recreation experiences and benefits. – Increased local tax revenue from visitors • Environmental: – Greater retention of distinctive natural landscape features. – Increased resource stewardship and protection by users

Yellowstone River Corridor Special Recreation Management Area (6959 acres surface and minerals) – Main Stem River, RMZ 1

Setting Prescriptions

Physical: Rural to Front country.

- Within ½ mile of paved/primary roads and highways.
- Character of the natural landscape considerably modified (agriculture, residential or industrial).
- Modern facilities such as campgrounds, group shelters, boat launches, and occasional exhibits

Social: Front country.

- 15-29 encounters/day off travel routes (e.g., campgrounds) and 30 or more encounters/day on travel routes.
- 13-25 people per group.
- Small areas of alteration prevalent. Surface vegetation gone with compacted soils observed. Sounds of people regularly heard.

Administrative: Front country.

- Two-wheel drive vehicles predominant, but also four wheel drives and non-motorized, mechanized use.
- Basic maps, staff infrequently present (e.g. seasonally, high use periods) to provide on-site assistance
- Basic user regulations at key access points. Minimum use restrictions

Management Actions and Allowable Use Decisions

Recreation and Visitor Services:

- Facilitate targeted recreation opportunities:
  - Hunting allowed in conformance with MTFWP regulations.
  - Implement current travel management decisions.
- Maintain setting:
  - Restrict facilities development to Entrance Parking Loop area unless modified by RAMP.
  - Use on roads or certain non-motorized activities may be temporarily, seasonally or permanently curtailed as a result of identified emergent conditions or excessive resource damage.
- Health, safety, resource protection, user conflict resolution:
  - Close and restore all non-designated trails, improve designated trails to meet management standards
  - Trapping by permit only.
  - No wood cutting.
  - No target shooting.
- Special Recreation Permit criteria:
  - Until completion of the RAMP SRP applications will be considered on an individual case-by-case basis. The BLM will provide SRPs consistent with 43 CFR 2932.26 and the goal of managing these lands for a variety of sustainable visitor experiences in mostly primitive and natural landscapes.

Other Programs:

- Surface Use Controls:
  - Oil and gas leasing, exploration and development would be allowed with an NSO stipulation
- Range Management:
  - Surface disturbing activities related to facility development and maintenance would be subject to mitigation guidelines.
- Fire and Fuels Management:
  - Area may be subject to fire and fuels management activities to restore and maintain forest health, reduce fire hazards, and maintain wildlife habitat
- Visual Resource Management:
  - Manage as Class II in back and middle country, Class III in front country area.

Yellowstone River Corridor Special Recreation Management Area (6959 acres surface and minerals) – Main Stem River, RMZ 1

Implementation Decisions			
Management: • A recreation area management plan (RAMP) will be developed. • Specific SRP criteria will be developed in the RAMP. • Non-motorized, mechanized or un-mechanized multiple use trails may be developed as part of implementation level planning through a Recreation Area Management Plan (RAMP)	**Administrative:** • Designated uses for existing trails. • All motorized/mechanized use limited to specifically designated trails & roads only.	**Information and Education:** • A comprehensive sign plan including information kiosks and route designation would be developed and implemented as part of the RAMP for this SRMA.	**Monitoring:** • Assure objectives are being met and prescribed settings are being maintained. • Monitor implemented actions and evaluate.

Yellowstone River Corridor Special Recreation Management Area – Clark's Fork of the Yellowstone, RMZ 2 (3182 acres, surface and minerals)

Management Objectives:	The goal is to manage these lands for a variety of sustainable visitor experiences in mostly primitive and natural landscapes. • Provide wildlife habitat • Protect historic, cultural, and scenic values. • Balance the widest range of beneficial uses with the least amount of degradation, possible without risking health and safety, and with a minimum of other undesirable or unintended consequences on other resources. • Provide dispersed recreation experiences. The SRMA will be managed to protect and preserve the remarkable scenic, recreational, geological, fish and wildlife, historic, cultural, and other values along the longest free-flowing river in the lower 48 states.

Outcomes

Primary Activities:	Experiences:	Benefits:
• Boating • Fishing • Hiking • Hunting • Sightseeing • Viewing wildlife	• Access to a range of physical challenge • Escaping everyday responsibilities for a while • Enjoying easy access to diverse recreation • Developing skills, abilities and self-confidence • Enjoying nature • Autonomy • Socializing	• Personal: – Improved physical fitness – Better health maintenance – Restored mind from unwanted stress – Greater cultivation of outdoor-oriented lifestyle – Improved outdoor knowledge, skills, and self-confidence – Greater environmental awareness and sensitivity – More well-informed and responsible visitors • Household and Community: – Involvement in recreation and other land use decisions – Improved cultivation of aesthetic appreciation for the area and an outdoor-oriented lifestyle. – Heightened sense of community satisfaction • Economic: – Positive contributions to local-regional economic stability. – Increased desirability as a place to live or retire. – Enhanced ability for visitors to find areas providing wanted recreation experiences and benefits. – Increased local tax revenue from visitors • Environmental: – Greater retention of distinctive natural landscape features. – Increased resource stewardship and protection by users

Yellowstone River Corridor Special Recreation Management Area – Clark's Fork of the Yellowstone, RMZ 2 (3182 acres, surface and minerals)

Setting Prescriptions

Physical: Rural to Front country.

- Within ½ mile of paved/primary roads and highways.
- Character of the natural landscape considerably modified (agriculture, residential or industrial).
- Modern facilities such as campgrounds, group shelters, boat launches, and occasional exhibits

Social: Front country.

- 15-29 encounters/day off travel routes (e.g., campgrounds) and 30 or more encounters/day on travel routes.
- 13-25 people per group.
- Small areas of alteration prevalent. Surface vegetation gone with compacted soils observed. Sounds of people regularly heard.

Administrative: Front country.

- Two-wheel drive vehicles predominant, but also four wheel drives and non-motorized, mechanized use.
- Basic maps, staff infrequently present (e.g. seasonally, high use periods) to provide on-site assistance
- Basic user regulations at key access points. Minimum use restrictions

Management Actions and Allowable Use Decisions

Recreation and Visitor Services:

- Facilitate targeted recreation opportunities:
  - Hunting allowed in conformance with MTFWP regulations.
  - Implement current travel management decisions.
- Maintain setting:
  - Restrict facilities development to Entrance Parking Loop area unless modified by RAMP.
  - Use on roads or certain non-motorized activities may be temporarily, seasonally or permanently curtailed as a result of identified emergent conditions or excessive resource damage.
- Health, safety, resource protection, user conflict resolution:
  - Close and restore all non-designated trails, improve designated trails to management standards
  - Trapping by permit only.
  - No wood cutting.
  - No target shooting.
- Special Recreation Permit criteria:
  - Until completion of the RAMP SRP applications will be considered on an individual basis. The BLM will provide SRPs consistent with 43 CFR 2932.26 and the goal of managing these lands for a variety of sustainable visitor experiences in mostly primitive and natural landscapes.

Other Programs:

- Surface Use Controls:
  - Oil and gas leasing, exploration and development would be allowed with an NSO stipulation
- Range Management:
  - Surface disturbing activities related to facility development and maintenance would be subject to mitigation guidelines.
- Fire and Fuels Management:
  - Area may be subject to fire and fuels management activities to restore and maintain forest health, reduce fire hazards, and maintain wildlife habitat
- Visual Resource Management:
  - Manage as Class II in back and middle country, Class III in front country area.

Yellowstone River Corridor Special Recreation Management Area – Clark's Fork of the Yellowstone, RMZ 2 (3182 acres, surface and minerals)

Implementation Decisions			
Management: • A recreation area management plan (RAMP) will be developed. • Specific SRP criteria will be developed in the RAMP. • Non-motorized, mechanized or un-mechanized multiple use trails may be developed as part of implementation level planning through a Recreation Area Management Plan (RAMP)	**Administrative:** • Designated uses for existing trails. • All motorized/mechanized use limited to specifically designated trails & roads only.	**Information and Education:** • A comprehensive sign plan including information kiosks and route designation would be developed and implemented as part of the RAMP for this SRMA.	**Monitoring:** • Assure objectives are being met and prescribed settings are being maintained. • Monitor implemented actions and evaluate

Mill Creek/Bundy Special Recreation Management Area

Management Objectives:	The goal is to manage these lands for a variety of sustainable visitor experiences in mostly primitive and natural landscapes concurrent with other management priorities. • Provide wildlife habitat • Protect historic, cultural, and scenic values. • Balance the widest range of beneficial uses with the least amount of degradation, possible without risking health and safety, and with a minimum of other undesirable or unintended consequences on other resources. • Provide dispersed recreation experiences.	
Outcomes		
Primary Activities: • Hiking • Running • Cross country skiing • Bird watching • Picnicking • Fishing • Exercising pets • Scenery and wildlife viewing • Yellowstone River access	**Experiences:** **Enjoying:** • Solitude • Family Recreation • Fishing • Exercise • Scenery • Escaping everyday responsibilities for awhile • having access to close-to-home outdoor amenities	**Benefits:** **Personal:** • Improved physical fitness • Restored mind from unwanted stress • Greater sense of overall wellness • Enhanced cultural resource stewardship ethic **Household and Community:** • Improved quality of life • Greater awareness of and appreciation for our natural landscapes • Greater appreciation for the area and outdoor-oriented lifestyle • Involvement in recreation and other land use decisions • Increased desirability as a place to live or retire. **Economic:** • Positive contributions to local-regional economic stability • Increased work productivity • Reduced health maintenance costs **Environmental:** • Increased resource stewardship and protection by communities

Mill Creek/Bundy Special Recreation Management Area

Setting Prescriptions

Physical:

- The area is Rural. The surrounding character of the landscape is considerably modified (20-40 acre ranchettes, communications towers and two private in-holdings within the boundaries). The most natural area occurs along the western edge of the SRMA with views of the urban/industrial core area of Billings easily accessible. The historic/rustic Will James cabin lies on the northern edge. Facilities include an unpaved parking lot, vault toilet and kiosk. One caretakers' residence could be allowed but could not disturb more than ½ acre nor change the VRM, Recreational Opportunity Spectrum (ROS) or ACEC Scenic values.

Social:

- Mostly small groups of 1-5 with occasional large group activities
- Could encounter 1-10 persons per day on weekends and 1-5 persons during week days.

Administrative:

- Day use only
- Closed to fireworks discharge
- OHV use limited to designated routes only
- Closed to driving off road/cross country.
- Compliance with terms of conservation easements

Management Actions and Allowable Use Decisions

Recreation and Visitor Services:

- Facilitate targeted recreation opportunities:
  - Implement current travel management decisions.
- Maintain setting:
  - Developments would be managed to VRM class III
- Health, safety, resource protection, user conflict resolution
  - Limited to OHV designations
  - Open to equestrian use
  - Open to rock climbing
  - Open to hang gliding
  - Open to hunting No fuel-wood collection
  - No fireworks
  - The area may be closed during high fire danger
- Special Recreation Permit criteria:
  - None

Other Programs:

- Surface Use Controls:
  - Oil and gas leasing, exploration and development would be allowed with an NSO stipulation
- Range Management:
  - Surface disturbing activities related to facility development and maintenance would be subject to mitigation guidelines.
- Fire and Fuels Management:
  - Area may be subject to fire and fuels management activities to restore and maintain forest health, reduce fire hazards, and maintain wildlife habitat
- Visual Resource Management:
  - Manage as VRM class III
- Cultural Resource Management
  - Large Native American events for traditional uses may be allowed under BLM authorization, if not in conflict with basic management

Mill Creek/Bundy Special Recreation Management Area

Implementation Decisions

Management:	Administrative:	Information and Education:	Monitoring:
Recreation and Visitor Services: • Facilitate targeted recreation opportunities: – A recreation area management plan (RAMP) will be developed. – May be divided in to RMZs during RAMP development. – Hunting allowed in conformance with MTFWP regulations. – Implement current travel management decisions. • Maintain setting: – Manage these lands for a variety of sustainable visitor experiences in mostly primitive and natural landscapes. This goal would allow BLM to provide dispersed recreation opportunities and ensure that visual quality characteristics reflect a predominantly primitive or natural landscape while providing a diversity of visitor experiences. • Health, safety, resource protection, user conflict resolution – Trapping permitted. • Special Recreation Permit criteria: – The BLM will provide SRPs for commercial outfitting and guiding (hunting) consistent with 43 CFR 2932.26 and the goal of managing these lands for a variety of sustainable visitor experiences in mostly primitive and natural landscapes. Outfitters and other recreational users will be required to use weed-free feed on BLM land for their livestock as a part of the integrated weed management program.	• All motorized/mechanized use limited to specifically designated routes	• A comprehensive sign plan including information kiosks and route designation would be developed and implemented as part of the RAMP for this SRMA.	• Assure objectives are being met and prescribed settings are being maintained. • Monitor implemented actions and evaluate

Pryor Mountain TMA Special Recreation Management Area

Management Objectives:

The goal is to manage these lands for a variety of sustainable visitor experiences in mostly primitive and natural landscapes concurrent with other management priorities.

- Provide wildlife habitat
- Protect historic, cultural, and scenic values.
- Balance the widest range of beneficial uses with the least amount of degradation, possible without risking health and safety, and with a minimum of other undesirable or unintended consequences on other resources.
- Provide dispersed recreation experiences.

Outcomes

Primary Activities:

- Hiking
- Running
- Cross country skiing
- Bird watching
- Picnicking
- Fishing
- Exercising pets
- Scenery and wildlife viewing
- Wild Horse viewing
- Caving
- camping

Experiences:

Enjoying:

- Solitude
- Family Recreation
- Fishing
- Exercise
- Scenery
- Escaping everyday responsibilities for awhile
- having access to outdoor amenities

Benefits:

Personal:

- Improved physical fitness
- Restored mind from unwanted stress
- Greater sense of overall wellness
- Enhanced cultural resource stewardship ethic

Household and Community:

- Improved quality of life
- Greater awareness of and appreciation for our natural landscapes
- Greater appreciation for the area and outdoor-oriented lifestyle
- Involvement in recreation and other land use decisions
- Increased desirability as a place to live or retire.

Economic:

- Positive contributions to local-regional economic stability
- Increased work productivity
- Reduced health maintenance costs

Environmental:

- Increased resource stewardship and protection by communities

Setting Prescriptions

Physical:

- The area is remote. The surrounding character of the landscape is a considerably natural in condition.

Social:

- Mostly small groups of 1-5 with occasional large group activities
- Could encounter 1-10 persons per day on weekends and 1-5 persons during week days.

Administrative:

- Day use and overnight use
- Closed to fireworks discharge
- OHV use limited to designated routes only
- Closed to driving off road/cross country.
- Compliance with terms of conservation easements and IMP

Management Actions and Allowable Use Decisions

Pryor Mountain TMA Special Recreation Management Area

Recreation and Visitor Services:

- Facilitate targeted recreation opportunities:
  - Implement current travel management decisions.
- Maintain setting:
  - Developments would be managed to VRM class III
- Health, safety, resource protection, user conflict resolution
  - Limited to OHV designations
  - Open to equestrian use
  - Open to rock climbing, caving
  - Open to hang gliding
  - Open to hunting
  - No fuel-wood collection
  - No fireworks
  - The area may be closed during high fire danger
- Special Recreation Permit criteria:
  - The BLM will provide SRPs for commercial outfitting and guiding (hunting) consistent with 43 CFR 2932.26 and the goal of managing these lands for a variety of sustainable visitor experiences in mostly primitive and natural landscapes. Outfitters and other recreational users will be required to use weed-free feed on BLM land for their livestock as a part of the integrated weed management program.

Other Programs:

- Surface Use Controls:
  - Oil and gas leasing, exploration and development would be allowed with an NSO stipulation
- Range Management:
  - Surface disturbing activities related to facility development and maintenance would be subject to mitigation guidelines.
- Fire and Fuels Management:
  - Area may be subject to fire and fuels management activities to restore and maintain forest health, reduce fire hazards, and maintain wildlife habitat
- Visual Resource Management:
  - Manage as VRM Class II inside ACECs and LWCs and VRM Class I inside WSAs. .

Pryor Mountain TMA Special Recreation Management Area

Implementation Decisions

Management:	Administrative:	Information and Education:	Monitoring:
Recreation and Visitor Services: • Facilitate targeted recreation opportunities: – A recreation area management plan (RAMP) will be developed. – May be divided in to RMZs during RAMP development. – Hunting allowed in conformance with MTFWP regulations. – Implement current travel management decisions. • Maintain setting: – Manage these lands for a variety of sustainable visitor experiences in mostly primitive and natural landscapes. This goal would allow BLM to provide dispersed recreation opportunities and ensure that visual quality characteristics reflect a predominantly primitive or natural landscape while providing a diversity of visitor experiences. • Health, safety, resource protection, user conflict resolution – Trapping permitted. – SRPs allowed	• All motorized/mechanized use limited to specifically designated routes	• A comprehensive sign plan including information kiosks and route designation would be developed and implemented as part of the RAMP for this SRMA.	• Assure objectives are being met and prescribed settings are being maintained. • Monitor implemented actions and evaluate.

Extensive Recreation Management Areas:

Mill Creek/Bundy Extensive Recreation Management Area (34,239 acres)	
Management Objectives	The goal is to manage these lands for a variety of sustainable visitor experiences in mostly primitive and natural landscapes concurrent with other management priorities. • Provide wildlife habitat • Protect historic, cultural, and scenic values. • Balance the widest range of beneficial uses with the least amount of degradation, possible without risking health and safety, and with a minimum of other undesirable or unintended consequences on other resources. • Provide dispersed recreation experiences.

Outcomes		
Primary Activities: • Hiking • hunting • Bird watching • Picnicking • Fishing • Exercising pets • Equestrian use • Scenery and wildlife viewing •Yellowstone River access	**Experiences:** Enjoying: • Solitude • Family Recreation • Hunting • Fishing • Exercise • Scenery • Escaping everyday responsibilities for awhile • having access to close-to-home outdoor amenities	**Benefits:** **Personal:** • Improved physical fitness • Restored mind from unwanted stress • Greater sense of overall wellness • Enhanced cultural and natural resource stewardship ethic Household and Community: • Improved quality of life • Greater awareness of and appreciation for our natural landscapes • Greater appreciation for the area and outdoor-oriented lifestyle • Involvement in recreation and other land use decisions • Increased desirability as a place to live or retire. **Economic:** • Positive contributions to local-regional economic stability • Increased work productivity • Reduced health maintenance costs **Environmental:** • Increased resource stewardship and protection by communities
Setting Prescriptions		

Physical:	Social:	Administrative:
•Mostly natural in appearance with structures limited to fences, cattle guards, and stock tank/ troughs. Signs limited to route designations.	• Mostly small groups of 1-5 with occasional large group activities • Could encounter 1-10 persons per day on weekends and 1-5 persons during week days.	•Two-wheel drive vehicles predominant, but also four wheel drives and non-motorized, mechanized use. •Basic maps, staff infrequently present (e.g. seasonally, high use periods) to provide on-site assistance •Basic user regulations at key access points. Minimum use restrictions •Rules are posted and use may be temporarily restricted due to permitted events or resource concerns due to weather. •Area accommodates multiple-use including grazing. • OHVs restricted to designated routes per travel management plan. • This area can be accessed in the front country area by ordinary highway vehicles; middle and backcountry areas are accessible by 4-wheel drive and ATVs, UTVs, and motorcycles. Land access can be restricted by private land ownership

Management Actions and Allowable Use Decisions

Recreation and Visitor Services:

- Facilitate targeted recreation opportunities:
  - Implement current travel management decisions.
- Maintain setting:
  - Developments would be managed to VRM Class III
- Health, safety, resource protection, user conflict resolution
  - Limited to OHV designations
  - Open to equestrian use
  - Open to rock climbing
  - Open to hang gliding
  - Open to hunting
  - No fuel-wood collection
  - No fireworks
  - The area may be closed during high fire danger
- Special Recreation Permit criteria:
  - None

Other Programs:

- Surface Use Controls:
  - Oil and gas leasing, exploration and development would be allowed with an NSO stipulation
- Range Management:
  - Surface disturbing activities related to facility development and maintenance would be subject to mitigation guidelines.
  - Fire and Fuels Management:
  - Area may be subject to fire and fuels management activities to restore and maintain forest health, reduce fire hazards, and maintain wildlife habitat
- Fire and Fuels Management:
  - Area may be subject to fire and fuels management activities to restore and maintain forest health, reduce fire hazards, and maintain wildlife habitat
- Cultural Resource Management
- - Large Native American events for traditional uses may be allowed under BLM authorization, if not in conflict with basic management
- Visual Resource Management:
  - Manage as Class II and Class III.

17 Mile Recreation Area (2,080 acres)

Management Objectives:	The goal is to manage these lands for a sustainable visitor experience in mostly primitive and natural landscapes concurrent with other management priorities. • Provide wildlife habitat • Protect historic, cultural, and scenic values. • Balance beneficial uses with the least amount of degradation, possible without risking health and safety, and with a minimum of other undesirable or unintended consequences on other resources. • Provide dispersed recreation experiences.

Management Actions and Allowable Use Decisions

Recreation and Visitor Services:

- Facilitate targeted recreation opportunities:
  - A recreation area management plan (RAMP) will be developed.
  - Hunting allowed in conformance with MTFWP regulations.
  - Implement current travel management decisions.
- Maintain setting:
  - Manage these lands for a variety of sustainable visitor experiences in mostly primitive and natural landscapes. This goal would allow BLM to provide dispersed recreation opportunities and ensure that visual quality characteristics reflect a predominantly primitive or natural landscape while providing a diversity of visitor experiences.
- Health, safety, resource protection, user conflict resolution
  - Trapping permitted.
- Special Recreation Permit criteria:
  - The BLM will provide SRPs for commercial outfitting and guiding consistent with 43 CFR 2932.26 and the goal of managing these lands for a variety of sustainable visitor experiences in mostly primitive and natural landscapes.

Other Programs:

Interdisciplinary plans would be developed only when and where necessary to address emerging issues affecting public lands users or resources.

- Surface Use Controls:
  - Oil and gas leasing, exploration and development would be allowed with an NSO stipulation
- Range Management:
  - Surface disturbing activities related to facility development and maintenance would be subject to mitigation guidelines.
- Fire and Fuels Management:
  - May be subject to closure during high fire danger
  - May be subject to fire and fuels management activities to restore and maintain rangeland health, reduce fire hazards, and maintain wildlife habitat.
- Visual Resource Management:
  - Manage as Class III

Horsethief Extensive Recreation Management Area (12,261 acres)

Management Objectives:	The goal is to manage these lands for a variety of sustainable visitor experiences in mostly primitive and natural landscapes concurrent with other management priorities. • Provide wildlife habitat • Protect historic, cultural, and scenic values. • Balance the widest range of beneficial uses with the least amount of degradation, possible without risking health and safety, and with a minimum of other undesirable or unintended consequences on other resources. • Provide dispersed recreation experiences.

Management Actions and Allowable Use Decisions

Recreation and Visitor Services:

- Facilitate targeted recreation opportunities:
  - A recreation area management plan (RAMP) will be developed.
  - Hunting allowed in conformance with MTFWP regulations.
  - Implement current travel management decisions.
- Maintain setting:
  - Manage these lands for a variety of sustainable visitor experiences in mostly primitive and natural landscapes. This goal would allow BLM to provide dispersed recreation opportunities and ensure that visual quality characteristics reflect a predominantly primitive or natural landscape while providing a diversity of visitor experiences.
- Health, safety, resource protection, user conflict resolution
  - Trapping permitted.
- Special Recreation Permit criteria:
  - The BLM will provide SRPs for commercial outfitting and guiding (hunting) consistent with 43 CFR 2932.26 and the goal of managing these lands for a variety of sustainable visitor experiences in mostly primitive and natural landscapes.

Other Programs:

- Surface Use Controls:
  - Oil and gas leasing, exploration and development would be allowed with an NSO stipulation
- Range Management:
  - Surface disturbing activities related to facility development and maintenance would be subject to mitigation guidelines.
- Fire and Fuels Management:
  - Area may be subject to fire and fuels management activities to restore and maintain forest health, reduce fire hazards, and maintain wildlife habitat
- Visual Resource Management:
  - Manage as Class III.

Asparagus Point Recreation Management Area (158 acres)

Management Objectives:	The goal is to manage these lands for a variety of sustainable visitor experiences in mostly primitive and natural landscapes concurrent with other management priorities. • Provide wildlife habitat • Protect historic, cultural, and scenic values. • Balance the widest range of beneficial uses with the least amount of degradation, possible without risking health and safety, and with a minimum of other undesirable or unintended consequences on other resources. • Provide dispersed recreation experiences.

Management Actions and Allowable Use Decisions

Recreation and Visitor Services:

- Facilitate targeted recreation opportunities:
  - A recreation area management plan (RAMP) will be developed.
  - Hunting allowed in conformance with MTFWP regulations.
  - Implement current travel management decisions.
- Maintain setting:
  - Manage these lands for a variety of sustainable visitor experiences in mostly primitive and natural landscapes. This goal would allow BLM to provide dispersed recreation opportunities and ensure that visual quality characteristics reflect a predominantly primitive or natural landscape while providing a diversity of visitor experiences.
- Health, safety, resource protection, user conflict resolution
  - Trapping permitted.
- Special Recreation Permit criteria:
  - The BLM will provide SRPs for commercial outfitting and guiding (hunting) consistent with 43 CFR 2932.26 and the goal of managing these lands for a variety of sustainable visitor experiences in mostly primitive and natural landscapes.

Other Programs:

- Surface Use Controls:
  - Oil and gas leasing, exploration and development would be allowed with an NSO stipulation
- Range Management:
  - Surface disturbing activities related to facility development and maintenance would be subject to mitigation guidelines.
  - Close to grazing the floodplain north and east of the access road. (approximately 26 acres)
- Fire and Fuels Management:
  - Area may be subject to fire and fuels management activities to restore and maintain forest health, reduce fire hazards, and maintain wildlife habitat
- Visual Resource Management:
  - Manage as Class III.

South Hills Recreation Management Area (1,357 acres)

Management Objectives:	The goal is to manage these lands for a variety of sustainable visitor experiences concurrent with other management priorities. • Provide recreational opportunities within the Urban Interface area. • Minimize conflicts with adjacent subdivisions. • Provide dispersed recreation experiences. • Mitigate soil erosion on steep slopes. • Provide wildlife habitat.

Management Actions and Allowable Use Decisions

Recreation and Visitor Services:

- Facilitate targeted recreation opportunities:
  - A recreation area management plan (RAMP) will be developed.
  - Hunting allowed in conformance with MTFWP regulations.
  - Implement current travel management decisions.
- Maintain setting:
  - Manage these lands for a variety of sustainable visitor experiences in an urban interface environment. This goal would allow BLM to provide dispersed recreation opportunities and reduce conflicts with adjacent subdivision.
- Health, safety, resource protection, user conflict resolution
  - Trapping permitted.
  - Firearms prohibited.
  - OHVs limited to two-wheeled motorcycles
  - Day Use Area only.
- Special Recreation Permit criteria:
  - The BLM will provide SRPs for commercial outfitting and guiding (hunting) consistent with 43 CFR 2932.26 and the goal of managing these lands for a variety of sustainable visitor experiences in mostly primitive and natural landscapes.

Other Programs:

- Surface Use Controls:
  - Oil and gas leasing, exploration and development would be allowed with an NSO stipulation
- Range Management:
  - Allotment 5517, Southland Estates
  - Surface disturbing activities related to facility development and maintenance would be subject to mitigation guidelines.
- Fire and Fuels Management:
  - Area may be subject to fire and fuels management activities to restore and maintain forest health, reduce fire hazards, and maintain wildlife habitat
- Visual Resource Management:
  - Manage as Class III.
- Lands and Realty
  - Valid ROW(s) for waterline(s)
  - New utility ROWs would be underground.

Special Recreation Management Areas (SRMA), Extensive Recreation Management Areas (ERMA) by Alternatives

SRMAs	Alternative A	Acres	Alternative B	Acres	Alternative C	Acres	Alternative D	Acres
Four Dances Natural Area ACEC	X	784	X	784	X	784	X	784
Sundance Lodge Recreation Area	X	387	X	387	X	387	X	387
Shepherd Ah-Nei		0	X	4,680	X	4,680	X	4,680
Acton Recreation Area		0	X	3,697	X	3,697	X	3,697
Asparagus Point		0		0	X	158	X	158
Bundy Island		0	X	98		0		0
Horsethief TMA		0			X	12,261	X	12,261
Mill Creek/Bundy TMA		0		0	X	34,239		0
Pryor Mountain TMA		0	X	81,277	X	81,277	X	81,277
17 Mile		0		0	X	2,080		0
South Hills TMA		0		0	X	1,357	X	1,357
Yellowstone River Corridor		0		0	X	6,311	X	6,311
# SRMAs / Acres	2 SRMAs / 1,171 acres		6 SRMAs / 90,783 acres		11 SRMAs / 147,181 acres		9 SRMAs / 110,862 acres	
ERMAs								
Shepherd Ah-Nei	X	4,680		0		0		0
Acton Recreation Area	X	3,697		0		0		0
South Hills TMA	X	1,357	X	1,357		0		0
Horsethief TMA	X	12,261	X	12,261		0		0
17 Mile	X	2,080	X	2,080		0	X	2,080
Asparagus Point	X	158	X	158		0		0
Yellowstone River Corridor		0	X	6,213		0		0
Mill Creek Area		0		0		0	X	34,239
# ERMAs / Acres	7 ERMAs / 105,460 acres		5 ERMAs / 7,668 acres		0 ERMAs / 0 acres		2 ERMAs / 36,319 acres	
Non-Designated Areas (public lands not identified as SRMAs or ERMAs)	All lands not designated as SRMAs will be managed as ERMAs (327,518 acres)		327,421 acres		288,495 acres		322,418 acres	

Appendix O:
Billings Field Office Travel Management Plan

A section of the Billings and Pompeys Pillar National Monument Resource Management Plan

UNITED STATES DEPARTMENT OF THE INTERIOR, BUREAU OF LAND MANAGEMENT

The Bureau of Land Management (BLM) manages travel and transportation on public lands in accordance with existing laws, regulations and policies. This Travel Management Plan addresses 434,154 surface acres of BLM administered public lands located in south central Montana and 4,298 acres in Big Horn County, Wyoming which are managed by the Billings Field Office.

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O. Billings Field Office Travel Management Plan

O.1 Introduction

Comprehensive travel management addresses all resource use aspects, such as recreational, traditional, casual, agricultural, commercial and educational) and accompanying modes and conditions of travel on public lands. During the development of the Resource Management Plan (RMP), the Billings Field Office (BiFO) of the Bureau of Land Management (BLM) utilized a systematic process to collect and compile data necessary for the thorough evaluation, analysis and/or designation of motorized and non-motorized routes (using the Route Evaluation Tree Process©). The process included a combination of utilizing resource data, geospatial analysis, route inventories and interdisciplinary team assessments/evaluations.

Stakeholder input was sought at the beginning of the route designation process through a series of public travel management workshops. The BLM also worked with Cooperating Agencies and a Resource Advisory Council (RAC)-appointed sub-committee.

O.2 Background

The BLM manages travel and transportation on public lands in accordance with existing laws, regulations and policies. Program policy guidance provides direction to the field for management and administration of all aspects of the travel management program. This guidance is developed at the National, State and District Office level, and includes regulations, manuals, handbooks, Strategic Action Plans, Instruction Memorandums and Information Bulletins. The Billings Field Office Travel Management program will support the accomplishment of management objectives for all resource programs. Within this context, the Billings Field Office will identify a transportation system that supports the agency's mission, management of land and resource programs and their goals and objectives, and provides for appropriate public and administrative access. The BLM's present transportation network is largely inherited, created from past resource uses and public access patterns.

The Billings Field Office will use a systematic process that considers the unique resource issues and social environments within each individual Travel Management Area (TMA) and integrate concepts of habitat connectivity into OHV planning to minimize habitat fragmentation.

Since comprehensive travel management addresses all resource use aspects (such as traditional, recreational, casual, agricultural, commercial, and educational) and accompanying modes and conditions of travel on public lands, it is not limited solely to motorized or off-highway activities.

O.3 Management Considerations and Assumptions

In general, the Billings Field Office will manage access to balance public use, protect public land resources, promote safety for all public land users, and minimize conflicts among users. It will accomplish this by the use of partnerships with other land-managing agencies, local governments, communities, and interest groups through a balanced approach, so as to protect public lands by minimizing impacts and resources while providing opportunities for the safe use and enjoyment for all. Specific considerations include the following:

- Whereas a comprehensive interdisciplinary approach to travel and transportation management incorporates the concerns and needs of multiple programs, the recreation program has a specific need to recognize and manage motorized recreational use of off-highway vehicles (OHVs) and non-motorized travel, such as foot, equestrian, and non-motorized mechanical travel.

- The planning process must consider and address the full range of various modes of travel on public lands, not just motorized access needs. An understanding of the regional supply and demand of recreational opportunities and access needs is important in designating a system of roads, primitive roads, trails, and areas for specific recreation and other uses.

- Travel and transportation management (TTM) is a comprehensive approach to on-the-ground management and administration of travel and transportation networks of roads, primitive roads, trails, and areas. TTM consists of implementation of travel and transportation planning decisions, route inventory and mapping, signing area and route designations, education and interpretation, law enforcement, easement acquisition, monitoring activities, and other measures necessary for providing access to and across public lands for a wide variety of uses (including recreational, traditional, authorized, commercial, educational, and for other travel and transportation purposes), as well as all forms of motorized and non-motorized access or use, such as foot, pack stock or animal-assisted travel, mountain bike, off-highway vehicle, and other forms of transportation.

- A specific management consideration is in regards to Revised Statute 477 claims:

  Section 8 of the Mining Act of 1866 provided that: "… *and be it further enacted , that the Right-of-Way for the construction of highways over public lands, not reserved for public uses, is hereby granted."* The statute was self-enacting, that is, rights being established by "construction" of a "highway" on unreserved public lands, without any form or acknowledgement by the Federal Government. This section of the statute was later re-codified as Revised Statute 2477. R.S. 2477 was repealed by passage of FLPMA on October 21, 1976 with a savings provision for rights established prior to repeal. However, it was unclear which rights-of-ways had actually been established.

- The existing motorcycle routes in the Elk Basin Area within Sub-Region III (Silver Tip) of the Cottonwood/Weatherman Draw TMA would continue to be available for motorcycle use and decisions are deferred until the Cottonwood/Weatherman Draw TMA Implementation Plan is completed, if not already addressed through other RMP

implementation actions relating to ongoing resource concerns (sage grouse habitat, soil erosion concerns, etc.).

A travel management plan is not intended to provide evidence bearing on or addressing the validity of any R.S. 2477 assertions. R.S. 2477 rights are now determined through a legal process that is entirely independent of the BLM's planning process. Consequently, BLM does not, and cannot, take into consideration R.S. 2477 assertions or evidence. Travel management planning is founded on an independently determined purpose and need that is based on resource uses and associated access to public lands and waters. At such time as a court decision is made on R.S. 2477 assertions, the BLM will adjust its travel routes accordingly, if necessary.

- Motorized travel on BLM-administered land (outside of established TMAs) would be limited to existing roads and trails. Measureable limits of change that would occur to the resource as a result of these travel modes would include indicators based on Land Health Standards, accelerated soil erosion and/or other resource concerns and potential for natural rehabilitation. Site specific travel planning would be initiated if those limits are exceeded.
- Modifications to a transportation network (routes, re-routes or closures) in the planning area where travel is limited to existing roads and trails may be made through activity-level planning.
- Cooperatively develop public outreach programs to promote trail etiquette, environmental ethics and a responsible-use stewardship ethic (e.g., Tread Lightly, Leave No Trace, etc.).
- BLM would continue to coordinate with MT FWP in the Block Management program, or other access agreements with other landowners, as appropriate. Designated motorized routes would conform with seasonal travel limitations, based on annual block management agreements, as determined by the authorized officer on a case-by-case basis
- Administrative access would limit motorized use to BLM-authorized use only. BLM employees, permittees, contractors, personnel from other agencies and other motorized access needs authorized by the authorized officer, would be allowed for resource management, maintenance, inventory, monitoring, or compliance purposes. Public use on administrative access routes would be limited to non-motorized access.
- Motorized wheeled cross-country travel to conduct BLM-authorized activities would require prior authorization
- Upon project completion, roads used for commercial or administrative access on BLM-administered lands would be reclaimed, unless the route provides specific benefits for public access, minimizes impacts to the resource and would be considered on a case-by-case basis.

- The BLM may close or restore unauthorized, user created roads and trails to prevent resource damage.
- Motorized off-road travel would be allowed for any military, fire, search and rescue, or law enforcement vehicle for emergency operations.
- Special recreation permits for motorized events, competitive events, or organized group activities would be considered and addressed through site-specific analysis.
- Motorized off-road big game retrieval would be authorized by the Field Manager on a case-by-case basis for individuals with a disabled hunter access permit (issued by FWP). Stipulations or limitations would be included in the authorization.
- Oil and gas activities would comply with all motorized vehicle use and travel plan restrictions, including seasonal restrictions and areas closed to motorized travel. (CSU).
- By BLM Manual 6330, WSAs do not allow for new surface disturbances and there is no cross-country OHV use. Use is restricted to the actual tread width.
- BLM would manage to reduce open road densities in big game winter and calving ranges where they exceed 1.0 miles/square mile.
- Snowmobile use in the planning area would be allowed, except where restricted, and would subject to the following restrictions: avoid locations where wind or topographic conditions may have reduced snow depth and create situations where damage to vegetation or soils would occur, or where vegetation is taller than the protective snow cover. Ecologically sensitive areas would be closed to snowmobiling if resource damage caused or exacerbated by snowmobile activity is found to be occurring in these areas.
- Where off-highway vehicles are causing or would cause considerable adverse effects upon soil, vegetation, wildlife, wildlife habitat, cultural resources, historical resources, threatened or endangered species, wilderness suitability or other authorized uses, or other resources, the affected areas would be immediately closed to the type(s) of vehicle causing the adverse effect until the adverse effects are eliminated and measures implemented to prevent recurrence.
- Not all routes would be designated through the RMP. Some routes lie within 149352.6 acres of lands which are outside of the Travel Management Areas (282404.5 acres) and which are deferred until after the TMAs are acted on (within 5 years of the RMP being signed) since these have a lower priority in management concerns. These routes are managed as “existing” and will not be evaluated in this Resource management Plan. The discussion which follows addresses only the routes, areas, and impacts on the lands within the TMAs.
- A selected number of single-track motorized trails in Elk Basin were designated solely for the use by Motorcycles and were analyzed through a site-specific

NEPA process. The remainder of the area and a multitude of single-track motorcycle trails are currently under review for Sage- Grouse management considerations, and the ultimate decision on all of these routes will be set by these considerations and addressed through the Cottonwood/Weatherman Draw TMA Implementation Plan.

- Non-motorized recreational trails would be considered during the development of SRMA management plans and travel management plans (refer to Recreation/Visitor Services section).

Table O-1: RECREATION EFFECTS MATRIX – GROUND BASED ACTIVITIES

> Recreation Activity > ↓ Factors of interest to resource managers* ↓	Hiking/back-packing, trail running	Horseback riding, horse-packing	Mountain biking	Motorcycle riding (off-pavement)	4-wheeled OHV riding
***Weight* applied to physical & biological setting (affects soil compaction potential)**	Weight of hiker, +up to 60 lb pack on extended trips	Weight of rider, +pack ~100 lbs, +horse ~900-1200 lbs	Weight of rider & day pack, +bicycle ~25-40 lbs	Weight of rider, +motorcycle~175-275 lbs +any extra gear or supplies	Weight of rider, +OHV ~400-700 lbs +any extra gear or supplies
***Power* applied to physical & biological setting (affects soil displacement potential)**	1 "human power"	1 horsepower	1 "human power"	25-55 horsepower	30-60 horsepower
Estimated *speed* range (can affect wildlife, other recreationists, distance traveled)	2-4 mph walking/hiking ~10 mph running	3-5mph	5-25 mph, mostly slower uphill, can be quite fast downhill	Typically 15-35 mph Capable of 70 mph+ Varies with trail/road conditions	Typically 10-30 mph Capable of 70 mph+ Varies with trail/road conditions
Daily Trip Length	~1-10 miles	~4-15 miles	~10-30 miles	~25-50 miles	~25-50 miles
Track Width Trail Width Standards	12"-24"	18"-24"	~4" 18"-24"	~6" 24"	~48" 48"- 60"
Interface with, and effects on physical and biological setting	2 lug sole hiking boots, may use 1-2 trekking poles. Footfalls, pole tip placements	4 horse hooves, can apply locally heavy impacts and pressure to trail substrate	2 tires ~3" wide, ~4" track, roll across terrain. Can lose traction/skid under power or braking, especially on slopes or in corners	2 tires ~5" wide, ~6" track, roll across terrain. Can lose traction/skid under power or braking, especially on slopes or in corners	4 tires 7-12" wide, ~48" track, roll across terrain. Can lose traction/skid under power or braking, especially on slopes or in corners
Emissions and waste products	Human waste if not managed properly. Potential litter/ garbage/fire rings	Human waste if not managed properly. Potential litter/ garbage/fire rings Horse dung and urine	Human waste if not managed properly. Potential litter/ garbage/fire rings	Human waste if not managed properly. Potential litter/garbage/fire rings Exhaust gases (CO, CO^2, NOX), potential for spilled or leaked fuel & lubricants Motor sounds	Human waste if not managed properly. Potential for litter/garbage/fire rings Exhaust gases (CO, CO^2, NOX), potential for spilled or leaked fuel & lubricants Motor sounds

*These factors affect average *per capita* resource impacts that popular forms of wildland recreation incur in recreation settings. These factors also help guide decisions on where each kind of use can be accommodated, visitor capacity and the level of site hardening and mitigation necessary to protect resources.

O.4 Route Designation Process – Overview

The Route designation process was broken into two separate components: a designated non-motorized trail system –found throughout the FO, and the designated motorized system – those vehicle routes within TMAs. The BLM recognizes that additional routes of both kinds are located throughout the FO which have not been inventoried and has included steps for modifications to the travel system if necessary.

A specific note is included here that all designated motorized routes, whether open or restricted (closed to all motorized use or for only administrative use purposes) are also available for non-motorized travel, whether designated as non-motorized trails or not.

O.4.1 Developing and Defining Travel Management Areas (TMAs)

The purpose of delineating TMAs is to provide more locale-specific travel management guidance to be considered during the route evaluation, designation and implementation. This process is designed to improve the BiFO's ability to protect various resource values by minimizing impacts and provide a more balanced range of motorized and non-motorized opportunities throughout the planning area.

The RMP would establish 11 TMAs within the planning area. Specific management objectives were defined for each TMA, consistent with the overall desired outcomes for travel management. After evaluating routes within each TMA (see route evaluation/assessment section below), consistent with the management objectives, acceptable modes and conditions of travel for each TMA were identified in the RMP as allowable uses. However the travel-specific decisions (route designations) are implementation-level decisions. The decisions for each of the 11 individual Travel Management Areas are considered to be 11 separate decisions. Travel management outside of the 11 TMAs would continue to be limited to existing roads and trails and in accordance with the RMP ROD until specific designations of roads and trails can be made in these areas within five years of the ROD being signed.

In developing and defining the TMAs, the following components were addressed:

a. Management units developed in the plan;

b. Consistency with resource program goals and objectives;

c. Primary modes of travel;

d. Objectives for allowing travel in the defined area;

e. Setting characteristics that are to be maintained (including recreation opportunity system and VRM settings); and

f. Areas with large, intact blocks of public land currently accessible to the public.

O.4.2 Route Inventory

The BiFO began collecting route inventory information in 2005, in an effort to establish a route baseline for use in the planning process. The BiFO used a variety of methods to inventory existing routes/ways within the planning area for consideration, including digitized route information while traveling on off-highway vehicles or by foot using GPS, other data provided by BLM staff, map and orthophoto data and staff and cooperator knowledge of existing routes. Digitized lines were overlaid with various road layers (county, USGS 1:100 data) and other geospatial data-sets (e.g., range improvement fenceline data, ROW corridors, seismic lines, overhead powerlines, etc.) and line discrepancies were reviewed and resolved. Route data was then verified and reviewed by an interdisciplinary team in preparation of the next phase - route evaluation/assessment process.

O.4.3 Route Evaluation/Assessment

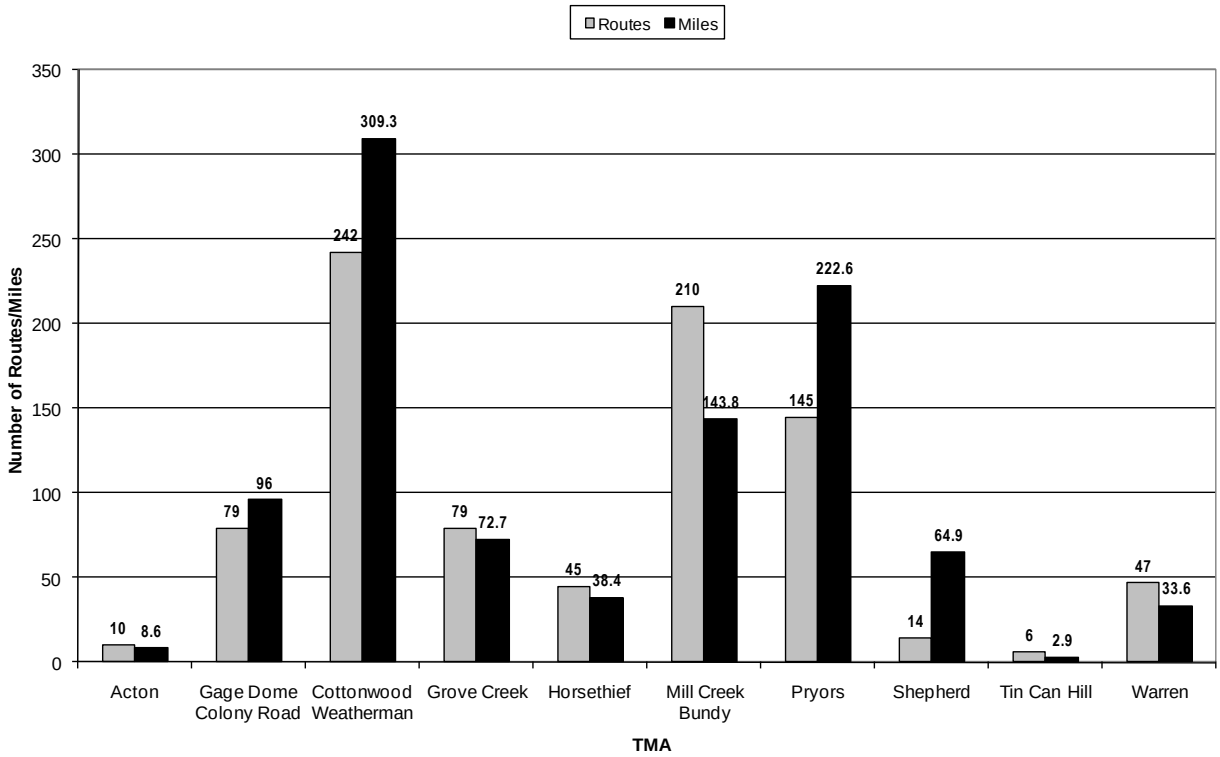
The Route Evaluation Tree Process© (Advanced Resource Solutions, Inc.) and its associated software/database is a tool designed to assist land management agencies with the systematic, neutral collection and compilation of data necessary for the thorough evaluation, analysis and/or designation of motorized and non-motorized routes. The process addressed a range of issues regarding travel planning, including: planning policies and regulations, sensitive resources (biological, physical and cultural), commercial access needs, and recreational access preferences. Additionally, the Route Evaluation Tree Process© is designed to integrate the desired outcomes (goals and objectives) that were developed based on the issues and opportunities unique to the specific travel planning (geographic) area, with the range of management options to work toward achieving those desired outcomes. The process also allows for the incorporation of stakeholder comments to be addressed as part of the route evaluations/assessments.

In order to effectively address the many facets of route evaluation and transportation planning, the Route Evaluation Tree Process© is divided into a series of assessment tasks/steps which provides for systematic collection of data needed to evaluate and designated routes through an interdisciplinary assessment.

The process utilizes a Route Evaluation Tree program that helps guide the interdisciplinary team through a series of questions and associated project-specific drop-down menus that assist with addressing compliance with a variety of applicable statutory requirements that principally address the need to protect identified resource values, as well as commercial/administrative access needs and public recreational access issues. The questions and menus allow both for narrowly focused route-by-route assessments, as well as landscape-scale assessments in an effort to consider the broader route network and cumulative effects.

The process incorporates consideration and selection of measures designed to eliminate, minimize or mitigate resource impacts, based on resource values present. The result of the process is the creation of different route network alternatives that utilize different thresholds of acceptable impact to address the identified issues. The information considered and evaluated for each route is captured in a data-base and used for analysis.

Figure 4.1a: Summary of Route/Miles by TMA



O.5 Developing and Defining Non-motorized Trail System (inventory, evaluation/assessment process)

As noted in the Introduction (Section O.1), above, the BLM used a variety of information sources to identify and designate non-motorized trails. The following processes were use:

- A number of routes were identified using the Motorized Travel inventory steps (discussed below in Section O.6.*). In these cases, the decision by the Interdisciplinary Team conducting the motorized route evaluation was to limit the use of these routes to non-motorized travel or a combination of administrative access through motorized travel with general public access as being non-motorized. Most of these routes were not specifically designated for non-motorized use, but are only recognized as being available for this type of use, since a full evaluation of the impacts for this type of travel was not done.

- Other routes were identified through a review of public comments– these routes were in many cases existing and in some cases user-created. Some routes have been identified and publicized through public media sources.

- Still other routes had been developed by the BLM and its partners during the course of implementing the previous RMP but had not been previously formally included in a comprehensive Travel and Transportation system.

O.5.1 Designated Non-Motorized Trails in the Billings Field Office

Table O-2: Designated Exclusively Non-motorized Trails in the Billings Field Office

Designated Exclusively Non-motorized trails in the Billings Field Office			
Location	**Location**	**Location**	**Location**
Sundance Lodge Recreation Area #	East Loop Trail West Loop Trail River Trail	SD 001 SD 002 SD 003	0.9 miles 2.8 miles 0.2 miles
Four Dances Natural Area/ACEC #	South Loop Trail River Loop Trail North Loop Trail Bridge Access Trail Cut Across Trail	FD 001 FD 002 FD 003 FD 004 FD 005	1.4 miles 1.2 miles 3.2 miles 0.3 miles 0.4 miles
Shepherd Ah-Nei Recreation Area #	West Loop North Loop South Loop	SA 001 SA 002 SA 003	2.8 miles 1.2 miles 1.4 miles
Weatherman Draw ACEC	All trails are Un-named and all are inventoried routes designated only for non-motorized use by the public. * (closed/limited for vehicles)	WD 001 (CW10009) WD 002 (CW 1003) WD 003 (CW 1001) WD 004 (CW 1004) WD 005 (CW 1005) WD 006 (CW 1016) WD 007 (CW 1002) WD 009 (CW 1012) WD 010 (CW 1007) WD 011 (CW 1013) WD 012 (CW 1014) WD 013 (CW 1015) WD 014 (CW 1010)	0.2 miles 4.9 miles 3.8 miles 1.5 miles 1.7 miles 1.3 miles 1.8 miles 0.4 miles 2.8 miles 0.2 miles 0.2 miles 0.4 miles 1.0 miles
Acton Recreation Area #	Roller Coaster Trail Tumbleweed Trail XXX Trail Upper Run Trail T1 Trail Wits Run Trail Flow Downhill Input Trail No Return Trail Old Southeast Rd Trail Black Haul Trail Explorer Trail Southwest trail	AC 2002 AC 2001 AC 2003 AC 2004 AC 2005 AC 2008 AC 2006 AC 2007 AC 2009 AC 2010 AC 2011 AC 2012	2.0 miles 1.4 miles 1.8 miles 1.2 miles 3.2 miles 0.5 miles 0.5 miles 0.3 miles 0.4 miles 2.4 miles 0.5 miles 2.1 miles 1.8 miles
Meeteetse Spires ACEC/LWC Trails	Face of the Mountain Trail ** Meeteetse Canyon Trail (*closed road)	MT 001 MT 002 (GC1059, GC 1060, GC 201)	0.8 miles 1.1 miles

Lilly Pad Lake Trail #	Lilly Pad Lake Trail		0.6 miles
Pryor Mountains Area	Big Sky Trail Bear Canyon Trail Douglas Fir Trail Rocky Juniper Trail Connector Trail (* closed ex-vehicle route)	PM 1001 (PM 1035) PM 1002 (PM 1068 & PM 1070) PM 1003 (PM 1033) PM 1004 PM 1076	0.7 miles 3.4 miles 0.5 miles 1.5 miles 1.5 miles
Asparagus Point Recreation Area #	Point Trail	AS 001	0.4 miles
Twin Coulee WSA	FS Trail 650	TCWSA 1001	0.3 miles
Big Horn Tack-on WSA	Mystery Cave Trail Royce Cave Trail Sykes Cave Trail	BHWSA 001 BHWSA 002 BHWSA 003	0.7 miles 0.7 miles 1.0 miles
Pryor Mountains WSA	Turkey Flat Trail	PMWSA (PM 1004)	2.4 miles
Bad Canyon LWC	River Trail	BC 1001	5.9 miles
Burnt Timber LWC	Demijohn Flat Trail (* closed ex-vehicle route)	BT 001 (PM 1019, PM 1022, PM 1021)	8.2 miles
Pompeys Pillar National Monument #	Interpretation Trail Walking Trail 1 Walking Trail 2	PPNM 1001 PPNM 1002 PPNM 1003	0.2 miles 0.1 miles 0.2 miles
TOTAL	**52 separate Trails**	**74.9 miles**	

1. (Parenthesis) denotes Route number of motorized trails inventoried as part of the Billings Field Office Travel Inventory. Route inventory files available.
   ** denotes Jurisdictional Transfer Case File #102125) between BLM and FS which established trail.
2. * denotes motorized roads closed to motorized use and limited to non-motorized use use or open for administrative access purposes only.
3. # denotes Trails built by BLM and its partners specifically as non-motorized prior to the RMP
4. For location maps of the non-motorized trails, please see ****.
5. Note that ALL motorized routes shown on the TMA maps either "closed" or "Admin use only" are also available for use for non-motorized travel, as are also any routes shown as "open" for motorized vehicle use. The routes shown in this table are specifically identified here as **exclusively** for non-motorized travel.

O.5.2 Impact Analysis Section

The impact analysis for motorized travel management, as presented in this Appendix, divided into two main parts. The first part describes environmental consequences associated with proposed management in RMP alternatives for the Billings Field Office overall (referred to as RMP level decisions). The second part describes the effects to specific resources from the site-specific travel plan alternatives (implementation decisions) for the 11 Travel Management Areas. Maps depicting travel routes by alternative, by TMA, are included in the map section of this RMP.

Direct impacts are caused by an action and occur at the same time and place as the action. Indirect impacts are caused by the action and occur later or farther away but are still reasonably foreseeable. Cumulative impacts are the effects on the environment that result from the incremental impact of the action when added to other past, present, or reasonably foreseeable future actions, regardless of what agency (federal or nonfederal) or person undertakes such other actions.

Impacts are also described as to their context, intensity, and duration. Context generally refers to the geographic extent of impact (localized or widespread). Impact duration refers to how long an

impact would last. Unless otherwise stated for any particular impact topic, short-term impacts would occur with five years of implementing the Plan, often during construction and recovery, while long-term impacts would occur beyond five years, often from operations. Impact intensity is the magnitude or degree to which a resource would be beneficially or adversely affected. The criteria used to rate the intensity of the impact for each impact topic are as follows:

Negligible: Impacts on travel and access would not be noticeable as there would be no discernible effect on the number or miles of routes designated as open for all uses, restricted to certain types of uses or seasonally or completely closed. While a few roads or trails could be improved or upgraded, overall road and trail conditions would essentially remain the same.

Minor: Impacts on travel and access would be slightly noticeable in certain areas, although there would no substantive effect on the overall miles of routes designated as open, restricted, or completely closed throughout the Planning Area. While numerous roads and trails could be improved or upgraded, these would be site specific while the condition of most roads and trails would essentially remain the same.

Moderate: Impacts on travel and access would be evident in many portions of Planning Area due to the overall miles of routes designated as open, limited in use, or completely closed for any number of uses. Changes in road and trail conditions would be noticeable in certain portions of the Planning Area due to road and trail improvement or upgrades.

Major: Impacts on travel and access would be extensive throughout the Planning Area due to the overall miles of routes designated as open, limited in use, or completely closed for any type of use. Substantial numbers/miles of roads and trails could be improved or upgraded, resulting in a noticeable change in road and trail condition throughout the Planning Area. The following Appendix Sections 5.3 and 5.4 describes those environmental consequences associated with proposed management in RMP alternatives for the Billings Field Office overall (referred to as RMP level decisions) predicted to occur from implementing the alternatives for non-motorized travel presented in Chapter 2.

O.5.3 Resource Management Plan Level Analysis for Non-motorized Travel

In dealing with non-motorized travel decisions, the entire Field Office public lands were evaluated (434,154 acres). This is due to the location and number of existing routes already constructed and/or being used but not having been documented.

O.5.4 Alternative A – No Action Alternative

O.5.4.1 Proposed Actions

Of the 434,154 acres of public lands in the BiFO, non-motorized travel would be permitted anywhere in the FO, with a total of 35.4 miles of trails specifically designated for non-motorized

use at this time. However, a Field Office-wide and Comprehensive Travel and Transportation system has not been developed. Trail development has been on an ad-hoc basis and not proactive. The existing trails already constructed (Table O-2) would continue to be used. Additionally, all motorized routes are also available for non-motorized use. All routes which are restricted for vehicle use (closed or administrative use only) are also available for non-motorized use. Some routes may be completely rehabbed and eliminated from the route inventory if resources conditions warrant.

O.5.4.2 Consequences

The miles of routes designated have been in existence for some time, with the 35.4 miles of trails constructed by BLM and its partners having been addressed in site specific NEPA analysis, but the others not having been considered for non-motorized uses. A pro-active and systematic approach to route management would not occur with the inevitable consequences: Conflicts would continue to occur on routes "claimed" by different user types; Users could continue to market, use and develop their own preferred routes with little or no regard for resource concerns.

O.5.4.3 Alternative B, C, D.

In all Alternatives, the routes designated for non-motorized use have been in existence for some time, with the 35.4 miles of trails constructed by BLM and its partners having been addressed in site specific NEPA analysis and all of the other routes inventoried by an interdisciplinary BLM staff through the route evaluation process.

Under all these Alternatives, all the routes identified in Section O.5.1 would be designated for the exclusive use as non-motorized trails. Of the 434,154 acres of public lands in the BiFO, non-motorized travel would be permitted anywhere in the FO, with a total of 73.4 miles of trails specifically designated for non-motorized use.

O.5.4.4 Proposed Actions

On all 434,154 acres of BLM administered public lands in the BiFO, non-motorized travel cross country by any means would be allowed, with restrictions only on the lands within WSAs (28,631 acres). All vehicle routes, regardless of designation, would also be available for use for non-motorized travel. A process for evaluation and designation of further routes for non-motorized travel is in place within the eleven (11) TMAs and all of these areas would have site specific implementation level decisions. The lands outside of the TMAs would continue to have individual decisions on specific routes made on an as-need basis.

O.5.4.5 Consequences

There would be a comprehensive and systematic process for the inventory, evaluation, establishment and management of a designated non-motorized component of a Travel Plan for most, but not all of the BiFO. The lands not included in the Travel Planning process do have in some cases trail systems, but much of these lands are isolated and inaccessible parcels with limited or no visitation.

O.6 Impact Analysis for Motorized Travel Management

The impact analysis for motorized travel management, as presented in this Appendix, is divided into two main parts. The first part describes environmental consequences associated with proposed management in RMP alternatives for the Billings Field Office overall (referred to as RMP level decisions). The second part describes the effects to specific resources from the site-specific travel plan alternatives (implementation decisions) for the 11 Travel Planning Areas. Maps depicting travel routes by alternative, by TPA, are included in the map section of this RMP.

For a detailed discussion of the Impact Analysis descriptions (direct and indirect, context, intensity, and duration), please refer to Section O.5.2, above.

O.6.1 Resource Management Plan Level Analysis

Of the 434,154 acres of public lands within the BiFO, this plan would deal with motorized travel management decisions within eleven separate areas (Travel Management Areas), totaling 282,404.5 acres. The rest of the BiFO, totaling approximately 149,352.6 acres, would be deferred for no more than 5 years once the ROD is signed. Having management decisions on the Travel Management Areas is a high priority, while the deferred lands are mostly inaccessible and isolated parcels with no motorized travel issues.

A specific note for readers of this document is that, in the course of conducting evaluations, route numbers and names shown on maps in this RMP are for display purposes only and names and numbers may not match names and numbers found on other agency publications.

O.6.1.1 Alternative A – No Action Alternative

O.6.1.1.1 Proposed Actions

Of the 434,154 acres of BLM public lands in the BiFO, vehicle travel would be limited to existing roads and trails on 326,561 acres. On about 101,027 acres, site-specific travel planning has been completed and motorized travel would be limited to designated routes in the following Travel Management Areas (TMAs): Shepherd Ah-Nei (4,680 acres), Acton (3,697 acres), Horsethief (11,423 acres) and the Pryors (81,227 acres). Under Alternative A, the South Hills OHV area would continue to be designated as open to motorized cross-country travel, limited to motorcycle use only (1,097 acres open) with a 260 acre closed area to provide a buffer to residential areas adjacent to the area.

General Travel Access: Under the No Action Alternative, the 877 existing BLM routes (993 miles) that comprise the travel networks within the eleven TMAs would continue to be managed using the five existing designations shown in **Error! Reference source not found.** and Figure 4.1.1a – Alternative A Route Designations for All TMAs (refer to the Figures Appendix at the end of this document), with the overwhelming majority of routes (about 84%) open to all motorized uses or open with special seasonal or vehicular restrictions. Designations specific to individual TMAs are shown in **Error! Reference source not found.**.

Table O-3: Alternative A Route Designations for All TMAs

Alternative A Route Designations for All TMAs				
	Alternative A			
Potential Route Designations	Number of Routes in Full Network	Percent of Full Network	Miles of Routes in Full Network	Percent of Full Network
Number of open routes	726	83%	763.6	77%
Number of open with vehicle restrictions routes	1	0.1%	52.7	5.3%
Number of open with seasonal restrictions routes	7	0.8%	7.2	0.7%
Number of limited to administrative use only routes	54	6.1%	61.1	6.2%
Number of closed routes	89	10%	108.6	11%
Average number/miles open routes per square mile (density)	1.5		1.7	

Table O-4: Alternative A Route Designations for Specific TMAs

Alternative A Route Designations for Specific TMAs							
TMA	Potential Route Designations	Open	Open with vehicle restrictions	Open with seasonal restrictions	Limited to administrative use only	Closed	Average open per square mile (density)
Acton	Number of Routes	0	0	7	0	3	1.2
	Miles of Routes	0	0	7	0	2	1.2
Gage Dome/ Colony Road	Number of Routes	79	0	0	0	0	1.4
	Miles of Routes	96	0	0	0	0	1.6
Cottonwood/ Weatherman	Number of Routes	226	0	0	16	0	1.7
	Miles of Routes	286	0	0	24	0	2.2
Grove Creek	Number of Routes	79	0	0	0	0	2.2
	Miles of Routes	73	0	0	0	0	2
Horsethief	Number of Routes	38	0	0	5	2	1.2
	Miles of Routes	33	0	0	3	3	1
Mill Creek/ Bundy	Number of Routes	196	0	0	14	0	2.5
	Miles of Routes	127	0	0	17	0	1.6
Pryors	Number of Routes	60	0	0	1	84	0.49
	Miles of Routes	116	0	0	2	14	1
Shepherd	Number of Routes	1	1	0	12	0	0.3

Alternative A Route Designations for Specific TMAs							
TMA	Potential Route Designations	Open	Open with vehicle restrictions	Open with seasonal restrictions	Limited to administrative use only	Closed	Average open per square mile (density)
	Miles of Routes	0.2	53	12	0	0	8.9
Tin Can Hill	Number of Routes	0	0	0	6	0	0
	Miles of Routes	0	0	0	3	0	0
Warren	Number of Routes	47	0	0	0	0	2.2
	Miles of Routes	34	0	0	0	0	1.5

Route Density: While the existing route density of the overall network is 1.8 routes per square mile at 2 miles per square mile for all designation types, managing the existing route network as is would retain an existing average route density of 1.5 open routes per square mile at 1.7 miles per square mile for the TMAs. On a specific TMA basis, the Mill Creek/Bundy TMA has the highest density of open routes at 2.5 routes per square mile while the Tin Can Hill TMA has the lowest density of open routes at 0.0 routes per square mile. In terms of miles of routes per square mile, the Shepherd TMA has the highest route density among the TMAs, of 8.9 miles of open routes; while again, Tin Can Hill has the lowest route density of 0.0 miles of open routes (See Figure 4.1.1b in the Figures Appendix at the end of this document).

Route Proliferation: During the specific route evaluation process, BLM staff specialists identified routes that have a higher potential for route proliferation in 9 of 11 TMAs: Acton, Cottonwood/Weatherman, Grove Creek, Gage Dome/Colony Road, Mill Creek/Bundy Road, Shepherd, South Hills, Warren and Pryors. Route proliferation is described as the ongoing or potential creation of new routes by unauthorized means, such as repeated off-route travel.

Error! Reference source not found. displays the existing route designations that are in place for the 609 routes (781 miles) where proliferation concerns were noted during the route evaluation process.

Table O-5: Alternative A Routes In/Thru Route Proliferation Area of Concern for All TMAs

Alternative A Routes In/Thru Route Proliferation Area of Concern for All TMAs				
Potential Route Designations	Alternative A			
	Number of Selected Routes	Percent of Selected Network	Miles of Selected Routes	Percent of Selected Network
Number of open routes	502	82%	591.7	76%
Number of open with restrictions routes	5	0.8%	58.8	7.5%
Number of limited to administrative use only routes	17	3%	25.9	3.3%
Number of closed routes	85	14%	104.9	13%

Public Safety Concerns*:* Another issue identified during the route evaluation process was public safety concerns associated with 13 routes in 3 of 11 TMAs: Cottonwood/Weatherman, Grove Creek and Pryors. Public safety concerns include, but are not limited to, poor road placement, soils concerns, poor alignment, poor condition related to maintenance, line of site related to on-coming traffic, etc.

O.6.1.1.2 Consequences

Summary: In this Alternative, the areas designated as 'limited to existing roads and trails' would continue to be difficult to enforce as unauthorized route creation and proliferation by users makes the 'existing network' ever-changing. In those areas where motorized travel is limited to existing roads and trails, impacts to various resources, including soil, water, fragile cultural or paleontological sites and wildlife habitat would continue in those areas outside of the existing TMAs (where route designations have been made under previous decisions).

Generally, limiting motorized travel in a majority of the planning area to existing roads and trails is not always compatible with the other resource uses or resource values associated with certain areas. Addressing site specific travel planning decisions better addresses localized conditions, resource features, on-going/historic uses and recreational trend information.

General Travel Access: Though in the long-term, travelers could experience minor increases in traffic on these open routes due to the assumptions described above, over 8 out of every 10 existing BLM routes would remain open to all users under Alternative A and the availability of access to the TMAs for travelers would remain fairly constant for the long-term. Additionally, as the potential for new route development is realized with boom cycles in energy exploration and development, these impacts may increase to a minor, short-term extent on a localized basis as these new routes potentially become available for, and help spread out public use; such effects would ebb and flow with energy development.

Although Alternative A carries forward closures and restrictions to administrative use only on 143 routes at 170 miles, the long-term, direct, localized effect of these restricted routes on access is minor, due to the availability of 735 open routes at 824 miles with the route densities that are described below.

Route Density: Generally, TMAs with higher densities of open routes provide greater access opportunities to public land areas for all types of travelers. Those areas with densities under 1 open route per square mile and/or under 1 open mile per square mile, could be considered much less accessible by travelers that rely solely on motorized modes of travel. As such, the existing motorized travel designations of Alternative A could constitute a continuation of a long-term, direct, localized minor to moderate restriction of motorized access in 4 of 11 TMAs (Horsethief, Pryors, Shepherd, and Tin Can Hill).

Route Proliferation: Current management decisions of 'closed', 'limited', or 'open with restrictions' on some 107 routes (190 miles), would continue to maintain a reduced potential for new, unauthorized routes by maintaining a reduced accessibility on 18% of the routes of concern. This would continue to directly reduce the potential for illegal route creation in the long-term, which would contribute to minimizing harassment of wildlife, disruption of wildlife habitats, damage to soil, watershed, vegetation, air, or other resources, and the potential for adversely

affecting natural areas to a minor degree by reducing the number of routes with known route proliferation concerns (43 CFR 8342.1(a)(b)(d)).

Public Safety Concerns: Error! Reference source not found. displays the existing route designations that are in place for the 13 routes (32 miles) where public safety concerns were noted during the evaluations (note: safety concerns are primarily associated with specific locations on a specific route, not the entire length of that route). Current management decisions of 'closed', 'limited', or 'open with restrictions' on 5 routes (5 miles), would continue to maintain a reduced potential for incidents involving public safety by maintaining reduced access opportunities on 39% of the routes of concern. This direct, long-term, reduction of routes would promote safety of all users of the public lands to a minor to moderate degree by reducing the potential for public safety incidents on routes with known safety concerns (43 CFR 8342.1).

Table O-6: Alternative A Routes with Public Safety Concerns for All TMAs

Alternative A Routes with Public Safety Concerns for All TMAs				
	Alternative A			
Potential Route Designations	Number of Selected Routes	Percent of Selected Network	Miles of Selected Routes	Percent of Selected Network
Number of open routes	8	61.5%	26.9	85%
Number of open with restrictions routes	0	0%	0	0%
Number of limited to administrative use only routes	0	0%	0	0%
Number of closed routes	5	38.5%	4.7	15%

O.6.1.2 Alternative B

O.6.1.2.1 Decisions

Under Alternative B, vehicle travel would be limited to designated roads and trails on 282,285 acres and limited to existing roads and trails on 145,303 acres of BLM public lands in the BiFO. Additionally, under Alternative B, South Hills (1,357 acres) would be designated as closed to all motorized modes of travel. This would result in a direct, long-term impact to motorized users (motorcycle only) resulting from the area closure of the South Hills OHV area. Under Alternative B, an additional 181,258 acres (or a 36 percent increase) (compared to Alternative A) would be limited to designated motorized routes in the planning area. Refer to **Error! Reference source not found.**: Alternative B Route Designations for All TMAs (compared to Alt. A).

Table O-7: Alternative B Route Designations for All TMAs (compared to Alt. A)

Alternative B Route Designations for All TMAs (compared to Alt. A)												
Potential Route Designations	Alternative A				Alternative B							
	# Routes	% of Network	Miles	% Network	# Routes	% of Network	# Δ from Alt. A	% Δ from Alt. A	Miles	% of| Network	# Δ from Alt. A	% Δ from Alt. A
Number of open routes	726	83%	763.6	77%	81	9.2%	-645	-74%	272.4	27%	-491.2	-50%
Number of open with vehicle restrictions routes	1	0.1%	52.7	5.3%	5	0.5%	4	0.4 %	65.1	6.5%	12.4	1.2%
Number of open with seasonal restrictions routes	7	0.8%	7.2	0.7%	6	0.7%	-1	-0.1%	11.8	1.2%	4.6	0.5%
Number of limited to administrative use only routes	54	6.2%	61.1	6.2%	223	25%	169	19%	247.3	25%	186.2	19%
Number of closed routes	89	10%	108.6	11%	562	64%	473	54%	396.5	40%	287.9	29%
Average number/miles open routes per square mile (density)	1.5		1.7		0.2		-1.3	-88%	0.7		-1.0	-58%

General Travel Access: Under the Alternative B, the 877 existing BLM routes (993 miles) that comprise the existing travel networks within the eleven TMAs would be managed using the five existing designations shown in **Error! Reference source not found.** Figure 4.1.2a (at the end of this document), which also compare Alternative B designations with Alternative A. Designations specific to individual TMAs are shown in **Error! Reference source not found.** and are also compared to Alternative A. At 562, the majority of routes (64% of overall network) would be recommended for closure to all motorized modes of travel and 223 routes (25% of overall network) would be recommended for administrative use only.

Table O-8: Alternative B Route Designations for TMAs (compared to Alt. A)

Alternative B Route Designations for TMAs (compared to Alt. A)							
TMA	Potential Route Designations	Open	Open with vehicle restrictions	Open with seasonal restrictions	Limited to administrative use only	Closed	Average open per square mile (density)
Acton	Alt. A # of Routes	0	0	7	0	3	1.2
	Alt. A Miles	0	0	7	0	2	1.2
	Alt. B # of Routes	0	0	3	0	7	0.5
	Alt. B Miles	0	0	5	0	4	0.9

Alternative B Route Designations for TMAs (compared to Alt. A)							
TMA	**Potential Route Designations**	**Open**	**Open with vehicle restrictions**	**Open with seasonal restrictions**	**Limited to administrative use only**	**Closed**	**Average open per square mile (density)**
	% Δ # of Routes	0.0%	0.0%	-40.0%	0.0%	40.0%	-57.0%
	% Δ Miles	0.0%	0.0%	-24.0%	0.0%	23.0%	-29.0%
Gage Dome/ Colony Road	Alt. A # of Routes	79	0	0	0	0	1.4
	Alt. A Miles	96	0	0	0	0	1.6
	Alt. B # of Routes	7	0	0	41	31	0.1
	Alt. B Miles	31	0	5	45	20	0.6
	% Δ # of Routes	-91.0%	0.0%	0.0%	52.0%	39.0%	-91.0%
	% Δ Miles	-68.0%	0.0%	5.0%	47.0%	21.0%	-62.0%
Cottonwood/ Weatherman	Alt. A # of Routes	226	0	0	16	0	1.7
	Alt. A Miles	286	0	0	24	0	2.2
	Alt. B # of Routes	29	2	0	52	159	0.2
	Alt. B Miles	123	10	0	68	108	1
	% Δ # of Routes	-84.0%	1.0%	0.0%	15.0%	66.0%	-86.0%
	% Δ Miles	-53.0%	3.0%	0.0%	14.0%	35.0%	-53.0%
Grove Creek	Alt. A # of Routes	79	0	0	0	0	2.2
	Alt. A Miles	73	0	0	0	0	2
	Alt. B # of Routes	7	0	0	8	64	0.2
	Alt. B Miles	18	0	0	9	46	0.5
	% Δ # of Routes	-91.0%	0.0%	0.0%	10.0%	81.0%	-91.0%
	% Δ Miles	-76.0%	0.0%	0.0%	13.0%	63.0%	-76.0%
Horsethief	Alt. A # of Routes	38	0	0	5	2	1.2
	Alt. A Miles	33	0	0	3	3	1
	Alt. B # of Routes	5	1	0	15	24	0.2
	Alt. B Miles	10	2	0	14	13	0.4
	% Δ # of Routes	-73.0%	2.0%	0.0%	22.0%	49.0%	-84.0%
	% Δ Miles	-59.0%	4.0%	0.0%	29.0%	26.0%	-64.0%
Mill Creek/ Bundy	Alt. A # of Routes	196	0	0	14	0	2.5
	Alt. A Miles	127	0	0	17	0	1.6
	Alt. B # of Routes	13	0	0	56	141	0.2
	Alt. B Miles	20	0	0	56	68	0.3

Alternative B Route Designations for TMAs (compared to Alt. A)							
TMA	**Potential Route Designations**	**Open**	**Open with vehicle restrictions**	**Open with seasonal restrictions**	**Limited to administrative use only**	**Closed**	**Average open per square mile (density)**
	% Δ # of Routes	-87.0%	0.0%	0.0%	20.0%	67.0%	-93.0%
	% Δ Miles	-74.0%	0.0%	0.0%	27.0%	48.0%	-84.0%
Pryors	Alt. A # of Routes	60	0	0	1	84	0.49
	Alt. A Miles	116	0	0	2	14	1
	Alt. B # of Routes	19	1	3	25	97	0.2
	Alt. B Miles	71	1	7	26	119	0.6
	% Δ # of Routes	-28.0%	1.0%	2.0%	17.0%	9.0%	-62.0%
	% Δ Miles	-20.0%	1.0%	3.0%	11.0%	7.0%	-33.0%
Shepherd	Alt. A # of Routes	1	1	0	12	0	0.3
	Alt. A Miles	0.2	53	12	0	0	8.9
	Alt. B # of Routes	1	1	0	8	4	0.3
	Alt. B Miles	1	53	0	11	2	7.2
	% Δ # of Routes	0.0%	0.0%	0.0%	-29.0%	29.0%	0.0%
	% Δ Miles	0.0%	0.0%	-19.0%	16.0%	3.0%	-19.0%
Tin Can Hill	Alt. A # of Routes	0	0	0	6	0	0
	Alt. A Miles	0	0	0	3	0	0
	Alt. B # of Routes	0	0	0	2	4	0
	Alt. B Miles	0	0	0	1	2	0
	% Δ # of Routes	0.0%	0.0%	0.0%	-67.0%	67.0%	0.0%
	% Δ Miles	0.0%	0.0%	0.0%	-62.0%	62.0%	0.0%
Warren	Alt. A # of Routes	47	0	0	0	0	2.2
	Alt. A Miles	34	0	0	0	0	1.5
	Alt. B # of Routes	0	0	0	16	31	0
	Alt. B Miles	0	0	0	18	16	0
	% Δ # of Routes	-100.0%	0.0%	0.0%	34.0%	66.0%	-100.0%
	% Δ Miles	-100.0%	0.0%	0.0%	53.0%	47.0%	-100.0%

Route Density: While Alternative A would continue managing existing route network at an average route density of 1.5 open routes per square mile at 1.7 miles per square mile for the TMAs, Alternative B would greatly reduce densities across all TMAs to an average of 0.2 open routes per square mile (an 88% reduction) at an average of 0.7 miles per square mile (a 58% reduction). On a specific TMA basis, the Acton TMA would have the highest density of open

routes at 0.5 routes per square mile while the Tin Can Hill and Warren TMAs would have the lowest densities of open routes at 0.0 routes per square mile. In terms of miles of routes per square mile, the Shepherd TMA would have the high among the TMAs of 7.2 miles of open routes, while again, Tin Can Hill and Warren would have the low of 0.0 miles of open routes (See Figure 4.1.2b at the end of this document).

Route Proliferation*:* Error! Reference source not found. displays the Alternative B route designations compared to the Alternative A designations for the 609 routes (781 miles) where route proliferation concerns were noted during the route evaluations for 9 out of the 11 TMAs. Alternative B designations of 'closed', 'limited', or 'open with restrictions' on 546 routes (547 miles), would restrict access on 89% of the routes identified as having route proliferation concerns; 72% more routes with restrictions in Alternative B than the current 18% in Alternative A.

Table O-9: Alternative B Routes In/Thru Route Proliferation Area of Concern for All TMAs

Alternative B Routes In/Thru Route Proliferation Area of Concern for All TMAs												
	Alternative A				Alternative B							
Potential Route Designations	# Selected Routes	% of Selected Network	Miles Selected Routes	% Selected Network	# Selected Routes	% of Selected Network	# Δ from Alt. A	% Δ from Alt. A	Miles Selected Routes	% of Selected Network	# Δ from Alt. A	% Δ from Alt. A
Number of open routes	502	82%	591.7	76%	62	10%	-440	-72%	233.5	30%	-358	-46%
Number of open with restrictions routes	5	0.8%	58.8	7.5%	8	1.3%	3	0.5%	74.2	9%	15.4	2%
Number of limited to administrative use only routes	17	2.8%	25.9	3.3%	129	21%	112	18%	148	19%	122.1	16%
Number of closed routes	85	14%	104.9	13%	409	67%	324	53%	325.2	42%	220.3	28%

Public Safety Concerns*:* Error! Reference source not found. displays the Alternative B route designations compared to the Alternative A designations for the 13 routes (32 miles) where public safety concerns were noted during the route evaluation process for 3 TMAs. Alternative B designations of 'closed', 'limited', or 'open with restrictions' on 10 routes (14 miles), would restrict access on **77**% of the routes identified as having public safety concerns; 38% more routes with restrictions in Alternative B than the current **39**% in Alternative A.

Table O-10: Alternative B Routes with Public Safety Concerns for All TMAs

Alternative B Routes with Public Safety Concerns for All TMAs												
	Alternative A				Alternative B							
Potential Route Designations	# Selected Routes	% of Selected Network	Miles Selected Routes	% Selected Network	# Selected Routes	% of Selected Network	# Δ from Alt. A	% Δ from Alt. A	Miles Selected Routes	% of Selected Network	# Δ from Alt. A	% Δ from Alt. A
Number of open routes	8	61.5%	26.9	85%	3	23%	-5	-39%	17.7	56%	-9.2	-29%
Number of open with restrictions routes	0	0%	0	0%	3	23%	3	23%	6.7	21.2%	6.7	21.2%
Number of limited to administrative use only routes	0	0%	0	0%	1	7.7%	1	7.7%	2.2	7%	2.2	7%
Number of closed routes	5	38.5%	4.7	15%	6	46%	1	7.7%	5.0	16%	0.3	0.9%

O.6.1.2.2 Consequences

Summary: This Alternative would generally have more restrictions and constraints to motorized access which would have a direct, long-term impact to motorized users by limiting access and opportunities; however, there would be fewer direct, indirect and cumulative impacts to sensitive and fragile resource issues identified (refer to those corresponding impact analysis discussions by alternative). Generally, designating roads and trails for motorized travel within the TMAs better responds to and addresses resource conditions.

General Travel Access: This would result in 54% more closed routes in Alternative B than already exist in Alternative A and in 19% more routes designated for administrative use only in Alternative B than exist in Alternative A. These results would be a long-term, direct, widespread, major reduction in general public access opportunities via motorized modes of travel. The closures would directly impact administrative users, but only to a minor degree in the long-term as closed route were not primary access to administrative facilities and functions.

While the number of routes recommended for closure and administrative use only would be 64% and 25% of the overall network respectively, the actual miles of routes closed under Alternative B would be 397 or about 40% and those limited to administrative use would be 247 or about 25% of the existing mileage. This would result in 29% more miles of routes closed in Alternative B than the current 11% closure mileage in Alternative A. Additionally, there would be 19% more mileage of routes identified for administrative use only in Alternative B than the current 6% mileage in Alternative A. This would result in a moderate, long-term, direct loss of motorized access opportunities for the general public and a negligible change in access availability for administrative uses, as such uses would continue to have access on administrative routes, absent of public use. So, while the actual number of routes recommended for closure changes greatly (54% more in Alternative B than in Alternative A) the actual number of miles of closed routes changes only moderately (29% more in Alternative B than in Alternative A) for an overall minor to moderate loss of available access.

Routes open to all motorized uses or open with special seasonal or vehicular restrictions would decrease to a total of 90 routes (10% of the network), or about 74% fewer open routes in Alternative B than the current 84% of open routes in Alternative A. In the long-term, travelers could experience major increases in traffic on open routes due to the concentration effects of excluding public motorized use from 9 out of every 10 existing BLM routes. Fewer open routes available to the public would concentrate travelers on fewer available routes, which could diminish realization of travelers' expectations for broader, uncrowded access, greatly reducing the potential for realizing various benefits that are possible with full access. However, with regard to route miles, Alternative B would recommend 347 miles with these open designations--35% of the proposed network. This would result in 49% fewer miles of open routes in Alternative B than the current 83% in Alternative A.

As the potential for new route development is realized with boom cycles in energy exploration and development, these impacts may be diminished to a minor, short-term extent on a localized basis as these new routes potentially become available for public use; such effects would ebb and flow with energy development.

Route Density: Given that areas with densities under 1 open route and/or 1 open mile per square mile could be considered much less accessible by motorized travelers, only two TMAs in Alternative B (Cottonwood/Weatherman and Shepherd) would meet or exceed this standard and then only in miles per square mile. As such, the route designations of Alternative B would constitute a long-term, direct, localized major restriction of motorized access in terms of travel dispersal opportunities in 8 of 10 TMAs (All except Cottonwood/Weatherman and Shepherd). However, concentrating motorized vehicular travel use on fewer routes may increase compaction, create more disturbance due to limited routes for travel, and higher frequency of use, which could result in unintended consequences of limiting motorized travel.

Route Proliferation*:* This would directly reduce the potential for illegal route creation in the long-term, which would contribute to minimizing harassment of wildlife, disruption of wildlife habitats, damage to soil, watershed, vegetation, air, or other resources, and the potential for adversely affecting natural areas to a major degree by reducing the number of routes with known route proliferation concerns (43 CFR 8342.1(a)(b)(d)).

Public Safety Concerns: This direct, long-term, reduction of routes would promote safety of all users of the public lands to a major degree by reducing the potential for public safety incidents on routes with known safety concerns (43 CFR 8342.1). However, for those travel areas that receive a high frequency of use, limiting access in some cases could create increased user conflicts or incidences of high traffic volume, as there are fewer motorized routes available in the planning area.

O.6.1.3 Alternative C

O.6.1.3.1 Decisions

Under Alternative C, vehicle travel would be limited to designated roads and trails on 282,285 acres and limited to existing roads and trails on 145,303 acres of BLM public lands in the Planning Area. This would the same as Alternative B. Under Alternative C, within the South

Hills OHV Area, 1,296 acres as open to motorized vehicle use (limited to motorcycle use only), and would identify a 61 acre closure area to motorized use (all uses) in the South Hills OHV Area to provide a buffer to adjacent residential areas. This would be an increase of 199 acres for an open area designation from Alternative A. Generally, under Alternative C, more routes would be designated as open all forms of motorized travel than in Alternative B, and fewer than Alternative A (refer to 4.1.3a: Alternative C Route Designations for All TMAs (compared to Alt. A, located at the end of this document)).

General Travel Access: Under the Alternative C, the 877 existing BLM routes (993 miles) that comprise the existing travel comprise the existing travel networks within the 11 TMAs would be managed using the five existing designations shown in **Error!** existing designations shown in **Error! Reference source not found.** and Figure 4.1.3a below, which also compare Alternative C designations with Alternative A. Designations specific to individual TMAs are shown in

and are also compared to Alternative A. At 22, few routes (2.5% of overall network) would be recommended for closure to all motorized modes of travel and 120 routes (13.7% of overall network) would be recommended for administrative use only. This would result in 7.6% fewer closed routes in Alternative C than already exist in Alternative A and in 7.5% more routes designated for administrative use only in Alternative C than exist in Alternative A.

While the number of routes recommended for closure and administrative use only would be 2.5% and 13.7% of the overall network respectively, the actual miles of routes closed under Alternative C would be 5.9 or about 0.6% and those limited to administrative use would be 91.3 or about 9.2% of the existing mileage. This would result in 10.3% fewer miles of routes closed in Alternative C than the current 11% closure mileage in Alternative A. Additionally, there would be 3% more mileage of routes identified for administrative use only in Alternative C than the current 6.2% mileage in Alternative A. The slight gain in administrative use only route miles is offset by the loss of over 3 times that amount in closed route miles (many that were designated as open in Alternative C). So, while the actual number of routes recommended for closure changes to a negligible to minor degree (7.6% fewer in Alternative C than in Alternative A) the actual number of miles of closed routes changes to a minor degree (10.3% fewer in Alternative C than in Alternative A) for an overall minor loss of available access.

Routes open to all motorized uses or open with special seasonal or vehicular restrictions would increase slightly by 1 route from Alternative A to a total of 735 routes (84% of the network), or about 0.1% more open routes in Alternative C. In terms of the number of open routes, there would be essentially no change from the number of open routes in Alternative A. However, with regard to route miles, Alternative C would recommend 896 miles with these open designations (90% of the proposed network). This would result in 8% more miles of open routes in Alternative C than the current 83% in Alternative A.

Table O-11: Alternative C Route Designations for All TMAs (compared to Alt. A)

Alternative C Route Designations for All TMAs (compared to Alt. A)												
Potential Route Designations	Alternative A				Alternative C							
	# Routes	% of Network	Miles	% Network	# Routes	% of Network	# Δ from Alt. A	% Δ from Alt. A	Miles	% of Network	# Δ from Alt. A	% Δ from Alt. A

Number of open routes	726	83%	763.6	77%	727	82.9%	1	0.1%	825	83%	61.4	6.2%
Number of open with vehicle restrictions routes	1	0.1%	52.7	5.3%	7	0.8%	6	0.7%	70.7	7.1%	18	1.8%
Number of open with seasonal restrictions routes	7	0.8%	7.2	0.7%	1	0.1%	-6	-0.7%	0.2	0 %	-7	-0.7%
Number of limited to administrative use only routes	54	6.2%	61.1	6.2%	120	13.7%	66	7.5%	91.3	9.2%	30.2	3.0%
Number of closed routes	89	10%	108.6	11%	22	2.5%	-67	-7.6%	5.9	0.6%	-102.7	-10%
Average number/miles open routes per square mile (density)	1.5		1.7		1.5		0	0.1%	1.8		0.1	8.8%

Table O-12: Alternative C Route Designations for Specific TMAs (compared to Alt. A)

Alternative C Route Designations for Specific TMAs (compared to Alt. A)							
TMA	**Potential Route Designations**	**Open**	**Open with vehicle restrictions**	**Open with seasonal restrictions**	**Limited to administrative use only**	**Closed**	**Average open per square mile (density)**
Acton	Alt. A # of Routes	0	0	7	0	3	1.2
	Alt. A Miles	0	0	7	0	2	1.2
	Alt. C # of Routes	1	0	0	0	0	1.7
	Alt. C Miles	9	0	0	0	0	1.5
	% Δ # of Routes	100.0%	0.0%	-70.0%	0.0%	-30.0%	43.0%
	% Δ Miles	100.0%	0.0%	-83.0%	0.0%	-17.0%	19.0%
Gage Dome/ Colony Road	Alt. A # of Routes	79	0	0	0	0	1.4
	Alt. A Miles	96	0	0	0	0	1.6
	Alt. C # of Routes	69	0	0	10	0	1.2
	Alt. C Miles	91	0	0	5	0	1.5
	% Δ # of Routes	-13.0%	0.0%	0.0%	13.0%	0.0%	-13.0%
	% Δ Miles	-6.0%	0.0%	0.0%	6.0%	0.0%	-6.0%
Cottonwood/ Weatherman	Alt. A # of Routes	226	0	0	16	0	1.7
	Alt. A Miles	286	0	0	24	0	2.2
	Alt. C # of Routes	220	5	0	14	3	1.7
	Alt. C Miles	279	16	0	14	1	2.3
	% Δ # of Routes	-3.0%	2.0%	0.0%	-1.0%	1.0%	-1.0%
	% Δ Miles	-3.0%	5.0%	0.0%	-3.0%	1.0%	3.0%
Grove Creek	Alt. A # of Routes	79	0	0	0	0	2.2

Alternative C Route Designations for Specific TMAs (compared to Alt. A)							
TMA	**Potential Route Designations**	**Open**	**Open with vehicle restrictions**	**Open with seasonal restrictions**	**Limited to administrative use only**	**Closed**	**Average open per square mile (density)**
	Alt. A Miles	73	0	0	0	0	2
	Alt. C # of Routes	69	0	0	8	2	1.9
	Alt. C Miles	70	0	0	2	1	1.9
	% Δ # of Routes	-13.0%	0.0%	0.0%	10.0%	3.0%	-13.0%
	% Δ Miles	-4.0%	0.0%	0.0%	3.0%	1.0%	-4.0%
Horsethief	Alt. A # of Routes	38	0	0	5	2	1.2
	Alt. A Miles	33	0	0	3	3	1
	Alt. C # of Routes	41	1	0	2	1	1.3
	Alt. C Miles	36	2	0	1	1	1.1
	% Δ # of Routes	7.0%	2.0%	0.0%	-7.0%	-2.0%	11.0%
	% Δ Miles	8.0%	4.0%	0.0%	-6.0%	-7.0%	14.8%
Mill Creek/ Bundy	Alt. A # of Routes	196	0	0	14	0	2.5
	Alt. A Miles	127	0	0	17	0	1.6
	Alt. C # of Routes	144	0	0	54	12	1.9
	Alt. C Miles	108	0	0	33	3	1.4
	% Δ # of Routes	-25.0%	0.0%	0.0%	19.0%	6.0%	-27.0%
	% Δ Miles	-13.0%	0.0%	0.0%	11.0%	2.0%	-15.0%
Pryors	Alt. A # of Routes	60	0	0	1	84	0.49
	Alt. A Miles	116	0	0	2	14	1
	Alt. C # of Routes	114	0	1	27	3	0.9
	Alt. C Miles	191	0	1	30	1	1.6
	% Δ # of Routes	37.0%	0.0%	1.0%	18.0%	-56.0%	92.0%
	% Δ Miles	34.0%	0.0%	1.0%	13.0%	-46.0%	65.0%
Shepherd	Alt. A # of Routes	1	1	0	12	0	0.3
	Alt. A Miles	0.2	53	12	0	0	8.9
	Alt. C # of Routes	10	1	0	3	0	1.5
	Alt. C Miles	8	53	0	4	0	8.3
	% Δ # of Routes	64.0%	0.0%	0.0%	-64.0%	0.0%	450.0%
	% Δ Miles	12.0%	0.0%	-19.0%	7.0%	0.0%	-7.0%
Tin Can Hill	Alt. A # of Routes	0	0	0	6	0	0
	Alt. A Miles	0	0	0	3	0	0

Alternative C Route Designations for Specific TMAs (compared to Alt. A)							
TMA	**Potential Route Designations**	**Open**	**Open with vehicle restrictions**	**Open with seasonal restrictions**	**Limited to administrative use only**	**Closed**	**Average open per square mile (density)**
	Alt. C # of Routes	5	0	0	1	0	5
	Alt. C Miles	3	0	0	1	0	2.7
	% Δ # of Routes	83.0%	0.0%	0.0%	-83.0%	0.0%	+ 5 routes
	% Δ Miles	93.0%	0.0%	0.0%	-97.0%	0.0%	+ 2.7 miles
Warren	Alt. A # of Routes	47	0	0	0	0	2.2
	Alt. A Miles	34	0	0	0	0	1.5
	Alt. C # of Routes	45	0	0	1	1	2.1
	Alt. C Miles	33	0	0	1	1	1.5
	% Δ # of Routes	-4.0%	0.0%	0.0%	2.0%	2.0%	-4.0%
	% Δ Miles	-3.0%	0.0%	0.0%	1.0%	2.0%	-3.0%

Route Proliferation*:* Error! Reference source not found. displays the Alternative C route designations compared to the Alternative A designations for the 609 routes (781 miles) where route proliferation concerns were noted during the route evaluation process for 9 TMAs. Alternative C designations of ‘closed’, ‘limited’, or ‘open with restrictions’ on 105 routes (138 miles), would restrict access on 17% of the routes identified as having route proliferation concerns; 0.4% fewer routes with restrictions in Alternative C than the current 18% in Alternative A.

Table O-13: Alternative C Routes In/Thru Route Proliferation Area of Concern for All TMAs

Alternative C Routes In/Thru Route Proliferation Area of Concern for All TMAs												
	Alternative A				Alternative C							
Potential Route Designations	# Selected Routes	% of Selected Network	Miles Selected Routes	% Selected Network	# Selected Routes	% of Selected Network	# Δ from Alt. A	% Δ from Alt. A	Miles Selected Routes	% of Selected Network	# Δ from Alt. A	% Δ from Alt. A
Number of open routes	502	82%	591.7	76%	504	82.8%	2	0.3%	643.2	82.3%	51.5	6.6%
Number of open with restrictions routes	5	0.8%	58.8	7.5%	7	1.1%	2	0.3%	69.3	8.9%	10.5	1.3%
Number of limited to administrative use only routes	17	2.8%	25.9	3.3%	89	14.6%	72	12%	65.8	8.4%	39.9	5.1%
Number of closed routes	85	14%	104.9	13%	9	1.5%	-76	-13%	3.1	0.4%	-101.8	-13%

Public Safety Concerns*: Error! Reference source not found.* displays the Alternative C route designations compared to the Alternative A designations for the 13 routes (32 miles) where public safety concerns were noted during the route evaluation process for 3 TMAs. Alternative C designations of ‘closed’, ‘limited’, or ‘open with restrictions’ on 7 routes (5.3 miles), would restrict access on 54% of the routes identified as having public safety concerns; 15.4% more routes with restrictions in Alternative C than the current 39% in Alternative A.

Table O-14: Alternative C Routes with Public Safety Concerns for All TMAs

Alternative C Routes with Public Safety Concerns for All TMAs												
	Alternative A				Alternative C							
Potential Route Designations	# Selected Routes	% of Selected Network	Miles Selected Routes	% Selected Network	# Selected Routes	% of Selected Network	# Δ from Alt. A	% Δ from Alt. A	Miles Selected Routes	% of Selected Network	# Δ from Alt. A	% Δ from Alt. A
Number of open routes	8	61.5%	26.9	85%	6	46.2%	-2	-15.4%	26.4	83.3%	-0.5	-2%
Number of open with restrictions routes	0	0%	0	0%	1	7.7%	1	7.7%	0.2	0.6%	0.2	0.6%
Number of limited to administrative use only routes	0	0%	0	0%	5	38.5%	5	38.5%	4.8	15.1%	4.8	15%
Number of closed routes	5	38.5%	4.7	15%	1	7.7%	-4	-30.8%	0.3	0.9%	-4.4	-14%

O.6.1.3.2 Consequences

Summary: This Alternative would be a direct, long-term moderate increase in access opportunities for all travelers to these areas. However, the increase number of routes available for all uses would result in impacts to soils, vegetation, wildlife and sensitive cultural areas (refer to those corresponding impact analysis discussions by alternative).

General Travel Access: These results would not substantially change public motorized access opportunities from Alternative A, as administrative only or closed route changes would occur only between those designations and not the open designations. The closures would directly impact administrative users to a minor degree in the long-term as 66 closed routes would become limited to administrative use only, thereby providing greater access for administrative functions.

As such, this would result in a minor, long-term, direct net gain of motorized access opportunities for the general public and a negligible gain in access availability for administrative uses. Many of the routes that would be closed were from consideration of redundant routes, therefore, the net impacts to access would be further minimized, as an access opportunity would still exist.

In the long-term, travelers would have a direct, minor, widespread increase in access opportunities in that 9 out of every 10 existing BLM route would be open to public motorized use.

As the potential for new route development is realized with boom cycles in energy exploration and development, these impacts may be diminished to a minor, short-term extent on a localized basis as these new routes potentially become available for public use; such effects would ebb and flow with energy development.

Route Proliferation: This Alternative would directly reduce the potential for illegal route creation in the long-term, which would contribute to minimizing harassment of wildlife, disruption of wildlife habitats, damage to soil, watershed, vegetation, air, or other resources, and the potential for adversely affecting natural areas to a negligible to minor degree by reducing the number of routes with known route proliferation concerns (43 CFR 8342.1(a)(b)(d)).

Public safety Concerns: This direct, long-term, reduction of routes would moderately promote safety of all users of the public lands by reducing the potential for public safety incidents on routes with known safety concerns (43 CFR 8342.1).

O.6.1.4 Alternative D

O.6.1.4.1 Decisions:

Under Alternative D, vehicle travel would be limited to designated roads and trails on 282,285 acres of BLM public lands and limited to existing roads and trails on 145,303 acres of BLM lands in the Planning Area. This would be the same as Alternatives B and C. Additionally, 982 acres would be designated as open to motorized vehicle use (limited to motorcycle use only).

Within the South Hills OHV Area under Alternative D, 982 acres would be designated as open to motorized vehicle use (limited to motorcycle use only), and 375 acres would be closed to provide for a buffer area to adjacent residential areas. This would be a decrease of 115 acres of an open designation, as compared to Alternative A.

General Travel Access: Under the Alternative D, the 877 existing BLM routes (993 miles) that comprise the existing travel networks within the 11 TMAs would be managed using the five existing designations shown in **Error! Reference source not found.** and Figure 4.1.4a (located at the end of this document), which also compare Alternative D designations with Alternative A. Designations specific to individual TMAs are shown in **Error! Reference source not found.** and are also compared to Alternative A. Few routes (80, or 9% of overall network) would be recommended for closure to all motorized modes of travel but 449 routes (51% of overall network) would be recommended for administrative use only. This would result in 1% fewer closed routes in Alternative D than already exist in Alternative A and in 45% more routes designated for administrative use only in Alternative D than exist in Alternative A.

While the number of routes recommended for closure and administrative use only would be 9% and 51% of the overall network respectively, the actual miles of routes closed under Alternative D would be 66 or about 7% and those limited to administrative use would be 313 or about 32% of the existing mileage. This would result in 4% fewer miles of routes closed in Alternative D than the current 11% closure mileage in Alternative A. Additionally, there would be 25% more miles of routes identified for administrative use only in Alternative D than the current 6% mileage in Alternative A. So, while the actual number of routes recommended for closure barely changes (1% fewer in Alternative D than in Alternative A) the actual number of miles of closed routes changes only slightly (4% fewer in Alternative D than in Alternative A) for an overall minor loss of available access.

Routes open to all motorized uses or open with special seasonal or vehicular restrictions would decrease to a total of 348 routes (40% of the network), or about 44% fewer open routes in Alternative D than the current 84% of open routes in Alternative A. In the long-term, travelers could experience major increases in traffic on open routes due to the concentration effects of excluding public motorized use from 6 out of every 10 existing BLM routes. Fewer open routes available to the public would concentrate travelers on fewer available routes, which could diminish realization of travelers' expectations for broader, uncrowded access, moderately reducing the potential for realizing various benefits that are possible with full access. However, with regard to route miles, Alternative D would recommend 614 miles with these open designations (62% of the proposed network). This would result in 21% fewer miles of open routes in Alternative D than the current 83% in Alternative A.

As the potential for new route development is realized with boom cycles in energy exploration and development, these impacts may be diminished to a minor, short-term extent on a localized basis as these new routes potentially become available for public use; such effects would ebb and flow with energy development.

Table O-15: Alternative D Route Designations for All TMAs (compared to Alt. A)

Alternative D Route Designations for All TMAs (compared to Alt. A)

Potential Route Designations	Alternative A				Alternative D							
	# Routes	% of Network	Miles	% Network	# Routes	% of Network	# Δ from Alt. A	% Δ from Alt. A	Miles	% of Network	# Δ from Alt. A	% Δ from Alt. A
Number of open routes	726	83%	763.6	77%	332	38%	-394	-45%	530.2	53.4%	-233.4	-24%
Number of open with vehicle restrictions routes	1	0.1%	52.7	5.3%	5	0.6%	4	0.5%	68.7	6.9%	16	1.6%
Number of open with seasonal restrictions routes	7	0.8%	7.2	0.7%	11	1.3%	4	0.5%	15.1	1.5%	7.9	0.8%
Number of limited to administrative use only routes	54	6.2%	61.1	6.2%	449	51%	395	45%	313.0	31.5%	251.9	25.4%
Number of closed routes	89	10%	108.6	11%	80	9%	-9	-1.0%	66.0	6.6%	-42.6	-4.3%
Average number/miles open routes per square mile (density)	1.5		1.7		0.7		-0.8	-52.6%	1.2		-0.4	-25.4%

Route Density*:* While Alternative A would continue managing existing route network at an average route density of 1.5 open routes per square mile at 1.7 miles per square mile for the TMAs, Alternative D would greatly reduce densities across all TMAs to an average of 0.7 open routes per square mile (an 53% reduction) at an average of 1.2 miles per square mile (a 25% reduction). On a specific TMA basis, the Tin Can Hill TMA would have the highest density of open routes at 2 routes per square mile while the Shepherd TMA would have the lowest density of open routes at 0.3 routes per square mile. In terms of miles of routes per square mile, the Shepherd TMA would have the high among the TMAs of 7.2 miles of open routes, while Warren TMA would have the low of 0.4 miles of open routes (See Figure 4.1.4b located at the end of this document).

Given that areas with densities under 1 open route and/or 1 open mile per square mile could be considered much less accessible by motorized travelers, eight TMAs in Alternative D (Gage Dome/Colony, Cottonwood/Weatherman, Grove Creek, Horsethief, Mill Creek/Bundy, Pryors, Shepherd and Warren) would meet or exceed this standard, primarily in routes per square mile.

Route Proliferation: Error! Reference source not found. displays the Alternative D route designations compared to the Alternative A designations for the 609 routes (781 miles) where route proliferation concerns were noted during the route evaluation process for 9 TMAs. Alternative D designations of ‘closed’, ‘limited’, or ‘open with restrictions’ on 355 routes (357 miles), would restrict access on 58% of the routes identified as having route proliferation

concerns; 41% more routes with restrictions in Alternative D than the current 18% in Alternative A.

Table O-16: Alternative D Routes In/Thru Route Proliferation Area of Concern for All TMAs

lternative D Routes In/Thru Route Proliferation Area of Concern for All TMAs												
	Alternative A				Alternative D							
Potential Route Designations	# Selected Routes	% of Selected Network	Miles Selected Routes	% Selected Network	# Selected Routes	% of Selected Network	# Δ from Alt. A	% Δ from Alt. A	Miles Selected Routes	% of Selected Network	# Δ from Alt. A	% Δ from Alt. A
Number of open routes	502	82%	591.7	76%	254	41.7%	-248	-40.7%	424.7	54.4%	-167	-21%
Number of open with restrictions routes	5	0.8%	58.8	7.5%	12	2.0%	7	1.1%	81.6	10.4%	22.8	2.9%
Number of limited to administrative use only routes	17	2.8%	25.9	3.3%	285	46.8%	268	44%	216.9	27.8%	191.0	24.4%
Number of closed routes	85	14%	104.9	13%	58	9.5%	-27	-4.4%	58.2	7.4%	-46.7	-6.0%

Public Safety Concerns: Error! Reference source not found. displays the Alternative D route designations compared to the Alternative A designations for the 13 routes (32 miles) where public safety concerns were noted during the route evaluation process for 3 TMAs. Alternative D designations of ‘closed’, ‘limited’, or ‘open with restrictions’ on 9 routes (12 miles), would restrict access on 69% of the routes identified as having public safety concerns; 31% more routes with restrictions in Alternative D than the current 39% in Alternative A.

Table O-17: Alternative D Routes with Public Safety Concerns for All TMAs

Alternative D Routes with Public Safety Concerns for All TMAs												
	Alternative A				Alternative D							
Potential Route Designations	# Selected Routes	% of Selected Network	Miles Selected Routes	% Selected Network	# Selected Routes	% of Selected Network	# Δ from Alt. A	% Δ from Alt. A	Miles Selected Routes	% of Selected Network	# Δ from Alt. A	% Δ from Alt. A
Number of open routes	8	61.5%	26.9	85%	4	31%	-4	-31%	19.9	63%	-7	-22%
Number of open with restrictions routes	0	0%	0	0%	3	23%	3	23%	6.7	21%	6.7	21.2%
Number of limited to administrative use only routes	0	0%	0	0%	4	31%	4	31%	2.9	9%	2.9	9.2%
Number of closed routes	5	38.5%	4.7	15%	2	15%	-3	-23%	2.1	7%	-2.6	-8%

O.6.1.4.2 Consequences

Summary: Generally, under Alternative D, fewer routes would be designated as open to all forms of motorized travel than in Alternatives A and C (refer to Figure 4.1.3a: Alternative D Route Designations for All TMAs (compared to Alt. A). The result would be a direct, long-term moderate decrease in access opportunities for all travelers to these areas. However, the consideration of motorized travel to other resources would minimize impacts to soils, vegetation, wildlife and sensitive cultural areas (refer to those corresponding impact analysis discussions by alternative).

General Travel Access: These results would be a long-term, direct, widespread, moderate reduction in general public access opportunities via motorized modes of travel. The closures would not greatly impact administrative users, but the additional administrative use only routes would, to a minor degree in the long-term, increase access for such uses. This would result in a minor, long-term, direct loss of motorized access opportunities for the general public and a negligible change in access availability for administrative uses, as such uses would continue to have access on administrative routes, absent of public use.

Route Density*:* As such, in this Alternative, the route designations of Alternative D would constitute a long-term, direct, localized major restriction of motorized access in terms of travel dispersal opportunities in 8 of 10 TMAs. However, limiting route densities would benefit sensitive resource concerns due to wildlife, cultural, or other ecologically sensitive areas (refer to those corresponding resource sections for impact analysis).

Route Proliferation: This Alternative would directly reduce the potential for illegal route creation in the long-term, which would contribute to minimizing harassment of wildlife, disruption of wildlife habitats, damage to soil, watershed, vegetation, air, or other resources, and the potential for adversely affecting natural areas to a moderate to major degree by reducing the number of routes with known route proliferation concerns (43 CFR 8342.1(a)(b)(d)).

Public Safety Concerns: This direct, long-term, reduction of routes would promote safety of all users of the public lands to a moderate to major degree by reducing the potential for public safety incidents on routes with known safety concerns (43 CFR 8342.1).

O.6.2 Implementation Level Impacts from Trails and Travel Management

This section discusses effects of alternatives for 11 site-specific travel plan areas (implementation decisions). This section is organized by resources/resource uses, by alternative, where implementation level impacts from motorized travel management actions, relative to 11 Travel Management Areas, would result in measurable impacts. Those resources/resources uses not specifically discussed would have negligible impacts.

O.6.2.1 Air Resources

O.6.2.1.1 Impacts Common to All Alternatives

Management of trails and routes will impact air quality. The greatest impacts to air quality from the use of trails and routes would result from motorized travel. These impacts vary greatly by the

route/trail surface, transportation mode, soil type, soil condition, size of vehicle, and speed of travel.

Most uses would increase fugitive dust; however there are no areas within the planning area which have a severe WEI rating. Additionally, mechanized travel would also increase tail pipe emissions. Throughout all alternatives the BLM would either leave routes open or closed, however simply closing roads does not reduce or eliminate impacts to air quality. The public is likely to shift use to other roads in the same area or move to a different area to recreate. In some instances, shifting to a different area could mean longer travel distances resulting in more impacts to air quality. Fewer miles of open roads would concentrate usage and impacts on the remaining open roads in an area. Since usage would likely remain at the same level, tailpipe emissions would be unaffected and localized fugitive dust levels would increase where more concentrated route use occurs.

Fugitive dust levels would decrease where road closures allow native plants to re-colonize the disturbed areas. Limiting authorized travel to administrative use would reduce traffic to a minimum and would have a similar effect to closures. The net effect of limiting and/or closing routes would be localized and would not be expected to offset increases where use is more concentrated.

Construction or maintenance of higher standard routes has the potential for greater speeds increasing fugitive dust. Unimproved and un-maintained routes generally keep vehicle speeds lower, reducing dust levels.

Impacts to air quality in the immediate vicinity of heavily used off road areas would be minor to moderate but would be short in duration. Route-maintenance activities, which would be limited to existing route types, maintenance levels, and frequencies, would also result in emissions. Watering and the use of chemical dust suppressants would greatly reduce the amount of dust emissions from maintenance and on haul roads from gravel pits, mines, and oil drilling sites.

O.6.2.1.2 Alternative A

Impacts would be the same as impacts common to all alternatives. Under Alternative A, all routes are “open” to all types of vehicle travel during all seasons with the exception of Shepherd Ah-Nei, South Hills, Sundance Lodge, Four Dances, Pompeys Pillar, and the Pryor Mountain Wild Horse Range which are closed or have designated open travel routes. Management under this alternative is summarized in **Error! Reference source not found.** below:

Table O-18: Travel Management Alternative A

Travel Management Alternative A	
Closed to All Vehicles	109 miles
Open to Motorcycles Only	1357 acres
Open to Technical 4WD by Permit Only	0

Open to Vehicles 50" or less	53 miles
Open Routes	764 miles
Open with additional management/seasonal closures	7 miles
Administrative Use Only	61 miles

The Shepherd Ah-Nei area has 53 miles of trails open for ATV and motorcycle use subject to closures to protect rider safety and protect resource values. South Hills (1,097 acres) is open to motorcycles only. Sundance Lodge (387acres), Four Dances (784 acres) are closed to motorized travel and emissions from OHV are reduced to only those from administrative activities. All routes at Pompeys Pillar outside the National Monument are closed except for administrative use. The National Monument visitors travel the 1/2 mile of paved road to the monument.

O.6.2.1.3 Alternative B

Impacts would be the same as impacts common to all alternatives. Management under Alternative B is summarized in **Error! Reference source not found.** below.

Table O-19: Travel Management Alternative B

Travel Management Alternative B	
Closed to All Vehicles	397 miles
Closed to Motorcycles	1357 acres
Open to Technical 4WD by Permit Only	0
Open to Vehicles 50" or less	65 miles
Open Routes	272 miles
Open with additional management/seasonal closures	12 miles
Administrative Use Only	247 miles

Closures of routes would likely move usage to other open routes or other areas with open routes, impacts to air resources would be unchanged. Routes designated open or limited with monitoring would increase awareness of emerging air quality issues and allow timely adaptive management thus reducing air resource impacts. Routes that are designated open with monitoring would provide the greatest opportunity to address air resource impacts. Routes that are designated limited with monitoring or limited to administrative use with monitoring would allow vegetative re-colonization and allow timely use of adaptive management, but usage and impacts would likely be shifted to another area. While Alternative B closes the most routes in the TMAs and the number of open with monitoring routes is larger than other Alternatives. Since public demand for access to public lands is expected to rise and closing routes would likely concentrate usage, Alternative B affords the best opportunity to limit impacts to air quality.

The overall impact to air quality in this Alternative would not be expected to exceed air quality standards.

O.6.2.1.4 Alternative C

Impacts would be the same as impacts common to all alternatives. Eleven areas would be designated as TMAs and routes managed under a Travel Management Plan. More specific management designated in a travel plan would be expected to further lower impacts to air resources. The overall impact to air quality in this Alternative would be localized and minor to negligible. The public would have access to 736 miles of open road subject to closures for safety and to protect resources. Increased demand and usage is expected but the overall impact to air quality in this Alternative would be localized and short term.

The following management under Alternative C is listed in **Error! Reference source not found.** below.

Table O-20: Travel Management Alternative C

Travel Management Alternative C	
Closed to All Vehicles	6 miles
Open to Motorcycles only	1357 acres
Open to Technical 4WD by Permit Only	1.5 miles
Open to Vehicles 50" or less	71 miles
Open Routes	825 miles
Open with additional management/seasonal closures	0.2 miles
Administrative Use Only	91 miles

O.6.2.1.5 Alternative D

Impacts would be the same as impacts common to all alternatives. Eleven areas would be designated as TMAs and routes managed under a Travel Management Plan. The number of miles of Open routes is 234 miles lower than Alternative A. Less open routes would allow more route reclamation resulting in less emissions and fugitive dust. More specific management designated in a travel plan would be expected to further lower the impacts. The overall impact to air quality in this Alternative would be localized and negligible. Management under this alternative is summarized in **Error! Reference source not found.** below:

Table O-21: Travel Management Alternative D

Travel Management Alternative D	
Closed to All Vehicles	66 miles
Open to Motorcycles only	1357 acres
Open to Technical 4WD by Permit Only	0

Open to Vehicles 50" or less	69 miles
Open Routes	530 miles
Open with additional management/seasonal closures	15 miles
Administrative Use Only	313 miles

O.6.2.2 Soil Resources

O.6.2.2.1 Impacts Common to All Alternatives

The primary impacts to soils from other management programs in the Planning Area include human-caused excessive erosion, soil compaction, and visual scars. These, in turn, can affect other resources such as water quality and quantity, health and makeup of vegetation communities, riparian function, health and sustainability of fish and wildlife habitats, etc.

Specifically, travel and transportation attributes, such as route type (primitive roads versus maintained roads), frequency and levels of use, types of vehicles, vehicle speeds, route structure, soil type, and surface type, come into play when assessing impacts to soils. Planning decisions that involve changes to the available number and overall miles of roads open for public or administrative use, the number of acres open or closed to off-road travel, road improvement or maintenance activities, or specific travel restrictions (e.g., speed limits, seasonal restrictions; etc.) would affect soils resources to varying degrees. Inasmuch as the use of motor vehicles on public routes constitutes the primary means of access to public lands for visitors to engage in a wide variety of motorized and non-motorized recreation activities and for commercial and administrative users to access facilities and resources, the supply and spatial extent of travel access networks for motor vehicles is an important factor in the condition of soils in the Travel Management Areas (TMA).

Travel through the TMAs is expected to increase due to the increased demand for open space and commercial recreation opportunities on public lands, as well as periodic up trends in energy exploration and development, including renewable energy production.

In analyzing the potential effects of route designations on soils, differences between each action alternative's set of route designations and the no action, current management route designations are analyzed and expressed primarily in terms of 'absolute percent change' versus a more familiar method of expressing 'relative percent change'. As a comparative example, in relative terms, an alternative that proposes to close 562 routes in Alternative X out of the total 877 routes that exist where only 89 routes out of 877 routes are closed under No Action represents a 631% increase in the number of routes closed in Alternative X relative to the No Action Alternative. In absolute terms, however, the 89 closed routes in the No Action Alternative represent 10% of the current total network while under Alternative X, the 562 closed routes represent 64% of the potential network, resulting in 54% more routes closed in Alternative X than in the No Action Alternative. Planners determined to use the 'absolute percent change', primarily because a) the route 'population', or total number of routes under consideration for designation is constant for all alternatives for each query and b) planners believe the results better depict the 'shifting' of designations within alternatives using the same route inventory.

By alternative, the impacts of route designations were analyzed with respect to several variables. These analyses were used to determine the effects of each alternative's route designations on soil resources.

O.6.2.2.2 Alternative A

In the following analyses, for all alternatives, impacts are categorized as:

- ***N = Negligible*** *= 8 out 10 to 10 out of 10 routes open*
- ***MI = Minor*** *= 5 out of 10 to 7 out of 10 routes open*
- ***MO = Moderate*** *= 3 out of 10 to 4 out of 10 routes open*
- ***MA = Major*** *= 0 out of 10 to 2 out of 10 routes open*

Soils with Severe Water Erosion Hazard Rating: Under the No Action Alternative, the 241 existing BLM routes (95 miles) that comprise the travel networks within soils with a severe water erosion rating would continue to be managed using five existing designation types, almost 9 out of every 10 existing routes (about 87%) open to all motorized uses. Additionally, the route density within these severe soils would remain fairly constant for the long-term at 4.2 open routes per square mile and 1.6 miles of open routes per square mile. The footprint (actual area of surface disturbance) of open routes affects approximately 129 acres or 0.4% of the 31,783 acres of soils with a severe water erosion hazard rating within the TMAs. In other words, for every 1 acre of route footprint within these soils, 245 acres would be without routes.

Under the No Action Alternative, the current open route network would continue the long-term, widespread conditions that directly and moderately affect soils rated as severe, regarding the water erosion hazard. Additionally, as the potential for new route development is realized with boom cycles in energy exploration and development, these impacts may increase to a minor, short-term extent on a localized basis as these new routes potentially become available and spread out public use; such effects would ebb and flow with energy development.

Although Alternative A carries forward closures and restrictions to administrative use only on 32 routes at 14 miles, the long-term, direct, localized effect of these restricted routes on reducing soil loss is negligible, due to the availability of 209 open routes at 82 miles with the route densities that are described above.

Soils with Moderate Water Erosion Hazard Rating: Under the No Action Alternative, the 323 existing BLM routes (173 miles) that comprise the travel networks within soils with a moderate water erosion rating would continue to be managed using five existing designation types, over 8 out of every 10 existing routes (about 85%) open to all motorized uses. Additionally, the route density within these moderate soils would remain fairly constant for the long-term at 3.9 open routes per square mile and 2.0 miles of open routes per square mile. The footprint (actual area of surface disturbance) of open routes affects approximately 192 acres or 0.4% of the 45,512 acres of soils with a moderate water erosion hazard rating within the TMAs. In other words, for every 1 acre of route footprint within these soils, 236 acres would be without routes.

Under the No Action Alternative, the current open route network would continue the long-term, widespread conditions that directly and moderately affect soils rated as moderate, regarding the water erosion hazard. Additionally, as the potential for new route development is realized with boom cycles in energy exploration and development, these impacts may increase to a minor, short-term extent on a localized basis as these new routes potentially become available and spread out public use; such effects would ebb and flow with energy development.

Although Alternative A carries forward closures and restrictions to administrative use only on 48 routes at 32 miles, the long-term, direct, localized effect of these restricted routes on reducing soil loss is negligible, due to the availability of 275 open routes at 142 miles with the route densities that are described above.

TMAs with known erosion scars: Under the No Action Alternative, of the 206 routes that were noted during evaluation as having erosion scars, 182 or 88% would be open to all types of motor vehicle use, 5 or 2% would be open with restrictions, while 16 routes or 8% would be limited to administrative use only and 3 routes or 2% would be closed. In the long-term, almost 9 out of every 10 existing BLM routes with erosion scars would remain available for public access in the No Action Alternative. With 88% of existing routes potentially open and only 12% potentially limited to administrative use only or closed to motor vehicle use, the localized, long-term effect of these route restrictions on reducing erosion potential in areas with known erosion scars would be negligible (43 CFR 8342.1(a)(d)).

Route Types: Motorized use occurs in many forms, all of which depend on travel networks that contain routes that are not only open to such uses, but also route types and/or conditions that are more conducive to particular types of motorized use. Well-designed, regularly maintained routes can do much in the way of reducing excessive erosion during heavy precipitation events, while a more primitive route with no design and little maintenance might actually contribute more to excessive erosion, though the actual surface disturbance area is less.

With regard to route types, of the 877 routes under the No Action Alternative, 50 routes (about 6%) currently classed as “roads” in the TMAs would be open to all types of motor vehicle use or open with restrictions, while 1 route (0.1%) classed as “semi-primitive roads”, 673 routes (76.8%) classed as “primitive roads” and 8 routes (0.9%) classed as ‘trails’ would be open/open with restrictions. Conversely, 1 route (about 0.1%) currently classed as “roads” in the TMAs would be limited to administrative use only or closed, while 14 routes (1.6%) classed as “semi-primitive roads”, 127 routes (14.5%) classed as “primitive roads” and 1 route (0.1%) classed as ‘trails’ would be administrative use only or closed.

Vehicle Use Levels in TMAs: Of the existing BLM routes within the TMAs under the No Action Alternative, 542 open routes (470 miles) or 81% are considered by resource specialists to have low vehicle use levels. Conversely, 95 open routes (219 miles) or 14% have vehicle use levels estimated as moderate and only 33 open routes (95 miles) or 5% are estimated to have heavy vehicle use. The combination of 89 closed routes (108 miles or 10% of all routes) and the continuation of low vehicle use levels on 81% of all open routes (60% of open route miles) would directly contribute, in the long-term, to lessening of the effects of route use, such as excessive loss of fine soils materials, soil compaction, the potential of off-road driving, etc. to a minor degree (43 CFR 8342.1(a)(d)).

Compared to Alternatives B and D, Alternative A would designate a much higher percentage of roads as "open", which would lead to increased resource conflicts from impacts identified in this section. Alternative A would have similar impacts to soil resources as Alternative C.

O.6.2.2.3 Alternative B

Soils with Severe Water Erosion Hazard Rating: Under Alternative B, the 241 existing BLM routes (95 miles) that comprise the travel networks within soils with a severe water erosion rating would be managed using five existing designation types shown, with just over 2 out of every 10 existing routes (49 routes or about 20%) open to all motorized uses or open with special seasonal or vehicular restrictions. This would result in 65% fewer open routes in Alternative B than would be open in Alternative A. Additionally; the route density within these soil areas would be reduced by 77% for the long-term to 1.0 open route per square mile and reduced by 50% to 0.8 miles of open routes per square mile. The footprint (actual area of surface disturbance) of open routes would affect approximately 79 acres or 0.25% of the 31,783 acres of severe rated soils within the TMAs (34% fewer acres than in Alternative A). In other words, for every 1 acre of route footprint within these soils, 403 acres would be without routes.

Alternative B proposes closures and restrictions to administrative use only on a combined 192 routes at 54 miles, a 66% more than in Alternative A. The long-term, direct, localized effect of these restricted routes on reducing soil loss is moderate to major, due to the reduced availability and use of open routes to only 49 (at 41 miles) with the route densities that are described above.

Soils with Moderate Water Erosion Hazard Rating: Under Alternative B, the 323 existing BLM routes (173 miles) that comprise the travel networks within soils with a moderate water erosion rating would be managed using five existing designation types shown, with almost 2 out of every 10 existing routes (55 routes or about 17%) open to all motorized uses or open with special seasonal or vehicular restrictions. This would result in 68% fewer open routes in Alternative B than would be open in Alternative A. Additionally; the route density within these soil areas would be reduced by 80% for the long-term to 0.8 open routes per square mile and reduced by 42% to 1.2 miles of open routes per square mile. The footprint (actual area of surface disturbance) of open routes would affect approximately 118 acres or 0.26% of the 45,512 acres of moderate rated soils within the TMAs (32% fewer acres than in Alternative A). In other words, for every 1 acre of route footprint within these soils, 383 acres would be without routes.

Alternative B proposes closures and restrictions to administrative use only on a combined 268 routes at 91 miles, a 68% more than in Alternative A. The long-term, direct, localized effect of these restricted routes on reducing soil loss is moderate to major, due to the reduced availability and use of open routes to only 55 (at 82 miles) with the route densities that are described above.

TMAs with known erosion scars: Under Alternative B, of the 206 routes that were noted during evaluation as having erosion scars, 26 or 13% would be open to all types of motor vehicle use (almost 76% fewer than in Alternative A), 5 or 2% would be open with restrictions (same as Alternative A), while 60 routes or 29% would be limited to administrative use only (21% more than in Alternative A) and 115 routes or 56% would be closed (54% more than in Alternative A). In the long-term, almost 2 out of every 10 existing BLM routes having erosion scars would remain available for public access in Alternative B. With 18% of existing routes potentially open

and 82% potentially limited to administrative use only or closed to motor vehicle use, the localized, long-term effect of these route restrictions on reducing erosion potential in areas with known erosion scars would be major (43 CFR 8342.1(a)(d)).

Route Types: With regard to route types, of the 877 routes under the Alternative B, 29 routes (about 2% fewer than Alternative A) currently classed as "roads" in the TMAs would be open to all types of motor vehicle use or open with restrictions, while 1 route (same as Alternative A) classed as "semi-primitive roads", 56 routes (70% fewer than Alternative A) classed as "primitive roads" and 2 routes (0.7% fewer than Alternative A) classed as 'trails' would be open/open with restrictions. Conversely, 22 routes (about 2.4% more than Alternative A) currently classed as "roads" in the TMAs would be limited to administrative use only or closed, while 14 routes (same as Alternative A) classed as "semi-primitive roads", 742 routes (70% more than Alternative A) classed as "primitive roads" and 7 routes (0.7% more than Alternative A) classed as 'trails' would be administrative use only or closed.

Vehicle Use Levels in TMAs: Of the existing BLM routes within the TMAs under the Alternative B, 31 of the open routes (107 miles) or 34% are considered by resource specialists to have low vehicle use levels. Conversely, 35 of the open routes (154 miles) or 44% have vehicle use levels estimated as moderate and only 26 of the open routes (89 miles) or 28% are estimated to have heavy vehicle use. The combination of 562 closed routes (397 miles or 64% of all routes) and the low vehicle use levels on 34% of open routes (31% of open route miles) and 79% of all administrative use only routes (78% of all administrative route miles) would directly contribute, in the long-term, to lessening of the effects of route use, such as excessive loss of fine soils materials, soil compaction, the potential of off-road driving, etc. to a major degree (43 CFR 8342.1(a)(d)).

Alternative B would be the most protective and beneficial to soil resources with nearly 64% of all route miles closed.

O.6.2.2.4 Alternative C

Soils with Severe Water Erosion Hazard Rating: Under Alternative C, the 241 existing BLM routes (95 miles) that comprise the travel networks within soils with a severe water erosion rating would be managed using five existing designation types shown, with almost 9 out of every 10 existing routes (214 routes or about 89%) open to all motorized uses or open with special seasonal or vehicular restrictions. This would result in 2% more open routes in Alternative C than would be open in Alternative A. Additionally, the route density within these soil areas would be increased by 2.4% for the long-term to 4.3 open routes per square mile and increased by 6.4% to 1.7 miles of open routes per square mile. The footprint (actual area of surface disturbance) of open routes would affect approximately 136 acres or 0.4% of the 31,783 acres of severe rated soils within the TMAs (5% more acres than in Alternative A). In other words, for every 1 acre of route footprint within these soils, 232 acres would be without routes.

Alternative C proposes closures and restrictions to administrative use only on a combined 27 routes at 54 miles, a 2% fewer than in Alternative A. The long-term, direct, localized effect of these restricted routes on reducing soil loss is negligible, due to the increased availability and use of open routes to 214 (at 87 miles) with the route densities that are described above.

Soils with Moderate Water Erosion Hazard Rating: Under Alternative C, the 323 existing BLM routes (173 miles) that comprise the travel networks within soils with a moderate water erosion rating would be managed using five existing designation types shown, with over 8 out of every 10 existing routes (271 routes or about 84%) open to all motorized uses or open with special seasonal or vehicular restrictions. This would result in 1% fewer open routes in Alternative C than would be open in Alternative A. Additionally; the route density within these soil areas would be decreased by 1.5% for the long-term to 3.8 open routes per square mile and increased by 13% to 2.2 miles of open routes per square mile. The footprint (actual area of surface disturbance) of open routes would affect approximately 215 acres or 0.5% of the 45,512 acres of moderate rated soils within the TMAs (9.6% more acres than in Alternative A). In other words, for every 1 acre of route footprint within these soils, 211 acres would be without routes.

Alternative C proposes closures and restrictions to administrative use only on a combined 52 routes at 14 miles, a 1% more than in Alternative A. The long-term, direct, localized effect of these restricted routes on reducing soil loss is negligible, due to the increased availability and use of open routes to 271 (at 159 miles) with the route densities that are described above.

TMAs with known erosion scars: Under Alternative C, of the 206 routes that were noted during evaluation as having erosion scars, 176 or 85% would be open to all types of motor vehicle use (3% fewer than in Alternative A), 4 or 2% would be open with restrictions (slightly less than Alternative A), while 20 routes or 10% would be limited to administrative use only (2% more than in Alternative A) and 6 routes or 3% would be closed (2% more than in Alternative A). In the long-term, over 8 out of every 10 existing BLM routes having erosion scars would remain available for public access in Alternative C. With 87% of existing routes potentially open and only 13% potentially limited to administrative use only, the localized, long-term effect of these route restrictions on reducing erosion potential in areas with known erosion scars would be negligible (43 CFR 8342.1(a)(d)).

Route Types: With regard to route types, of the 877 routes under the Alternative C, 50 routes (same as Alternative A) currently classed as “roads” in the TMAs would be open to all types of motor vehicle use or open with restrictions, while 12 routes (1.3% fewer than Alternative A) classed as “semi-primitive roads”, 664 routes (1% fewer than Alternative A) classed as “primitive roads” and 7 routes (0.1% fewer than Alternative A) classed as ‘trails’ would be open/open with restrictions. Conversely, 1 route (same as Alternative A) currently classed as “roads” in the TMAs would be limited to administrative use only or closed, while 3 routes (1.2% fewer than Alternative A) classed as “semi-primitive roads”, 136 routes (1% more than Alternative A) classed as “primitive roads” and 2 routes (0.1% more than Alternative A) classed as ‘trails’ would be administrative use only or closed.

Vehicle Use Levels in TMAs: Of the existing BLM routes within the TMAs under the Alternative C, 533 of the open routes (504 miles) or 80% are considered by resource specialists to have low vehicle use levels. Conversely, 95 of the open routes (221 miles) or 14% have vehicle use levels estimated as moderate and only 35 of the open routes (96 miles) or 5% are estimated to have heavy vehicle use. The combination of 22 closed routes (6 miles or 3% of all routes), the low vehicle use levels on 80% of the open routes (61% of open route miles) and 98% of administrative use only routes (99% of administrative route miles) would directly contribute, in the long-term, to lessening of the effects of route use, such as excessive loss of fine soils

materials, soil compaction, the potential of off-road driving, etc. to a minor degree (43 CFR 8342.1(a)(d)).

Alternative C actions would have the most adverse impacts to soil resources by managing approximately 90% of route miles as open and leaving almost 86% of roads open that are associated with moderate and severely erodible soils.

O.6.2.2.5 Alternative D

Soils with Severe Water Erosion Hazard Rating: Under Alternative D, the 241 existing BLM routes (95 miles) that comprise the travel networks within soils with a severe water erosion rating would be managed using five existing designation types shown, with over 5 out of every 10 existing routes (131 routes or about 54%) open to all motorized uses or open with special seasonal or vehicular restrictions. This would result in 32% fewer open routes in Alternative D than would be open in Alternative A. Additionally; the route density within these soil areas would be decreased by 37% for the long-term to 2.6 open routes per square mile and decreased by 20% to 1.3 miles of open routes per square mile. The footprint (actual area of surface disturbance) of open routes would affect approximately 110 acres or 0.35% of the 31,783 acres of severe rated soils within the TMAs (13% fewer acres than in Alternative A). In other words, for every 1 acre of route footprint within these soils, 288 acres would be without routes.

Alternative D proposes closures and restrictions to administrative use only on a combined 110 routes at 30 miles, a 32% more than in Alternative A. The long-term, direct, localized effect of these restricted routes on reducing soil loss is minor, due to the increased availability and use of open routes to 131 (at 65 miles) with the route densities that are described above.

Soils with Moderate Water Erosion Hazard Rating: Under Alternative D, the 323 existing BLM routes (173 miles) that comprise the travel networks within soils with a moderate water erosion rating would be managed using five existing designation types shown, with over 4 out of every 10 existing routes (148 routes or about 46%) open to all motorized uses or open with special seasonal or vehicular restrictions. This would result in 39% fewer open routes in Alternative D than would be open in Alternative A. Additionally; the route density within these soil areas would be decreased by 46% for the long-term to 2.1 open routes per square mile and decreased by 18% to 1.6 miles of open routes per square mile. The footprint (actual area of surface disturbance) of open routes would affect approximately 160 acres or 0.35% of the 45,512 acres of moderate rated soils within the TMAs (14% fewer acres than in Alternative A). In other words, for every 1 acre of route footprint within these soils, 284 acres would be without routes.

Alternative D proposes closures and restrictions to administrative use only on a combined 175 routes at 73 miles, a 39% more than in Alternative A. The long-term, direct, localized effect of these restricted routes on reducing soil loss is minor to moderate, due to the increased availability and use of open routes to 148 (at 116 miles) with the route densities that are described above.

TMAs with known erosion scars: Under Alternative D, of the 206 routes that were noted during evaluation as having erosion scars, 79 or 38% would be open to all types of motor vehicle use (50% fewer than in Alternative A), 9 or 4% would be open with restrictions (2% more than Alternative A), while 96 routes or 47% would be limited to administrative use only (39% more than in Alternative A) and 22 routes or 11% would be closed (9% more than in Alternative A). In

the long-term, just over 4 out of every 10 existing BLM routes having erosion scars would remain available for public access in Alternative D. With 42% of existing routes potentially open and 58% potentially limited to administrative use only or closed to motor vehicle use, the localized, long-term effect of these route restrictions on reducing erosion potential in areas with known erosion scars would be moderate (43 CFR 8342.1(a)(d)).

Route Types: With regard to route types, of the 877 routes under the Alternative D, 40 routes (about 1.1% fewer than Alternative A) currently classed as "roads" in the TMAs would be open to all types of motor vehicle use or open with restrictions, while 4 routes (0.3% more than Alternative A) classed as "semi-primitive roads", 298 routes (about 43% fewer than Alternative A) classed as "primitive roads" and 4 routes (0.5% fewer than Alternative A) classed as 'trails' would be open/open with restrictions. Conversely, 11 routes (about 1.1% more than Alternative A) currently classed as "roads" in the TMAs would be limited to administrative use only or closed, while 11 routes (0.4% fewer than Alternative A) classed as "semi-primitive roads", 502 routes (43% more than Alternative A) classed as "primitive roads" and 5 routes (0.4% more than Alternative A) classed as 'trails' would be administrative use only or closed.

Vehicle Use Levels in TMAs: Of the existing BLM routes within the TMAs under the Alternative D, 218 of the open routes (296 miles) or 66% are considered by resource specialists to have low vehicle use levels. Conversely, 79 open routes (212 miles) or 24% have vehicle use levels estimated as moderate and only 34 of the open routes (96 miles) or 10% are estimated to have heavy vehicle use. The combination of 80 closed routes (66 miles or 9% of all routes) and the low vehicle use levels on 66% of open routes (49% of open route miles) and 95% of administrative use only routes (96% administrative route miles) would directly contribute, in the long-term, to lessening of the effects of route use, such as excessive loss of fine soils materials, soil compaction, the potential of off-road driving, etc. to a moderate degree (43 CFR 8342.1(a)(d)).

O.6.2.3 Water Resources

O.6.2.3.1 Impacts Common to All Alternatives

Motorized and mechanized modes of travel on the BLM-administered land (outside of established TMAs) would be limited to existing roads and trails. Site-specific travel planning would be initiated if resources were impacted (not meeting Land Health Standards, excessive erosion). In all Alternatives, the BLM may close or restore unauthorized, user created roads and trails to prevent resource damage. Prohibiting off road travel reduces erosion and protects water quality and riparian resources.

Travel planning designated 11 Travel Management Areas (TMAs) to designate specific routes as open, closed or limited to administrative use. Resource values and impacts from resource uses were used to develop a range of Alternatives designed to protect resources and comply with specific resource objectives while maintaining a sound multiple use condition.

The primary issues related to water resources are the preservation of water quality, erosion, and drainage from road surfaces into wetlands. More specifically, the existence of routes with their areas of surface disturbance, as well as the use of motor vehicles on those routes that are

associated with water courses and/or sensitive soils constitutes a primary activity that has the potential to adversely affect water resources. Relative to travel management, this can occur by improper placement of routes; inappropriate behavior by visitors in these areas; the spread of invasive species or noxious weeds; or unauthorized off-road vehicle use. Therefore, the supply and spatial extent of travel access networks for motor vehicles is an important component for managing or providing various levels of protection for water resources.

O.6.2.3.2 Alternative A

See impacts common to all for general discussion pertaining to travel management impacts to water resources.

Motorized and mechanized modes of travel on the BLM-administered land (outside of established TMAs) would be limited to existing roads and trails. Site-specific travel planning would be initiated if water resources were impacted (not meeting Land Health Standards, excessive erosion). The BLM may close or restore unauthorized, user created roads and trails to prevent resource damage. Prohibiting off road travel reduces erosion and protects water quality and riparian resources.

The following analysis determines the impacts of potential water pollution sources associated with routes in proximity to different types of water sources and when in areas where severe or moderate erosion rated soils were identified. These characteristics were determined to have the most potential to impact water resources, pertaining to travel management.

Routes in and through perennial channels (within 25 feet): Of the 1.1 miles (5 routes) that are within 25 feet of perennial channels, 1 mile (4 routes) would be open and 0.1 mile (1 route) would be closed. Therefore 91 percent of these routes would continue producing sediment in close proximity of the stream. This sediment has a high likelihood of impacting water quality. There is also a high likelihood that noxious invasive species could increase thereby decreasing bank stability and producing additional sediment.

Routes associated with perennial channels (in, through, crossing, leads to/end at, proximate within 0.25 miles): Under the No Action Alternative, of the 63 routes that are in or through or proximate within 0.25 miles of perennial channels, 55 routes, or 87 percent, would be open to all types of motor vehicle use, and 8 routes or 13 percent would be closed. In the long-term, almost 9 out of every 10 existing BLM routes in or through or within 0.25 miles of perennial channels would remain available for public access. The localized, long-term effect of these open routes (erosion, drainage from road surfaces and the spread of noxious weeds into wetlands) and the potential for direct and indirect impacts to water resources would be major (43 CFR 8342.1(a)(d)).

Routes crossing or proximate to perennial channels in severe/moderate water erosion rated soils (in, through, within 300 feet of perennial): All 4.2 miles (14 routes) that are in, through or within 300 feet of perennial channels that are in severe or moderate water erosion rated soils, would be open to all vehicle uses. The actual footprint (area of surface disturbance) of open routes would be approximately eight acres in these areas. These sites have a high likelihood of extreme erosion with sediment delivery being a function of distance to the stream (43 CFR 8342.1(a)(d)).

Routes in and through intermittent channels (within 10 feet): Of the 158 routes with 82 miles that are in or through or within 10 feet of intermittent channels, 122 routes with 58 miles and 1 route at 5 miles open with vehicle restrictions would be open to use (77%), while 8 routes with 4 miles (5%) limited to administrative use and 27 routes with 15 miles (18%) would be closed. With about 77 percent of existing route miles potentially open and about 23 percent potentially limited to administrative use only or closed to motor vehicle use, the localized, long-term effect of these routes impacting water resources through erosion and drainage from road surfaces and the spread of noxious weeds into wetlands and the potential for direct and indirect impacts to water values would be major (43 CFR 8342.1(a)(d)).

Routes associated with intermittent channels (in, through, crossing, leads to/end at, proximate within 300 feet): Of the 642 routes that are in, through or within 300 feet of intermittent channels, 525 routes or 82 percent would be open to use, while 1 of the routes or 0.2 percent would be open with vehicle restrictions and 6 routes or 0.9 percent would be open with seasonal restrictions. Additionally, 35 routes or 6 percent would be limited to administrative use only and 75 routes or 12 percent would be closed. In the long-term, over 8 out of every 10 existing BLM routes in, through or within 300 feet of intermittent channels would remain available for public access in the No Action Alternative. With about 83 percent of existing routes potentially open and about 17 percent potentially limited to administrative use only or closed to motor vehicle use, the localized, long-term effect of these routes impacting water resources through erosion and drainage from road surfaces and the spread of noxious weeds into wetlands and the potential for direct and indirect impacts to water values would be major (43 CFR 8342.1(a)(d)).

O.6.2.3.3 Alternative B

See impacts common to all for general discussion pertaining to travel management impacts to water resources.

In action alternatives the BLM establishes Travel Management Areas (TMAs) to minimize impacts and provide a spectrum of motorized and non-motorized recreational opportunities. In each TMA motorized travel routes are designated open, closed or open with restrictions by resource issues analyzed in travel planning. Outside of the TMAs, motorized and mechanized travel would be limited to designated roads and trails as established in the 2001 OHV EIS. These routes have negligible impacts on water resources. Riparian areas are monitored for PFC on a regular basis and resource issues, primarily erosion/run-off and noxious invasive species spread, would be managed on a case by case basis as they are identified. In this alternative, riparian areas would be prioritized, by resource concerns, and treated to maintain or improve water quality conditions.

An implementation and monitoring plan would be initiated for the TMAs within 3-5 years of the ROD. The plan would include signing, mapping, information and education, and monitoring of impacts associated with continued use on designated open routes, etc. The implementation plan would also identify criteria for route variances specific to each TMA. In this plan, the BLM may close or restore unauthorized, user created roads and trails to prevent resource damage. The travel plan would also allow for, upon project completion, roads used for commercial or administrative access on BLM-administered lands would be reclaimed, unless the route provides

specific benefits for public access, minimizes impacts to the resource and would be considered on a case-by-case basis.

The BLM may close or restore unauthorized, user created roads and trails to prevent resource damage. Prohibiting off road travel reduces erosion and protects water quality and riparian resources.

Alternative B is the most restrictive in closing roads or limiting them to vehicle types, dates or to administrative use only. Impacts to water quality from the effects of erosion, sediment delivery to water sources and the spread of noxious weeds to areas that may impact water quality, would be the least in alternative B travel management.

The following analysis determines the impacts of potential water pollution sources associated with routes in proximity to different types of water sources and when in areas where severe or moderate erosion rated soils were identified. These characteristics were determined to have the most potential to impact water resources, pertaining to travel management.

Routes in and through perennial channels (within 25'): Of the 5 routes that are within 25' of perennial channels, 2 routes with 0.3 miles (27%) would be open, while no routes would be limited to administrative use only and 3 routes with 0.8 miles (73%) would be closed. Therefore 27 percent of these route miles would continue producing sediment in close proximity of the stream. Alternative B road designations would have the least impact, with less sediment input to perennial channels and less likelihood of promoting noxious weed infestations (43 CFR 8342.1(a)(d)).

Routes associated with perennial channels (in, through, crossing, leads to/end at, proximate within 0.25 miles): Under Alternative B, of the 63 routes that are in or through or within 0.25 miles of perennial channels, 17 or 27% would be open to all types of motor vehicle use, with 2 routes (3.2%) open with vehicle restrictions. Additionally, 9 routes or 14% would be limited to administrative use only and 35 routes or 56% would be closed. With 70 percent of the routes designated closed or limited to administrative use only (as opposed to only 13 percent in alternative A) sediment production and potential noxious weed infestations would be minimized (43 CFR 8342.1(a)(d)).

Routes crossing or proximate to perennial channels in severe/moderate water erosion rated soils (in, through, within 300' of perennial): Of the 14 routes that are in, through or within 300' of perennial channels that are in severe or moderated water erosion rated soils, 5 routes with 2.8 miles (67%) would be open to all vehicle uses. Additionally, 4 routes with 0.4 miles (10%) would be limited to administrative use only and 5 routes with 1 mile (23%) would be closed to motor vehicle use. The actual footprint (area of surface disturbance) of open routes would be approximately 6.4 acres in these areas (21% fewer than Alternative A). The footprint for routes that would be closed (and eventually restored to a more natural condition) would be 1.2 acres (15% more than Alternative A). With 33 percent of the route miles closed or limited to administrative access only (as opposed to zero percent in alternative A) impacts from sediment production and noxious weed infestation would be less than other alternatives (43 CFR 8342.1(a)(d)).

Routes in and through intermittent channels (within 10'): Of the 158 routes that are in or through or within 10' of intermittent channels, 33 routes with 27 miles (32%) would be open to use with 4 routes at 6.8 miles (8%) open with vehicle restrictions. Additionally, 46 routes with 17.6 miles (21%) would be limited to administrative use only and 75 routes with 32 miles (39%) would be closed. Having 50% of the route miles closed or limited to administrative use only (as compared to 23% in alternative A) would minimize impacts to water resources from sediment production and noxious weed infestation (43 CFR 8342.1(a)(d)).

Routes associated with intermittent channels (in, through, crossing, leads to/end at, proximate within 300'): Of the 642 routes that are in, through or within 300' of intermittent channels, 71 routes or 11% would be open to use, while 4 routes or 0.6% would be open with vehicle and 5 routes or 0.8% would be open with seasonal restrictions (for a total of 70% fewer than Alternative A). Additionally, 176 routes or 27% would be limited to administrative use only (22% more than Alternative A) and 386 routes or 60% would be closed (48% more than Alternative A). Having 87% of the routes closed or limited to administrative use only (as opposed to 17% in alternative A) would minimize impacts to water resources from sediment production and noxious weed infestation (43 CFR 8342.1(a)(d)).

O.6.2.3.4 Alternative C

See impacts from alternative B for general discussion pertaining to travel management impacts to water resources in action alternatives.
Alternative C has the least restrictions to road designations (fewer routes closed, limited by dates or vehicle type, or limited to administrative use only). Alternative C would have the most adverse impacts to water quality from the effects of erosion, sediment delivery to water sources and the spread of noxious weeds to areas that would impact water quality.

Routes in and through perennial channels (within 25'): Of the 5 routes that are within 25' of perennial channels, 5 routes with 1.1 miles (100%) would be open and zero routes would be closed or limited (as opposed to 73 percent in alternative B). (43 CFR 8342.1(a)(d)). Alternative C road designations would have the highest impact (similar to alternative A), with the most potential for sediment input to perennial channels and promoting noxious weed infestations that would impact water quality (43 CFR 8342.1(a)(d)).

Routes associated with perennial channels (in, through, crossing, leads to/end at, proximate within 0.25 miles): Under Alternative C, of the 63 routes that are in or through or within 0.25 miles of perennial channels, 60 or 95% would be open to all types of motor vehicle use, with 2 routes (3.2%) open with vehicle restrictions. Additionally, 1 route or 2% would be limited to administrative use only and no routes would be closed. Having 98% of existing routes open and only 2% limited to administrative use only, impacts from sediment input to perennial channels and potential noxious weed infestations would impact water quality more than other alternatives (43 CFR 8342.1(a)(d)).

Routes crossing or proximate to perennial channels in severe/moderate water erosion rated soils (in, through, within 300' of perennial): Of the 14 routes that are in, through or within 300' of perennial channels that are in severe or moderated water erosion rated soils, 14 routes with 4.2 miles (100%) would be open to all vehicle uses (same as Alternative A). The actual

footprint (area of surface disturbance) of open routes would be approximately 6.4 acres in these areas (same as Alternative A. The impacts for Alternative C would be the same as Alternative A.

Routes in and through intermittent channels (within 10'): Of the 158 routes that are in or through or within 10' of intermittent channels, 130 routes with 64 miles (78%) would be open to use and 4 routes with 7.3 miles (9%) would be open with vehicle restrictions. Additionally, 20 routes with 10 miles (12%) would be limited to administrative use only and 4 routes with 0.8 miles (1%) would be closed. With about 87% of existing routes potentially open and about 13% potentially limited to administrative use only or closed to motor vehicle use (as opposed to 86 percent in alternative B), the impacts from sediment input to perennial channels and potential noxious weed infestations would be higher than alternatives B and D (43 CFR 8342.1(a)(d)).

Routes associated with intermittent channels (in, through, crossing, leads to/end at, proximate within 300'): Of the 642 routes that are in, through or within 300' of intermittent channels, 546 routes or 85% would be open to use, while 6 routes or 1% would be open with vehicle and 5 routes and no routes would be open with seasonal restrictions. Additionally, 76 routes or 12% would be limited to administrative use only and 14 routes or 2% would be closed. Having about 86% of existing routes potentially open and about 14% potentially limited to administrative use only or closed to motor vehicle use, impacts from sediment input to perennial channels and potential noxious weed infestations would impact water quality more than alternatives B and D (43 CFR 8342.1(a)(d)).

O.6.2.3.5 Alternative D

See impacts from alternative B for general discussion pertaining to travel management impacts to water resources in action alternatives.

Alternative D has a moderate number of restrictions to road designations compared to other Alternatives. Alternative D would have a moderate level of impacts to water quality from the effects of erosion, sediment delivery to water sources and the spread of noxious weeds to areas that would impact water quality, compared to other alternatives.

Routes in and through perennial channels (within 25'): Of the 5 routes that are within 25' of perennial channels, 2 routes with 0.3 miles (27%) would be open, while 3 routes with 0.8 miles (73%) would be limited to administrative use only and no routes would be closed. With only 27% of existing routes potentially open and 73% potentially limited to administrative use only, the impacts from sediment input to perennial channels and potential noxious weed infestations would affect water quality more than alternative B, but less than alternatives A and C (43 CFR 8342.1(a)(d)).

Routes associated with perennial channels (in, through, crossing, leads to/end at, proximate within 0.25 miles): Under Alternative D, of the 63 routes that are in or through or within 0.25 miles of perennial channels, 28 or 44% would be open to all types of motor vehicle use, with 2 routes (3.2%) open with vehicle restrictions (for a total of 40% fewer open routes than in Alternative A). Additionally, 32 routes or 51% would be limited to administrative use only (51% more than Alternative A) and 1 routes or 2% would be closed (11% fewer than Alternative A). With 48% of existing routes potentially open and only 52% potentially limited to administrative use only or closed to motor vehicle use, the impacts from sediment input to perennial channels

and potential noxious weed infestations would affect water quality more than alternative B, but less than alternatives A and C (43 CFR 8342.1(a)(d)).

Routes crossing or proximate to perennial channels in severe/moderate water erosion rated soils (in, through, within 300' of perennial): Of the 14 routes that are in, through or within 300' of perennial channels that are in severe or moderated water erosion rated soils, 7 routes with 3.1 miles (74%) would be open to all vehicle uses. Additionally, 7 routes with 1.1 miles (26%) would be limited to administrative use only and no routes would be closed to motor vehicle use. The actual footprint (area of surface disturbance) of open routes would be approximately 6.8 acres in these areas (16% fewer than Alternative A). With 74% of existing routes potentially open and 26% potentially limited to administrative use only, the impacts from sediment input to perennial channels and potential noxious weed infestations would impact water quality more than alternative B, but less than alternatives A and C (43 CFR 8342.1(a)(d)).

Routes in and through intermittent channels (within 10'): Of the 158 routes that are in or through or within 10' of intermittent channels, 85 routes with 47 miles (58%) would be open to use and 4 routes with 7.3 miles (9%) open with vehicle restrictions. Additionally, 52 routes with 20 miles (24%) would be limited to administrative use only and 17 routes with 7.3 miles (9%) would be closed. Having about 67 percent of existing routes potentially open and about 33 percent potentially limited to administrative use only or closed to motor vehicle use, impacts from sediment input to perennial channels and potential noxious weed infestations would impact water quality more than alternative B, but less than alternatives A and C (43 CFR 8342.1(a)(d)).

Routes associated with intermittent channels (in, through, crossing, leads to/end at, proximate within 300'): Of the 642 routes that are in, through or within 300' of intermittent channels, 272 routes or 42% would be open to use, while 5 routes or 0.8% would be open with vehicle and 9 routes or 1.4% would be open with seasonal restrictions (for a total of 38% fewer than Alternative A). Additionally, 306 routes or 48% would be limited to administrative use only (42% more than Alternative A) and 50 routes or 8% would be closed (4% more than Alternative A). With about 45% of existing routes potentially open and about 55% potentially limited to administrative use only or closed to motor vehicle use, impacts from sediment input to perennial channels and potential noxious weed infestations would impact water quality more than alternative B, but less than alternatives A and C (43 CFR 8342.1(a)(d)).

In summary, water resources would be adversely impacted more from Alternatives A and C. Alternative B would be the most protective to water resources and Alternative D would be more protective than Alternatives A and C, but less than Alternative B.

O.6.2.4 Forest and Woodlands

O.6.2.4.1 Alternative A

Under this Alternative, motorized vehicle travel would be confined to existing roads and trails, except for those specifically closed. The total number of miles of travel routes that specifically impact forested areas is not known.

Limiting motorized travel to existing roads and trails would ensure that forest and woodland areas with young seedlings would be protected from damage, growth deformity, and/or mortality. However, the lack of a formal travel management plan would allow duplicate and unneeded routes to remain open; thereby contributing to increased erosion and higher maintenance costs. These routes have negative impacts on forest resources; including, encouraging unauthorized forest products removal, the spread of invasive plants, and damaging or killing seedlings. However, existing routes provide access to forest resources and reduce the cost of forest treatments and harvest. Closure and decommissioning of roads that contribute to resource damage, or which are not needed, would afford greater protection for forest resources, but would increase costs and restrict or eliminate some forest management treatments. The negative impacts to resources from duplicate unmaintained routes outweigh the benefits of additional access to forest and woodland acres and lower cost of treatments.

O.6.2.4.2 Alternative B

The establishment of eleven Travel Management Areas (TMAs) would reduce the number of miles of open roads and trails and improve route monitoring and maintenance. The reduction of routes would reduce the negative impacts to forest resources as discussed in Alternative A, except for the possible reduction in access for potential harvest and forest treatments. The increased cost of constructing and decommissioning temporary routes needed for forest management activities would reduce the amount of acres treated over the life of the plan.

Reclamation of roads upon completion of projects, unless the route provides specific benefits for public access, would minimize detrimental impacts to forests and woodlands and provide the conditions required for rapid forest regeneration. This Alternative closes or limits the most routes and reduces access for forest treatments and harvest more than the other Alternatives. The current level of planning would limit access to areas such as Tin Can Hill and Mill Creek/Bundy, thereby increasing the costs of forest management treatments. Closures under this Alternative would restrict access and eliminate all but the most expensive hand treatments in portions of some areas such as Grove Creek.

O.6.2.4.3 Alternative C

The impacts to forest resources would be similar to Alternative A. Soil compaction, loss of infiltration capacity, erosion, and vegetation loss would be less than Alternative A, but more than Alternatives B and D due to the increase in routes open for public use.

O.6.2.4.4 Alternative D

Impacts to forest resources would be the same as described in Alternative A. This Alternative is a compromise between public use and resource protection needs.

O.6.2.5 Rangelands

O.6.2.5.1 Impacts Common to all Alternatives

Travel on roads/trails could increase disturbances to soils and vegetation; resulting in increased soil compaction, rutting, surface runoff, and subsequent erosion. The severity of disturbance would depend upon soil conditions (moist or wet vs. dry or frozen), frequency, vehicle weight

(lbs./sq. inch) and type, tire width or tread, and driver type. Effects would be greatest in areas of concentrated use that are not maintained or improved. Compaction and erosion could occur to the extent that natural revegetation fails and some sort of mechanical treatment would be required. Travel during wet soil conditions could lead to rutting and the creation of Alternative routes, parallel and/or braided roads/trails. Ruts can provide a channel for concentrated flow to accelerate soil erosion.

BLM roads/trails that are properly designed, graded, and maintained would provide for improved road/trail conditions. This could result in decreased soil disturbances associated with creation of parallel or braided roads/trails and associated runoff and subsequent erosion. Roads/trails with poor design and improper maintenance would be the most susceptible to erosion due to runoff, compacted surfaces, and lack of vegetative cover. Typically, poorly designed and improperly maintained roads are incised and channel water, leading to erosion within the road and vegetative loss adjacent to the road. Appropriate design standards and features that minimize surface runoff and subsequent soil erosion and subsequent vegetative loss would be required for new roads/trails.

Limiting road density per square mile could cause road closures in some locations of the planning area. The primary negative effects of high road density are habitat fragmentation/degradation and disturbance/disruption to wildlife and grazing animals.

Common road closure techniques include (but are not limited to) the following:

- Signage that indicates the road is closed and being allowed to naturally revegetate.
- Rubble and debris piles at road entrance points.
- Physical barriers, such as gates and tank traps.
- Mechanical ripping and obliteration of the road surface, followed by reseeding.

O.6.2.5.2 Alternative A

Under Alternative A, travel is restricted to “existing roads and trails”. Allowing OHV travel off existing roads and vehicular routes to retrieve big game kills and to access primitive campsites would increase disturbance from OHVs and trampling by humans, increasing vegetation damage in these localized areas. Rangeland management and monitoring sites, areas or sites of seeding, predator control, vegetation treatment, fuels management, monitoring or exclosures are typically accessed by motorized vehicle along existing routes. Total closure of routes to or near these areas or sites could have a detrimental effect on the ability of the agency personnel to access them to conduct research, treatments, reclamation or other related activities.

With regard to the 259 routes that are associated with rangeland management or monitoring areas or sites under the No Action Alternative, 237 routes (446 miles) or about 92% would continue to be managed as open/open with restrictions or limited to administrative use only. Although Alternative A carries forward 22 route closures, over 8% of routes associated with facilities, the direct, long-term effect of these closed routes on the ability of agency personnel to access these

sites would be negligible, due to the continued availability of over 9 out of every 10 existing BLM routes for these activities.

Routes that are proposed for closure would either be allowed to reclaim vegetative cover naturally over time or would receive some degree of mechanical reclamation following closure. In either case, the route acreage returned to a more natural condition would potentially change overall upland health associated with such routes.

Under the No Action Alternative, no routes would be slated for active, mechanical reclamation. However, 81 existing BLM routes would be closed and natural reclamation would be allowed to occur. The footprint (actual area of surface disturbance) of these routes would be approximately 120 acres.

O.6.2.5.3 Alternative B

Of the 259 routes that are associated with rangeland management or monitoring areas or sites under Alternative B, 142 routes (385 miles) or about 55% would continue to be managed as open/open with restrictions or limited to administrative use only (36% fewer than in Alternative A). Because Alternative B would close 117 routes, or over 45% of routes associated with these sites, the direct, long-term effect of these closed routes on the ability of agency personnel to access livestock grazing facilities would be moderate to major, due to the availability of over 5 out of every 10 existing BLM routes for these activities.

Under Alternative B, no routes would be slated for active, mechanical reclamation (same as Alternative A). However, 458 existing BLM routes would be closed and natural reclamation would be allowed to occur. The footprint (actual area of surface disturbance) of these routes would be approximately 404 acres, 285 more acres than Alternative A.

O.6.2.5.4 Alternative C

Of the 259 routes that are associated with rangeland management or monitoring areas or sites under Alternative C, 247 routes (494 miles) or over 95% would continue to be managed as open/open with restrictions or limited to administrative use only (4% more than in Alternative A). Because Alternative C would close just 12 routes, at 5% of routes associated with facilities, the direct, long-term effect of these closed routes on the ability of agency personnel to access these sites would be negligible, due to the availability of over 9 out of every 10 existing BLM routes for these activities.

Under Alternative C, no routes would be slated for active, mechanical reclamation (same as Alternative A). However, 18 existing BLM routes would be closed and natural reclamation would be allowed to occur. The footprint (actual area of surface disturbance) of these routes would be approximately 6 acres, 63 fewer acres than Alternative A.

O.6.2.5.5 Alternative D

Of the 259 routes that are associated with rangeland management or monitoring areas or sites under Alternative D, 247 routes (523 miles) or about 95% would continue to be managed as open/open with restrictions or limited to administrative use only. Because Alternative D would close 14 routes, or about 5% of routes associated with these sites, the direct, long-term effect of

these closed routes on the ability of agency personnel to access most sites would be negligible, due to the availability of over 9 out of every 10 existing BLM routes for these activities.

Under Alternative D, no routes would be slated for active, mechanical reclamation (same as Alternative A). However, 66 existing BLM routes would be closed and natural reclamation would be allowed to occur. The footprint (actual area of surface disturbance) of these routes would be approximately 73 acres, 47 fewer acres than Alternative A.

O.6.2.6 Riparian and Wetlands Resources

O.6.2.6.1 Impacts Common to All Alternatives

The primary impact issues to riparian resources from other management programs in the Planning Area include loss or alteration of riparian communities and/or corridors, ground disturbance, increased invasion of noxious weeds and other non-native species, decreased water availability, increased fragmentation, and detrimental changes to riparian function—all of which can prevent or retard riparian communities from "maturing" toward the appropriate climax community for the specific site. Surface disturbing actions that alter riparian characteristics (e.g. vegetative structures and composition, water quantity, water quality, erosion potential) also have the potential to affect riparian health.

Inasmuch as the use of motor vehicles on public routes that lead to or are proximate to, or are in and through riparian areas constitutes a primary activity that has the potential to adversely affect riparian characteristics and, in turn, proper riparian function. Relative to travel management, this can occur by improper placement of routes; inappropriate behavior by visitors in these areas; or unauthorized off-road vehicle use. Therefore, the supply and spatial extent of travel access networks for motor vehicles is an important component for managing or providing various levels of protection for these areas.

O.6.2.6.2 Alternative A

Motorized and mechanized modes of travel on BLM-administered land would be limited to existing roads and trails. Site specific travel planning would be initiated if resources were impacted (not meeting Land Health Standards, excessive erosion). In all Alternatives, the BLM may close or restore unauthorized, user created roads and trails to prevent resource damage. Prohibiting off road travel reduces erosion and protects water quality and riparian resources.

The following analysis was completed to determine the potential impacts of the spread of noxious, invasive plant species to riparian areas and surrounding uplands as well as impacts from erosion caused by altered drainage patterns. The real impacts are unknown, however, varying degrees of proximity were analyzed to aid in future monitoring efforts and management action to preserve or enhance riparian habitat.

Routes in/through Riparian Areas: Under the No Action Alternative, of the 24 routes that are in or through riparian areas, 21 or 88% would be open to all types of motor vehicle use, while no routes would be limited to administrative use only and 3 routes or 12% would be closed. In the long-term, almost 9 out of every 10 existing BLM routes in or through riparian areas would remain available for public access in the No Action Alternative. With 88% of existing routes

potentially open and only 12% potentially closed to motor vehicle use, the localized, long-term effect of these route restrictions on reducing public motorized access and its potential for direct and indirect impacts to riparian values would be negligible (43 CFR 8342.1(a)(b)(d)).

This results in a higher level of impact, primarily from the potential spread of noxious, invasive plant species to the riparian area and surrounding uplands, which degrades riparian function.

Of the 10 routes that are in, through or cross riparian areas that are also in soils with severe or moderate water erosion hazard ratings, 10 or 100% would be open to all types of motor vehicle use, while no routes would be limited to administrative use only or closed. In the long-term, 10 out of every 10 existing BLM routes in or through riparian areas with these soils would remain available for public access in the No Action Alternative. With 100% of existing routes potentially open and no routes limited to administrative use only or closed to motor vehicle use, the localized, long-term effect of these route restrictions on reducing public motorized access and its potential for direct and indirect impacts to riparian values would be negligible (43 CFR 8342.1(a)(b)(d)). This results in a higher level of impact, primarily from the potential spread of noxious, invasive plant species to the riparian area and surrounding uplands and potential off route travel that increases erosion from surface disturbance.

Routes within 300' of Riparian Areas: Of the 35 routes that are within 300' of riparian areas, 29 or 83% would be open, while no routes would be limited to administrative use only and 6 routes or 17% would be closed. In the long-term, just over 8 out of every 10 existing BLM routes within 300' of riparian areas would remain available for public access in the No Action Alternative. With 83% of existing routes potentially open and 17% potentially closed to motor vehicle use, the localized, long-term effect of these route restrictions on reducing public motorized access and its potential for direct and indirect impacts to riparian values would be negligible (43 CFR 8342.1(a)(b)(d)).

Of the 23 routes that are within 300' of riparian areas that are also in soils with severe or moderate water erosion hazard ratings, 19 or 83% would be open to all types of motor vehicle use, while no routes would be limited to administrative use only and 4 routes or 17% would be closed. In the long-term, just over 8 out of every 10 existing BLM routes within 300' of riparian areas in these soil types would remain available for public access in the No Action Alternative.

With 87% of existing routes potentially open and 17% potentially closed to motor vehicle use, the localized, long-term effect of these route restrictions on reducing public motorized access and its potential for direct and indirect impacts to riparian values would be negligible (43 CFR 8342.1(a)(b)(d)).

Routes within 0.25 miles of Riparian Areas: Of the 21 routes that are within 0.25 miles of riparian areas, 14 or 66.5% would be open to use (with 2 of the routes or 9.5% open with seasonal restrictions), while 5 routes or 24% would be limited to administrative use only and 2 routes or 9.5% would be closed. In the long-term, 6.5 out of every 10 existing BLM routes within 0.25 miles of riparian areas would remain available for public access in the No Action Alternative. With about 67% of existing routes potentially open and about 33% potentially limited to administrative use only or closed to motor vehicle use, the localized, long-term effect

of these route restrictions on reducing public motorized access and its potential for direct and indirect impacts to riparian values would be minor (43 CFR 8342.1(a)(b)(d)).

Of the 12 routes that are within 0.25 miles of riparian areas that are also in soils with severe or moderate water erosion hazard ratings, 8 or 67% would be open to all types of motor vehicle use (with 1 of the routes or 8% open with seasonal restrictions), while 4 routes or 33% would be limited to administrative use only and no routes would be closed. In the long-term, 6.7 out of every 10 existing BLM routes within 0.25 miles of riparian areas in these soil types would remain available for public access in the No Action Alternative. With 67% of existing routes potentially open and 33% potentially limited to administrative use only or closed to motor vehicle use, the localized, long-term effect of these route restrictions on reducing public motorized access and its potential for direct and indirect impacts to riparian values would be minor (43 CFR 8342.1(a)(b)(d)).

Routes within 0.5 miles of Riparian Areas: Of the 19 routes that are within 0.5 miles of riparian areas, 12 or 63% would be open to use (with 1 of the routes or 5% open with seasonal restrictions), while 1 route or 5% would be limited to administrative use only and 6 routes or 32% would be closed. In the long-term, over 6 out of every 10 existing BLM routes within 0.5 miles of riparian areas would remain available for public access in the No Action Alternative. With about 63% of existing routes potentially open and about 37% potentially limited to administrative use only or closed to motor vehicle use, the localized, long-term effect of these route restrictions on reducing public motorized access and its potential for direct and indirect impacts to riparian values would be minor (43 CFR 8342.1(a)(b)(d)).

Of the 5 routes that are within 0.5 miles of riparian areas that are also in soils with severe or moderate water erosion hazard ratings, 3 or 60% would be open to all types of motor vehicle use (with 1 of the routes or 20% open with seasonal restrictions), while no routes would be limited to administrative use only and 2 routes or 40% would be closed. In the long-term, 6 out of every 10 existing BLM routes within 0.5 miles of riparian areas in these soil types would remain available for public access in the No Action Alternative. With 60% of existing routes potentially open and 40% potentially closed to motor vehicle use, the localized, long-term effect of these route restrictions on reducing public motorized access and its potential for direct and indirect impacts to riparian values would be minor (43 CFR 8342.1(a)(b)(d)).

In general, Alternative A and C allow for more potential impacts to riparian resources than Alternatives B and D. Alternatives A and C leave many routes open for motorized travel without regard to the routes potential impact to various resources, including riparian.

O.6.2.6.3 Alternative B

In action Alternatives the BLM established 11 Travel Management Areas (TMAs) to minimize impacts and provide a spectrum of motorized and non-motorized recreational opportunities. In each TMA motorized travel routes are designated open, close or open with restrictions by resource issues analyzed in travel planning. Outside of the TMAs, motorized and mechanized travel would be limited to designated roads and trails as established in the 2001 OHV EIS. These routes have negligible impacts on riparian resources. Riparian areas are monitored for PFC on a regular basis and resource issues, primarily erosion/run-off and noxious invasive species spread,

would be managed on a case by case basis as they are identified. In this Alternative, riparian areas would be prioritized, by resource concerns, and treated to improve riparian conditions. An implementation and monitoring plan would be initiated for the TMAs within 3-5 years of the ROD. The plan would include signing, mapping, information and education, and monitoring of impacts associated with continued use on designated open routes, etc. The implementation plan would also identify criteria for route variances specific to each TMA. In this plan, the BLM may close or restore unauthorized, user created roads and trails to prevent resource damage. The travel plan would also allow for, upon project completion, roads used for commercial or administrative access on BLM-administered lands would be reclaimed, unless the route provides specific benefits for public access, minimizes impacts to the resource and would be considered on a case-by-case basis.

The following analysis was completed to determine the potential impacts of the spread of noxious, invasive plant species to riparian areas and surrounding uplands as well as impacts from erosion caused by altered drainage patterns. The real impacts are unknown, however, varying degrees of proximity were analyzed to aid in future monitoring efforts and management action to preserve or enhance riparian habitat.

Routes in/through Riparian Areas: Under Alternative B, of the 24 routes that are in or through riparian areas, 6 or 25% would be open to all types of motor vehicle use (almost 63% fewer than in Alternative A), while 6 routes or 25% would be limited to administrative use only (25% more than in Alternative A) and 12 routes or 50% would be closed (38% more than in Alternative A). In the long-term, over 2 out of every 10 existing BLM routes in or through riparian areas would remain available for public access in Alternative B. With 25% of existing routes potentially open and 75% potentially limited to administrative use only or closed to motor vehicle use, the localized, long-term effect of these route restrictions on reducing public motorized access and its potential for direct and indirect impacts to riparian values would be major (43 CFR 8342.1(a)(b)(d)). Mainly, the potential of erosion issues and spread of noxious invasive plant species would be significantly reduced in this level of management.

Of the 10 routes that are in, through or cross riparian areas that are also in soils with severe or moderate water erosion hazard ratings, 6 or 60% would be open to all types of motor vehicle use (40% fewer than in Alternative A), while 3 routes or 30% would be limited to administrative use only (30% more than in Alternative A) and 1 route or 10% would be closed (10% more than in Alternative A). In the long-term, 6 out of every 10 existing BLM routes in or through riparian areas with these soils would remain available for public access in Alternative B. With 60% of existing routes potentially open and 40% limited to administrative use only or closed to motor vehicle use, the localized, long-term effect of these route restrictions on reducing public motorized access and its potential for direct and indirect impacts to riparian values would be minor (43 CFR 8342.1(a)(b)(d)). Spread of noxious invasive plant species and erosion issues would be decreased in this Alternative compared to all other Alternatives.

Routes within 300' of Riparian Areas: Of the 35 routes that are within 300' of riparian areas, 6 or 17% would be open, 1 route or 3% would be open with vehicle restrictions (a total of 63% fewer open routes than in Alternative A). Additionally, 7 routes or 20% would be limited to administrative use only (20% more than in Alternative A) and 21 routes or 60% would be closed (43% more than in Alternative A). In the long-term, 2 out of every 10 existing BLM routes

within 300' of riparian areas would remain available for public access in Alternative B. With 20% of existing routes potentially open and 80% potentially limited to administrative use only or closed to motor vehicle use, the localized, long-term effect of these route restrictions on reducing public motorized access and its potential for direct and indirect impacts to riparian values would be major (43 CFR 8342.1(a)(b)(d)). This action would minimize impacts from invasive plant species spread and erosion issues that may arise from open route designations.

Of the 23 routes that are within 300' of riparian areas that are also in soils with severe or moderate water erosion hazard ratings, 4 or 18% would be open, 1 route or 4% would be open with vehicle restrictions (a total of 61% fewer open routes than in Alternative A). Additionally, 4 routes or 17% would be limited to administrative use only (17% more than in Alternative A) and 14 routes or 61% would be closed (44% more than in Alternative A). In the long-term, just over 2 out of every 10 existing BLM routes within 300' of riparian areas in these soil types would remain available for public access in Alternative B. With 22% of existing routes potentially open and 78% potentially limited to administrative use only or closed to motor vehicle use, the localized, long-term effect of these route restrictions on reducing public motorized access and its potential for direct and indirect impacts to riparian values would be major (43 CFR 8342.1(a)(b)(d)). The primary benefit to riparian areas would be the reduced potential for erosion associated with open routes and lower potential spread of invasive noxious plant species.

Routes within 0.25 miles of Riparian Areas: Of the 21 routes that are within 0.25 miles of riparian areas, 5 or 24% would be open to use, 1 route or 5% would be open with seasonal restrictions (a total of 38% fewer open routes than in Alternative A). Additionally, 2 routes or 10% would be limited to administrative use only (14% fewer than in Alternative A) and 13 routes or 62% would be closed (52% more than in Alternative A). In the long-term, almost 3 out of every 10 existing BLM routes within 0.25 miles of riparian areas would remain available for public access in Alternative B. With about 29% of existing routes potentially open and about 71% potentially limited to administrative use only or closed to motor vehicle use, the localized, long-term effect of these route restrictions on reducing public motorized access and its potential for direct and indirect impacts to riparian values would be moderate (43 CFR 8342.1(a)(b)(d)).

Of the 12 routes that are within 0.25 miles of riparian areas that are also in soils with severe or moderate water erosion hazard ratings, 5 or 42% would be open, 1 route or 8% would be open with seasonal restrictions (a total of 17% fewer open routes than in Alternative A). Additionally, 1 route or 8% would be limited to administrative use only (25% fewer than in Alternative A) and 5 routes or 42% would be closed (42% more than in Alternative A). In the long-term, 5 out of every 10 existing BLM routes within 0.25 miles of riparian areas in these soil types would remain available for public access in Alternative B. With 50% of existing routes potentially open and 50% potentially limited to administrative use only or closed to motor vehicle use, the localized, long-term effect of these route restrictions on reducing public motorized access and its potential for direct and indirect impacts to riparian values would be minor (43 CFR 8342.1(a)(b)(d)).

Routes within 0.5 miles of Riparian Areas: Of the 19 routes that are within 0.5 miles of riparian areas, 1 or 5% would be open, with no routes open with restrictions (a total of 58% fewer open routes than in Alternative A). Additionally, 4 route or 21% would be limited to administrative use only (16% more than in Alternative A) and 14 routes or 74% would be closed

(42% more than in Alternative A). In the long-term, less than 1 out of every 10 existing BLM routes within 0.5 miles of riparian areas would remain available for public access in Alternative B. With about 5% of existing routes potentially open and about 95% potentially limited to administrative use only or closed to motor vehicle use, the localized, long-term effect of these route restrictions on reducing public motorized access and its potential for direct and indirect impacts to riparian values would be major (43 CFR 8342.1(a)(b)(d)).

Of the 5 routes that are within 0.5 miles of riparian areas that are also in soils with severe or moderate water erosion hazard ratings, no routes would be open/open with seasonal restrictions (60% fewer than in Alternative A), no routes would be limited to administrative use only and all 5 routes or 100% would be closed (60% more than in Alternative A). In the long-term, 0 out of every 10 existing BLM routes within 0.5 miles of riparian areas in these soil types would remain available for public access in Alternative B. With no routes potentially open and 100% potentially closed to motor vehicle use, the localized, long-term effect of these route restrictions on reducing public motorized access and its potential for direct and indirect impacts to riparian values would be major (43 CFR 8342.1(a)(b)(d)).

Routes in/through and within 300'/.25/.5 miles of Riparian Areas: Of the 97 routes that are in or through or within 300’, 0.25 or 0.5 miles of riparian areas, 18 or 19% would be open, 1 route or 1% would be open with seasonal restrictions, and 1 route or 1% would be open with vehicle restrictions (for a total of 56% fewer open routes than in Alternative A). Additionally, 16 routes or 17% would be limited to administrative use only (10% more than in Alternative A) and 61 routes or 63% would be closed (45% more than in Alternative A). In the long-term, just over 2 out of every 10 existing BLM routes in or through or within 300’, 0.25 or 0.5 miles of riparian areas would remain available for public access in Alternative B. With about 21% of existing routes potentially open and about 79% potentially limited to administrative use only or closed to motor vehicle use, the localized, long-term effect of these route restrictions on reducing public motorized access and its potential for direct and indirect impacts to riparian values would be major (43 CFR 8342.1(a)(b)(d)).

Of the 50 routes that are in or through or within 300’, 0.25 or 0.5 miles of riparian areas that are also in soils with severe or moderate water erosion hazard ratings, 15 or 30% would be open, 1 route or 2% would be open with seasonal restrictions, and 1 route or 2% would be open with vehicle restrictions (for a total of 46% fewer open routes than in Alternative A). Additionally, 8 routes or 16% would be limited to administrative use only (8% more than in Alternative A) and 25 routes or 50% would be closed (38% more than in Alternative A). In the long-term, over 3 out of every 10 existing BLM routes in or through or within 300’, 0.25 or 0.5 miles of riparian areas in these soil types would remain available for public access in Alternative B. With 34% of existing routes potentially open and only 66% potentially closed to motor vehicle use, the localized, long-term effect of these route restrictions on reducing public motorized access and its potential for direct and indirect impacts to riparian values would be moderate to major (43 CFR 8342.1(a)(b)(d)).

Alternative B manages travel activities to protect natural resources, including riparian resources, more than any other Alternative.

O.6.2.6.4 Alternative C

In the analyses below for route designations in TMAs, Alternative C shows the most potential to impact riparian areas, primarily by the spread of noxious invasive plant species, increased sediment loading from erosion and un-natural drainage patterns, and direct impacts from habitat altering erosion. The more roads open in, through or in various proximities up to ½ mile from riparian areas increase the potential spread of noxious invasive plant species and potential erosion and sediment issues. The spread of noxious weeds can be detrimental to riparian functionality, reducing native plant diversity, abundance and vigor in some cases. This impact promotes erosion and changes in riparian wildlife and fish habitat, lowering the functional status of the riparian area.

Routes in/through Riparian Areas: Under Alternative C, of the 24 routes that are in or through riparian areas, 22 or 92% would be open to all types of motor vehicle use (4% more than in Alternative A), while 2 routes or 8% would be limited to administrative use only (8% more than in Alternative A) and no routes would be closed (13% fewer than in Alternative A). In the long-term, over 9 out of every 10 existing BLM routes in or through riparian areas would remain available for public access in Alternative C. With 92% of existing routes potentially open and only 8% potentially limited to administrative use only, the localized, long-term effect of these route restrictions on reducing public motorized access and its potential for direct and indirect impacts to riparian values would be negligible (43 CFR 8342.1(a)(b)(d)).

Of the 10 routes that are in, through or cross riparian areas that are also in soils with severe or moderate water erosion hazard ratings, 10 or 100% would be open to all types of motor vehicle use (same as Alternative A) and no route would be limited to administrative use only or closed. The impacts would be the same as Alternative A.

Routes within 300’ of Riparian Areas: Of the 35 routes that are within 300’ of riparian areas, 33 or 94% would be open (11% more than in Alternative A), while 2 routes or 6% would be limited to administrative use only (6% more than in Alternative A) and no routes would be closed (17% fewer than in Alternative A). In the long-term, over 9 out of every 10 existing BLM routes within 300’ of riparian areas would remain available for public access in Alternative C.

With 94% of existing routes potentially open and only 6% potentially limited to administrative use only, the localized, long-term effect of these route restrictions on reducing public motorized access and its potential for direct and indirect impacts to riparian values would be negligible (43 CFR 8342.1(a)(b)(d)).

Of the 23 routes that are within 300’ of riparian areas that are also in soils with severe or moderate water erosion hazard ratings, 22 or 96% would be open (13% more than in Alternative A), while 1 route or 4% would be limited to administrative use only (4% more than in Alternative A) and no routes would be closed (17% fewer than in Alternative A). In the long-term, over 9 out of every 10 existing BLM routes within 300’ of riparian areas in these soil types would remain available for public access in Alternative C. With 96% of existing routes potentially open and only 4% potentially limited to administrative use only or closed to motor vehicle use, the localized, long-term effect of these route restrictions on reducing public

motorized access and its potential for direct and indirect impacts to riparian values would be negligible (43 CFR 8342.1(a)(b)(d)).

Routes within 0.25 miles of Riparian Areas: Of the 21 routes that are within 0.25 miles of riparian areas, 20 or 95% would be open to use, with no routes open with seasonal restrictions (for a total of 28% more open routes than in Alternative A). Additionally, 1 route or 5% would be limited to administrative use only (19% fewer than in Alternative A) and no routes would be closed (10% more than in Alternative A). In the long-term, over 9 out of every 10 existing BLM routes within 0.25 miles of riparian areas would remain available for public access in Alternative C. With 95% of existing routes potentially open and only 5% potentially limited to administrative use only, the localized, long-term effect of these route restrictions on reducing public motorized access and its potential for direct and indirect impacts to riparian values would be negligible (43 CFR 8342.1(a)(b)(d)).

Of the 12 routes that are within 0.25 miles of riparian areas that are also in soils with severe or moderate water erosion hazard ratings, all 12 or 100% would be open, with no routes open with seasonal restrictions (for a total of 33% fewer open routes than in Alternative A). No routes would be limited to administrative use only (33% fewer than in Alternative A) and no routes would be closed (same as Alternative A). In the long-term, 10 out of every 10 existing BLM routes within 0.25 miles of riparian areas in these soil types would remain available for public access in Alternative C. With 100% of existing routes potentially open and 0% potentially limited to administrative use only or closed to motor vehicle use, the localized, long-term effect of these route restrictions on reducing public motorized access and its potential for direct and indirect impacts to riparian values would be negligible (43 CFR 8342.1(a)(b)(d)).

Routes within 0.5 miles of Riparian Areas: Of the 19 routes that are within 0.5 miles of riparian areas, 17 or 90% would be open, with no routes open with restrictions (a total of 26% fewer open routes than in Alternative A). Additionally, 2 routes or 10% would be limited to administrative use only (5% more than in Alternative A) and no routes would be closed (32% fewer than in Alternative A). In the long-term, 9 out of every 10 existing BLM routes within 0.5 miles of riparian areas would remain available for public access in Alternative C. With 90% of existing routes potentially open and 10% potentially limited to administrative use only or closed to motor vehicle use, the localized, long-term effect of these route restrictions on reducing public motorized access and its potential for direct and indirect impacts to riparian values would be negligible (43 CFR 8342.1(a)(b)(d)).

Of the 5 routes that are within 0.5 miles of riparian areas that are also in soils with severe or moderate water erosion hazard ratings, 5 routes 100% would be open, with no open with seasonal restrictions (for a total of 40% more than in Alternative A). No routes would be limited to administrative use only or closed (40% fewer than in Alternative A). In the long-term, 10 out of every 10 existing BLM routes within 0.5 miles of riparian areas in these soil types would remain available for public access in Alternative C. With 100% potentially open and no routes potentially limited to administrative use only or closed to motor vehicle use, the localized, long-term effect of these route restrictions on reducing public motorized access and its potential for direct and indirect impacts to riparian values would be negligible (43 CFR 8342.1(a)(b)(d)).

Routes in/through and within 300'/.25/.5 miles of Riparian Areas: Of the 97 routes that are in or through or within 300', 0.25 or 0.5 miles of riparian areas, 90 or 93% would be open, with no routes open with seasonal restrictions (for a total of 17% more open routes than in Alternative A). Additionally, 7 routes or 7% would be limited to administrative use only (1% more than in Alternative A) and no routes would be closed (18% fewer than in Alternative A). In the long-term, just over 9 out of every 10 existing BLM routes in or through or within 300', 0.25 or 0.5 miles of riparian areas would remain available for public access in Alternative C. With 93% of existing routes potentially open and about 7% potentially limited to administrative use only, the localized, long-term effect of these route restrictions on reducing public motorized access and its potential for direct and indirect impacts to riparian values would be negligible (43 CFR 8342.1(a)(b)(d)).

Of the 50 routes that are in or through or within 300', 0.25 or 0.5 miles of riparian areas that are also in soils with severe or moderate water erosion hazard ratings, 49 or 98% would be open, with no routes open with seasonal restrictions (for a total of 18% more open routes than in Alternative A). Additionally, 1 route or 2% would be limited to administrative use only (6% fewer than in Alternative A) and no routes would be closed (12% fewer than in Alternative A). In the long-term, almost 10 out of every 10 existing BLM routes in or through or within 300', 0.25 or 0.5 miles of riparian areas in these soil types would remain available for public access in Alternative C. With 98% of existing routes potentially open and only 2% potentially limited to administrative use only, the localized, long-term effect of these route restrictions on reducing public motorized access and its potential for direct and indirect impacts to riparian values would be negligible (43 CFR 8342.1(a)(b)(d)).

O.6.2.6.5 Alternative D

Impacts from Alternative D would be similar to impacts from Alternative B.

In all analyses below for route designations in TMAs, Alternative D has a moderate impact compared to Alternatives B (the least impact) and C (the highest impact), to riparian areas; primarily the spread of noxious invasive plant species, increased sediment loading from erosion and un-natural drainage patterns, and direct impacts from habitat altering erosion. The more roads open in, through or in various proximities up to ½ mile from riparian areas increase the potential spread of noxious invasive plant species and potential erosion and sediment issues. The spread of noxious weeds can be detrimental to riparian functionality, reducing native plant diversity, abundance and vigor in some cases. This impact promotes erosion and changes in riparian wildlife and fish habitat, lowering the functional status of the riparian area.

Routes in/through Riparian Areas: Under Alternative D, of the 24 routes that are in or through riparian areas, 12 or 50% would be open to all types of motor vehicle use (almost 38% fewer than in Alternative A), while 10 routes or 42% would be limited to administrative use only (42% more than in Alternative A) and 2 routes or 8% would be closed (4% fewer than in Alternative A). In the long-term, 5 out of every 10 existing BLM routes in or through riparian areas would remain available for public access in Alternative D. With 50% of existing routes potentially open and 50% potentially limited to administrative use only or closed to motor vehicle use, the localized, long-term effect of these route restrictions on reducing public motorized access and its

potential for direct and indirect impacts to riparian values would be minor (43 CFR 8342.1(a)(b)(d)).

Of the 10 routes that are in, through or cross riparian areas that are also in soils with severe or moderate water erosion hazard ratings, 7 or 70% would be open to all types of motor vehicle use (30% fewer than in Alternative A), while 3 routes or 30% would be limited to administrative use only (30% more than in Alternative A) and no routes would be closed (same as Alternative A). In the long-term, 7 out of every 10 existing BLM routes in or through riparian areas with these soils would remain available for public access in Alternative D. With 70% of existing routes potentially open and 30% limited to administrative use only, the localized, long-term effect of these route restrictions on reducing public motorized access and its potential for direct and indirect impacts to riparian values would be minor (43 CFR 8342.1(a)(b)(d)).

Routes within 300' of Riparian Areas: Of the 35 routes that are within 300' of riparian areas, 11 or 32% would be open to all vehicle uses (51% fewer open routes than in Alternative A). Additionally, 19 routes or 54% would be limited to administrative use only (54% more than in Alternative A) and 5 routes or 14% would be closed (3% fewer than in Alternative A). In the long-term, just over 3 out of every 10 existing BLM routes within 300' of riparian areas would remain available for public access in Alternative D. With 32% of existing routes potentially open and 68% potentially limited to administrative use only or closed to motor vehicle use, the localized, long-term effect of these route restrictions on reducing public motorized access and its potential for direct and indirect impacts to riparian values would be moderate (43 CFR 8342.1(a)(b)(d)).

Of the 23 routes that are within 300' of riparian areas that are also in soils with severe or moderate water erosion hazard ratings, 8 or 35% would be open (48% fewer open routes than in Alternative A). Additionally, 11 routes or 48% would be limited to administrative use only (48% more than in Alternative A) and 4 routes or 17% would be closed (same as Alternative A). In the long-term, over 3 out of every 10 existing BLM routes within 300' of riparian areas in these soil types would remain available for public access in Alternative D. With 35% of existing routes potentially open and 65% potentially limited to administrative use only or closed to motor vehicle use, the localized, long-term effect of these route restrictions on reducing public motorized access and its potential for direct and indirect impacts to riparian values would be moderate (43 CFR 8342.1(a)(b)(d)).

Routes within 0.25 miles of Riparian Areas: Of the 21 routes that are within 0.25 miles of riparian areas, 5 or 24% would be open to use, 4 routes or 19% would be open with seasonal restrictions (a total of 24% fewer open routes than in Alternative A). Additionally, 6 routes or 29% would be limited to administrative use only (5% more than in Alternative A) and 6 routes or 29% would be closed (19% more than in Alternative A). In the long-term, just over 4 out of every 10 existing BLM routes within 0.25 miles of riparian areas would remain available for public access in Alternative D. With 43% of existing routes potentially open and about 57% potentially limited to administrative use only or closed to motor vehicle use, the localized, long-term effect of these route restrictions on reducing public motorized access and its potential for direct and indirect impacts to riparian values would be minor to moderate (43 CFR 8342.1(a)(b)(d)).

Of the 12 routes that are within 0.25 miles of riparian areas that are also in soils with severe or moderate water erosion hazard ratings, 5 or 42% would be open (17% fewer than in Alternative A), 3 route or 25% would be open with seasonal restrictions (17% more than in Alternative A). Additionally, 2 route or 17% would be limited to administrative use only (17% fewer than in Alternative A) and 2 routes or 17% would be closed (17% more than in Alternative A). In the long-term, over 6 out of every 10 existing BLM routes within 0.25 miles of riparian areas in these soil types would remain available for public access in Alternative D. With 67% of existing routes potentially open and 33% potentially limited to administrative use only or closed to motor vehicle use, the localized, long-term effect of these route restrictions on reducing public motorized access and its potential for direct and indirect impacts to riparian values would be minor (43 CFR 8342.1(a)(b)(d)).

Routes within 0.5 miles of Riparian Areas: Of the 19 routes that are within 0.5 miles of riparian areas, 5 or 26% would be open, with 1 route or 5% open with seasonal restrictions (for a total of 32% fewer open routes than in Alternative A). Additionally, 12 routes or 63% would be limited to administrative use only (58% more than in Alternative A) and 1 routes or 5% would be closed (26% fewer than in Alternative A). In the long-term, just over 3 out of every 10 existing BLM routes within 0.5 miles of riparian areas would remain available for public access in Alternative D. With about 32% of existing routes potentially open and about 68% potentially limited to administrative use only or closed to motor vehicle use, the localized, long-term effect of these route restrictions on reducing public motorized access and its potential for direct and indirect impacts to riparian values would be moderate (43 CFR 8342.1(a)(b)(d)).

Of the 5 routes that are within 0.5 miles of riparian areas that are also in soils with severe or moderate water erosion hazard ratings, no routes would be open to all vehicle uses (40% fewer than in Alternative A), however, 1 route or 20% would be open with seasonal restrictions (same as Alternative A), 3 routes or 60% would be limited to administrative use only and 1 route or 20% would be closed (20% fewer than in Alternative A). In the long-term, 2 out of every 10 existing BLM routes within 0.5 miles of riparian areas in these soil types would remain available for public access in Alternative D. With 20% routes potentially open and 80% potentially closed to motor vehicle use, the localized, long-term effect of these route restrictions on reducing public motorized access and its potential for direct and indirect impacts to riparian values would be major (43 CFR 8342.1(a)(b)(d)).

Routes in/through and within 300'/.25/.5 miles of Riparian Areas: Of the 97 routes that are in or through or within 300’, 0.25 or 0.5 miles of riparian areas, 33 or 34% would be open, 5 routes or 5% would be open with seasonal restrictions (for a total of 37% fewer open routes than in Alternative A). Additionally, 45 routes or 46% would be limited to administrative use only (40% more than in Alternative A) and 14 routes or 14% would be closed (3% fewer than in Alternative A). In the long-term, almost 4 out of every 10 existing BLM routes in or through or within 300’, 0.25 or 0.5 miles of riparian areas would remain available for public access in Alternative D. With about 39% of existing routes potentially open and about 61% potentially limited to administrative use only or closed to motor vehicle use, the localized, long-term effect of these route restrictions on reducing public motorized access and its potential for direct and indirect impacts to riparian values would be moderate (43 CFR 8342.1(a)(b)(d)).

Of the 50 routes that are in or through or within 300', 0.25 or 0.5 miles of riparian areas that are also in soils with severe or moderate water erosion hazard ratings, 20 or 40% would be open, 4 routes or 8% would be open with seasonal restrictions (for a total of 32% fewer open routes than in Alternative A). Additionally, 19 routes or 38% would be limited to administrative use only (30% more than in Alternative A) and 7 routes or 14% would be closed (2% more than in Alternative A). In the long-term, almost 5 out of every 10 existing BLM routes in or through or within 300', 0.25 or 0.5 miles of riparian areas in these soil types would remain available for public access in Alternative D. With 48% of existing routes potentially open and only 52% potentially closed to motor vehicle use, the localized, long-term effect of these route restrictions on reducing public motorized access and its potential for direct and indirect impacts to riparian values would be moderate to minor to moderate (43 CFR 8342.1(a)(b)(d)).

O.6.2.7 Invasive Species and Noxious Weeds

O.6.2.7.1 Alternative A

General: Inasmuch as the use of motor vehicles on public routes constitutes a primary source for the spread of noxious weed seeds and the establishment of new outbreaks and infestations of noxious weeds, the supply and spatial extent of travel access networks for motor vehicles is an important component for managing or providing some level of control in noxious weeds. Under the No Action Alternative, the overall network of 877 existing BLM routes (993 miles) within the eleven TMAs would continue to be managed as open/open with restrictions, limited to administrative use only (6%), or closed (10%). The overwhelming majority of routes (about 84%) would be open to all motorized uses or open with special seasonal or vehicular restrictions. In the long-term, over 8 out of every 10 existing BLM routes would remain available for access to the TMAs with an average route density of 1.5 open routes per square mile at 1.7 miles per square mile.

Therefore, Alternative A would continue to provide a moderate to high degree of motor vehicle access opportunities, which could perpetuate the potential for a moderate, long-term, indirect spread of noxious weeds on a localized basis. The potential for the spread of noxious weeds would be even greater in the Mill Creek/Bundy TMA, which has the highest density of open routes at 2.5 routes per square mile and the Shepherd TMA, which has a high of 8.9 miles per square mile of open routes. Additionally, as the potential for new route development is realized with boom cycles in energy exploration and development, these impacts may increase to a minor, short-term extent on a localized basis as these new routes potentially become available for and help spread out public use; such effects would ebb and flow with energy development.

Although Alternative A carries forward closures and restrictions to administrative use only on 143 routes (170 miles) or 16% of the routes, the long-term, direct, localized effect of these restricted routes on reducing the potential for spreading noxious weeds by motor vehicle use is minor.

Noxious Weeds in Riparian Areas: With regard to riparian areas, where noxious weed outbreaks have the potential over time to outcompete and replace native vegetative species, the number of open routes that are in, through or cross these areas, as well as routes that are proximate to riparian zones all have the potential to spread noxious weeds. Under the No Action

Alternative, of the 24 routes that are in, through or cross riparian areas, 21 or 88% would be open to all types of motor vehicle use. Of the 35 routes that are within 300' of riparian areas, 29 or 83% would be open. These existing conditions would continue to provide a moderate to high degree of motor vehicle access opportunities to riparian areas, which could perpetuate the potential for a moderate, long-term, indirect spread of noxious weeds in such areas. However, of the 21 routes that are within 0.25 miles of riparian areas, only 14 or 67% would be open to use. This would reduce, to a minor degree, the potential for long-term, indirect spread of noxious weeds in near riparian areas.

Noxious Weeds Inventory and Treatment Areas: In assessing travel routes that are associated with inventoried weed areas, of the 101 routes (166 miles) that are in or through these areas, 78 routes (136 miles) or 77% would be open to all motorized vehicles. This represents a moderate potential for the direct, long-term spread of noxious weed species from known infestation sites to other non-infested areas.

Regarding motor vehicle routes available for noxious weed management actions, of the 527 routes (659 miles) that are in or through weed management areas, 426 routes (527 miles) or 80% are open to all motor vehicle uses and 17 routes (26 miles) or 3% are limited to administrative uses only. This represents a continuation of a major, widespread management condition that would be conducive to the long-term, direct control of noxious weeds.

O.6.2.7.2 Alternative B

General: Under Alternative B, the overall network of 877 existing BLM routes (993 miles) within the eleven TMAs would continue to be managed as open/open with restrictions (10%), limited to administrative use only, or closed. At 562, the majority of routes (64% of overall network) would be recommended for closure to all motorized modes of travel and 223 routes (25% of overall network) would be recommended for administrative use only. This would result in 54% more closed routes in Alternative B than already exist in Alternative A and in 19% more routes designated for administrative use only in Alternative B than exist in Alternative A.

Additionally, the actual miles of routes closed under Alternative B would be 397 or about 40% and those limited to administrative use would be 247 or about 25% of the existing mileage. This would result in 29% more miles of routes closed in Alternative B than the current 11% closure mileage in Alternative A. Additionally, there would be 19% more mileage of routes identified for administrative use only in Alternative B than the current 6% mileage in Alternative A. So, while the actual number of routes recommended for closure changes greatly--54% more in Alternative B than in Alternative A--the actual number of miles of closed routes changes only moderately --29% more in Alternative B than in Alternative A--for an overall minor to moderate reduction of motorized public access. This would result in a moderate reduction of the potential for the long-term, direct, spread of noxious weeds on a localized basis, contributing to minimizing damage to vegetation and watersheds (43 CFR 8342.1(a)).

The potential for the spread of noxious weeds in the Mill Creek/Bundy TMA would be greatly diminished by a 93% reduction in route density from the Alternative A high of 2.5 to 0.2 open routes per square mile the Alternative B. Similarly, the potential for spreading noxious weeds in

the Shepherd TMA would be diminished to a minor degree by a 19% reduction in route density from the Alternative A high of 8.9 to 7.2 miles per square mile of open routes in Alternative B.

In reducing the supply to 90 open routes (347 miles) or 10% of the overall network, the long-term, direct, localized threat of these open routes spreading noxious weeds by motor vehicle use is minor.

Noxious Weeds in Riparian Areas: Under Alternative B, of the 24 routes that are in, through or cross riparian areas, 6 or 25% would be open to all types of motor vehicle use, resulting in 63% fewer open routes than exist in Alternative A . Of the 35 routes that are within 300' of riparian areas, 7 or 20% would be open in Alternative B; 63% fewer than those open in Alternative A. Finally, of the 21 routes that are within 0.25 miles of riparian areas, only 6 or 29% would be open under Alternative B; 38% fewer than those open in Alternative A. The potential route designations of Alternative B would greatly reduce opportunities for motor vehicle access to riparian areas, which could moderately reduce the potential for long-term, indirect spread of noxious weeds in such areas, contributing to minimizing damage to vegetation and watersheds and disruption of wildlife habitats associated with riparian areas (43 CFR 8342.1(a),(b)).

Noxious Weeds Inventory and Treatment Areas: Under Alternative B, of the 101 routes (166 miles) that are in or through inventoried weed areas, 19 routes (91 miles) or 19% would be open to all motorized vehicles or open with restrictions; 58% fewer open routes in these areas than would be open in Alternative A. This represents a direct, long-term, moderate reduction in the potential for the spread of noxious weed species from known infestation sites to other non-infested areas.

Regarding motor vehicle routes available for noxious weed management actions, of the 527 routes (659 miles) that are in or through weed management areas, under Alternative B, 64 routes (251 miles) or 12% are open or open with restrictions; 69% fewer open routes than in Alternative A. Similarly, 101 routes (123 miles) or 19% are limited to administrative uses only; 16% more administrative routes than are in Alternative A. This represents a moderate to major reduction of motorized access potentially needed for the long-term, direct control of noxious weeds.

O.6.2.7.3 Alternative C

General: Under Alternative C, the overall network of 877 existing BLM routes (993 miles) within the eleven TMAs would continue to be managed as open/open with restrictions (84%), limited to administrative use only, or closed. At 22, few routes (3% of overall network) would be recommended for closure to all motorized modes of travel and 120 routes (14% of overall network) would be recommended for administrative use only. This would result in 8% fewer closed routes in Alternative C than already exist in Alternative A and in 8% more routes designated for administrative use only in Alternative C than exist in Alternative A.

Additionally, the actual miles of routes closed under Alternative C would be 6 or about 1% and those limited to administrative use would be 91 or about 9% of the existing mileage. This would result in 10% fewer miles of route miles closed in Alternative C than the current 11% closure mileage in Alternative A. Additionally, there would be 3% more route miles identified for administrative use only in Alternative C than the current 6% mileage in Alternative A. Though the number of open route miles is virtually the same for Alternative A and Alternative C, the 896

miles of open routes in Alternative C represents 7% more open route miles than in Alternative A. The potential route designations of Alternative C would result in a minor increase in access opportunities for motorized public access. This could result in a minor increase in the potential for the long-term, direct, spread of noxious weeds on a localized basis, contributing to minimizing damage to vegetation and watersheds (43 CFR 8342.1(a)).

The potential for the spread of noxious weeds in the Mill Creek/Bundy TMA would be moderately diminished by a 27% reduction in route density from the Alternative A high of 2.5 to 1.9 open routes per square mile the Alternative C. Similarly, the potential for spreading noxious weeds in the Shepherd TMA would be slightly diminished by a 7% reduction in route density from the Alternative A high of 8.9 to 8.3 miles per square mile of open routes in Alternative C.

Alternative C proposes 735 open routes (896 miles) or 84% of the overall network; virtually the same as Alternative A, with the exception that Alternative C would manage 72 more miles of open routes than Alternative A. Managing for the Alternative C network in the long-term would have essentially the same direct, localized threat of open routes spreading noxious weeds by motor vehicle use as Alternative A.

Noxious Weeds in Riparian Areas: Under Alternative C, of the 24 routes that are in, through or cross riparian areas, 22 or 92% would be open to all types of motor vehicle use, resulting in 4% more open routes than exist in Alternative A . Of the 35 routes that are within 300’ of riparian areas, 33 or 94% would be open in Alternative C; 11% more than those open in Alternative A. Finally, of the 21 routes that are within 0.25 miles of riparian areas, 20 or 95% would be open under Alternative C; 38% more than those open in Alternative A. The potential route designations of Alternative C would slightly to moderately increase opportunities for motor vehicle access to riparian areas, which could moderately increase the potential for long-term, indirect spread of noxious weeds in such areas, contributing only slightly to minimizing damage to vegetation and watersheds and disruption of wildlife habitats associated with riparian areas (43 CFR 8342.1(a),(b)).

Noxious Weeds Inventory and Treatment Areas: Under Alternative C, of the 101 routes (166 miles) that are in or through inventoried weed areas, 85 routes (147 miles) or 84% would be open to all motorized vehicles or open with restrictions; 7% more open routes in these areas than would be open in Alternative A. This represents a direct, long-term, minor increase in the potential for the spread of noxious weed species from known infestation sites to other non-infested areas.

Regarding motor vehicle routes available for noxious weed management actions, of the 527 routes (659 miles) that are in or through weed management areas, under Alternative C, 467 routes (608 miles) or 89% are open or open with restrictions; 8% more open routes than in Alternative A. Similarly, 49 routes (47 miles) or 9% are limited to administrative uses only; 6% more administrative routes than are in Alternative A. This represents a minor increase in opportunities for motorized access potentially needed for the long-term, direct control of noxious weeds.

O.6.2.7.4 Alternative D

General: Under Alternative D, the overall network of 877 existing BLM routes (993 miles) within the eleven TMAs would continue to be managed as open/open with restrictions (40%), limited to administrative use only, or closed. At 80, few routes (9% of overall network) would be recommended for closure to all motorized modes of travel and 449 routes (51% of overall network) would be recommended for administrative use only. This would result in 1% fewer closed routes in Alternative D than already exist in Alternative A and in 45% more routes designated for administrative use only in Alternative D than exist in Alternative A. In reducing the open routes 44% from Alternative A to 346 open routes (584 miles) or 62% of the overall network and in increasing routes for administrative use only by 45% for Alternative D, the long-term, direct, potential for motor vehicle use of these open routes to spread noxious weeds would be minor to moderate, due to reduced traffic volume on administrative routes.

Additionally, the actual miles of routes closed under Alternative D would be 66 or about 7% and those limited to administrative use would be 313 or about 32% of the existing mileage. This would result in 4% fewer miles of routes closed in Alternative D than the current 11% closure mileage in Alternative A. Additionally, there would be 25% more route miles identified for administrative use only in Alternative D than the current 6% mileage in Alternative A.

Alternative D would result in an overall moderate reduction of motorized public access. This would result in a moderate reduction of the potential for the long-term, direct, spread of noxious weeds on a localized basis, contributing to minimizing damage to vegetation and watersheds (43 CFR 8342.1(a)).

The potential for the spread of noxious weeds in the Mill Creek/Bundy TMA would be greatly diminished by a 69% reduction in route density from the Alternative A high of 2.5 to 0.8 open routes per square mile the Alternative D. Similarly, the potential for spreading noxious weeds in the Shepherd TMA would be diminished to a minor degree by a 19% reduction in route density from the Alternative A high of 8.9 to 7.2 miles per square mile of open routes in Alternative D.

Noxious Weeds in Riparian Areas: Under Alternative D, of the 24 routes that are in, through or cross riparian areas, 12 or 50% would be open to all types of motor vehicle use, resulting in 38% fewer open routes than exist in Alternative A . Of the 35 routes that are within 300’ of riparian areas, 11 or 31% would be open in Alternative D; 51% fewer than those open in Alternative A. Finally, of the 21 routes that are within 0.25 miles of riparian areas, only 9 or 43% would be open under Alternative D; 24% fewer than those open in Alternative A. The potential route designations of Alternative D would considerably reduce opportunities for motor vehicle access to riparian areas, which could moderately reduce the potential for long-term, indirect spread of noxious weeds in such areas, contributing to minimizing damage to vegetation and watersheds and disruption of wildlife habitats associated with riparian areas (43 CFR 8342.1(a),(b)).

Noxious Weeds Inventory and Treatment Areas: Under Alternative D, of the 101 routes (166 miles) that are in or through inventoried weed areas, 42 routes (112 miles) or 42% would be open to all motorized vehicles or open with restrictions; 36% fewer open routes in these areas than would be open in Alternative A. This represents a minor to moderate reduction in the potential

for the direct, long-term, spread of noxious weed species from known infestation sites to other non-infested areas.

Regarding motor vehicle routes available for noxious weed management actions, of the 527 routes (659 miles) that are in or through weed management areas, under Alternative D, 230 routes (410 miles) or 44% are open or open with restrictions; 37% fewer open routes than in Alternative A. Similarly, 245 routes (192 miles) or 47% are limited to administrative uses only; 43% more administrative routes than are in Alternative A. This represents a minor increase of motorized access potentially needed for the long-term, direct control of noxious weeds.

O.6.2.8 Special Status Plants

O.6.2.8.1 Impacts Common to All Alternatives

Special Status Plants would most likely be impacted by OHV use off of roads or trails associated with establishment of campsites, principally due to mechanical crushing of vegetation, soil compaction or erosion, and introduction of noxious invasive weeds.

O.6.2.8.2 Alternative A

Impacts would be the same as impacts common to all alternatives. Under Alternative A, there would be 824 miles of open routes (83% of all route miles). This alternative opens more routes than Alternative B (35%) and D (62%) and fewer routes than Alternative C (90%). Therefore potential impacts would be greater than Alternatives B and D, but less than Alternative C.

O.6.2.8.3 Alternative B

Impacts would be the same as impacts common to all alternatives. Under Alternative B, there would be 349 miles of open routes (35% of all route miles). This Alternative Closes or limits to administrative access more route miles than all alternatives. Alternative A designates 83% of route miles as open, Alternative C designates 90% of route miles as open and Alternative D designates 62% of route miles as open. Therefore potential impacts would be fewer than all other alternatives.

O.6.2.8.4 Alternative C

Impacts would be the same as impacts common to all alternatives. Under Alternative C, there would be 893 miles of open routes (90% of all route miles). This Alternative closes or limits to administrative access less route miles than all alternatives. Alternative A designates 83% of route miles as open, Alternative B designates 35% of route miles as open and Alternative D designates 62% of route miles as open. Therefore potential impacts would be more than all other alternatives.

O.6.2.8.5 Alternative D

Impacts would be the same as impacts common to all alternatives. Under Alternative D, there would be 624 miles of open routes (62% of all route miles). This Alternative closes or limits to administrative access more route miles than alternatives A and C, but less than Alternative B.

Alternative A designates 83% of route miles as open, Alternative B designates 35% of route miles as open and Alternative C designates 90% of route miles as open. Therefore potential impacts would be less than Alternatives A and C, but more than Alternative B.

O.6.2.9 Wildlife Habitat and Special Status Species

Wildlife resources, habitat and individual populations and animals, are sensitive to travel management issues. The comprehensive analysis presented below was used by resource specialists to develop trails and travel management actions, considering impacts to wildlife and special status species and providing sound multiple use of BLM administered public lands.

O.6.2.9.1 Methods and Assumptions

The analysis of potential impacts to wildlife resources is based on the expertise of BLM resource specialists at the Billings Field Office. These specialists possess an extensive knowledge of wildlife resources within the Planning Area. The impact analysis is also based on review of existing literature and information provided by non-planning team experts in the BLM and other agencies. In absence of quantitative data, best professional judgment was used. Impacts are sometimes described using ranges of potential impacts or in qualitative terms, if appropriate.

The following assumptions regarding wildlife resources are made:

- Wildlife habitat would be managed for those species identified as priority wildlife species.
- All surface disturbing activities include mitigation to reduce impacts to wildlife resources. Analysis of impacts includes any and all mitigation.
- Travel through the TMAs is expected to increase due to the increased demand for open space and commercial recreation opportunities on public lands, as well as periodic up trends in energy exploration and development, including renewable energy production.
- Planning decisions that involve changes to the available number and overall miles of roads open for public or administrative use, the number of acres open or closed to off-road travel, road improvement or maintenance activities, or specific travel restrictions (e.g., speed limits, seasonal restrictions; etc.) would affect wildlife resources to varying degrees.

In analyzing the potential effects of route designations on wildlife resources, differences between each action alternative's set of route designations and the no action, current management route designations are analyzed and expressed primarily in terms of 'absolute percent change' versus a more familiar method of expressing 'relative percent change'. As each alternative develops a different transportation network or combination of route designations (open, limited, closed) using the same supply of existing routes, changes in the apportionment of designations within a given alternative are then measured against the apportioned designations of the No Action Alternative. As a comparative example then, in relative terms, an alternative that proposes to close 562 routes in Alternative X out of the total 877 routes that exist where only 89 routes out of

877 routes are closed under No Action represents a 631% increase in the number of routes closed in Alternative X relative to the No Action Alternative. In absolute terms, however, the 89 closed routes in the No Action Alternative represent 10% of the current total network while under Alternative X, the 562 closed routes represent 64% of the potential network, resulting in 54% more routes closed in Alternative X than in the No Action Alternative. Planners determined to use the 'absolute percent change', primarily because a) the route 'population', or total number of routes under consideration for designation is constant for all alternatives and b) planners believe the results better depict the 'shifting' of designations within alternatives using the same route inventory.

Direct impacts to wildlife resources from management activities may result in mortality or displacement of individuals, disturbance in reduced air or water quality, and alteration of immediate environments through loss of, or changes to, key habitat components. Key habitat components include food availability or quality, cover from predators, insulation from extreme temperatures, nesting/roosting/denning habitat, water availability and quality, and travel corridors. Direct impacts may affect wildlife populations or habitats for the duration of the action, for a few days thereafter, for several growing seasons, or may continue indefinitely where the action results in permanent habitat loss.

Indirect impacts to wildlife resources from management activities typically result from influences of post-disturbance succession, recovery, or rehabilitation of the habitat. These impacts may be long-term, depending on the severity of the habitat alteration, and may change species assemblages (relative abundances or species composition), species behaviors, or overall population trends, benefiting some species while negatively affecting others. The direct and indirect effects of management actions on wildlife resources may vary widely, depending on a variety of factors such as the dynamics of the habitat (e.g. community type, size, shape, complexity, seral state, condition); season, intensity, duration, frequency, and extent of the disturbance; rate and composition of vegetation recovery; change in vegetation structure; type of soils; topography and microsites; animal species present; and the mobility of wildlife species (i.e., ability to leave a site or recolonize a site after a disturbance).

Direct impacts are caused by an action and occur at the same time and place as the action. Indirect impacts are caused by the action and occur later or farther away but are still reasonably foreseeable. Cumulative impacts are the effects on the environment that result from the incremental impact of the action when added to other past, present, or reasonably foreseeable future actions, regardless of what agency (federal or nonfederal) or person undertakes such other actions.

Impacts are also described as to their context, intensity, and duration. Context generally refers to the geographic extent of impact (localized or widespread). Impact duration refers to how long an impact would last. Unless otherwise stated for any particular impact topic, short-term impacts would occur with five years of implementing the Plan, often during construction and recovery, while long-term impacts would occur beyond five years, often from operations. Impact intensity is the magnitude or degree to which a resource would be beneficially or adversely affected. The criteria used to rate the intensity of the impact for each impact topic are as follows:

The intensities of impacts are also described, where possible, using the following guidance:

- Negligible: No changes to wildlife resources would occur, or effects on individuals, populations, or habitat would be at or below the level of detection. If detected, the effects would be considered slight.
- Minor: Changes to wildlife resources would be measurable, although the changes would be small, short-term (less than seven consecutive days), and local. Mitigation measures would not be necessary.
- Moderate: Changes to wildlife resources would be measurable and would have appreciable consequences, although the effect would be relatively local. Mitigating measures would be necessary, but would most likely be successful.
- Major: Changes to wildlife resources would be measurable, have substantial consequences, and be noticed regionally. Mitigating measures would be necessary, and their success would be uncertain.

O.6.2.9.2 Impacts Common to All Alternatives

The primary impact issues to wildlife resources from other management programs in the Planning Area include loss or alteration of native habitats, increased invasion of noxious weeds and other exotic weed species, decreased water availability, increased habitat fragmentation, changes in habitat and species composition, disruption of species behavior leading to reduced reproductive fitness and/or increased susceptibility to predation, and direct mortality of wildlife. Surface disturbing actions that alter vegetation characteristics (e.g. structure, composition, and/or production) have the potential to affect habitat suitability for wildlife, particularly where the disturbance removes or reduces cover and/or food resources. Even minor changes to vegetation communities have the potential to affect resident wildlife populations.

Resource Management Plan Level: Current management for travel is to designated roads and trails outside of Travel Management Areas (TMAs). Eleven Travel Management Areas (TMAs) were described and routes were designated. Route designations, such as Open, Closed, or Limited, vary in Alternatives B, C, and D. TMAs management is a more detailed site specific analysis of management described in, BLM. 2003c. *Off-Highway Vehicle EIS and Proposed Plan Amendment for Montana, North Dakota, and South Dakota*. ROD June, 2003.

O.6.2.9.3 Alternative A

Big Game Species

Under the No Action Alternative, the 865 existing BLM routes (974 miles) that comprise the travel networks within big game general winter range (BGGWR) would continue to be managed using the five existing designations shown in **Error! Reference source not found.** and Figure 4.2.1.1a (below), with 8 out of every 10 existing routes (about 84%) open to all motorized uses or open with special seasonal or vehicular restrictions. Additionally, the route density within the BGGWR would remain fairly constant for the long-term at 1.7 open routes per square mile and 1.9 miles of open routes per square mile. The footprint (actual area of surface disturbance) of open routes affects approximately 1,174 acres or 0.4% of the 275,839 acres of BGGWR within the TMAs. In other words, for every 1 acre of route footprint within the BGGWR, 234 acres would be without routes.

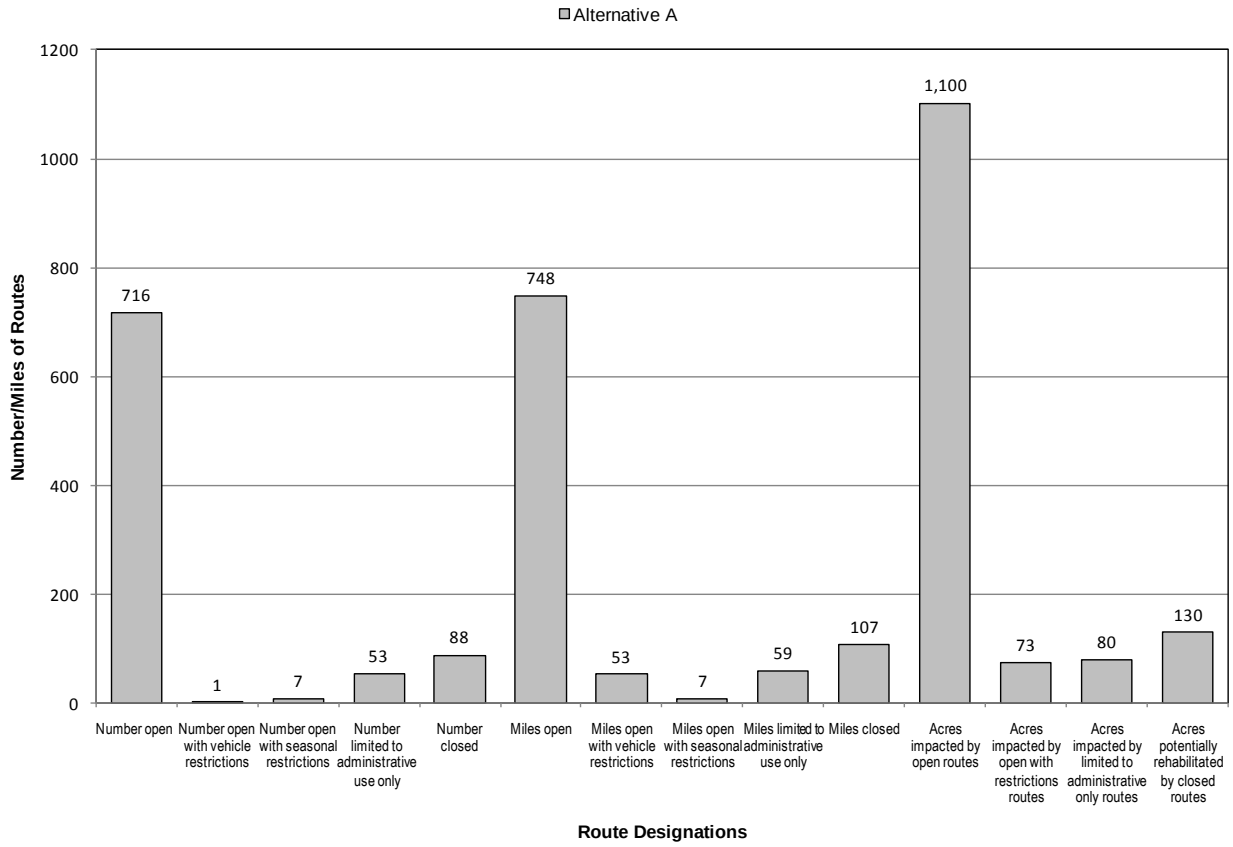
Under the No Action Alternative, the current open route network would continue the long-term, widespread conditions that directly and moderately affect big game species, such as impairment of big game species' movements, wildlife harassment by humans, and disruption of big game habitats through loss of, or changes to, key habitat components. Additionally, as the potential for new route development is realized with boom cycles in energy exploration and development, these impacts may increase to a minor, short-term extent on a localized basis as these new routes potentially become available and help spread out public use; such effects would ebb and flow with energy development.

Although Alternative A carries forward closures and restrictions to administrative use only on 141 routes at 166 miles, the long-term, direct, localized effect of these restricted routes on reducing BGGWR habitat fragmentation is minor, due to the availability of 724 open routes at 808 miles with the route densities that are described above.

Table O-22: Alternative A Route Designations in Big Game General Winter Range

Alternative A Route Designations in Big Game General Winter Range						
	Alternative A					
Potential Route Designations	Routes	Percent	Miles	Percent	Acres impacted by routes	Percent of total route acreage
Open	716	83%	747.6	76.8%	1100.3	79.6%
Open with vehicle restrictions	1	0.1%	52.7	5.4%	73.4	5.3%
Open with seasonal restrictions	7	0.8%	7.2	0.7%		
Limited to administrative use only	53	6.1%	59	6.1%	79.6	5.8%
Closed	88	10.2%	107.4	11%	129.7	9.4%
Average open routes per square mile (density)	1.7		1.9			
Percent of open route acreage					0.4%	
Ratio of open route acres to un-routed acres					1:234	

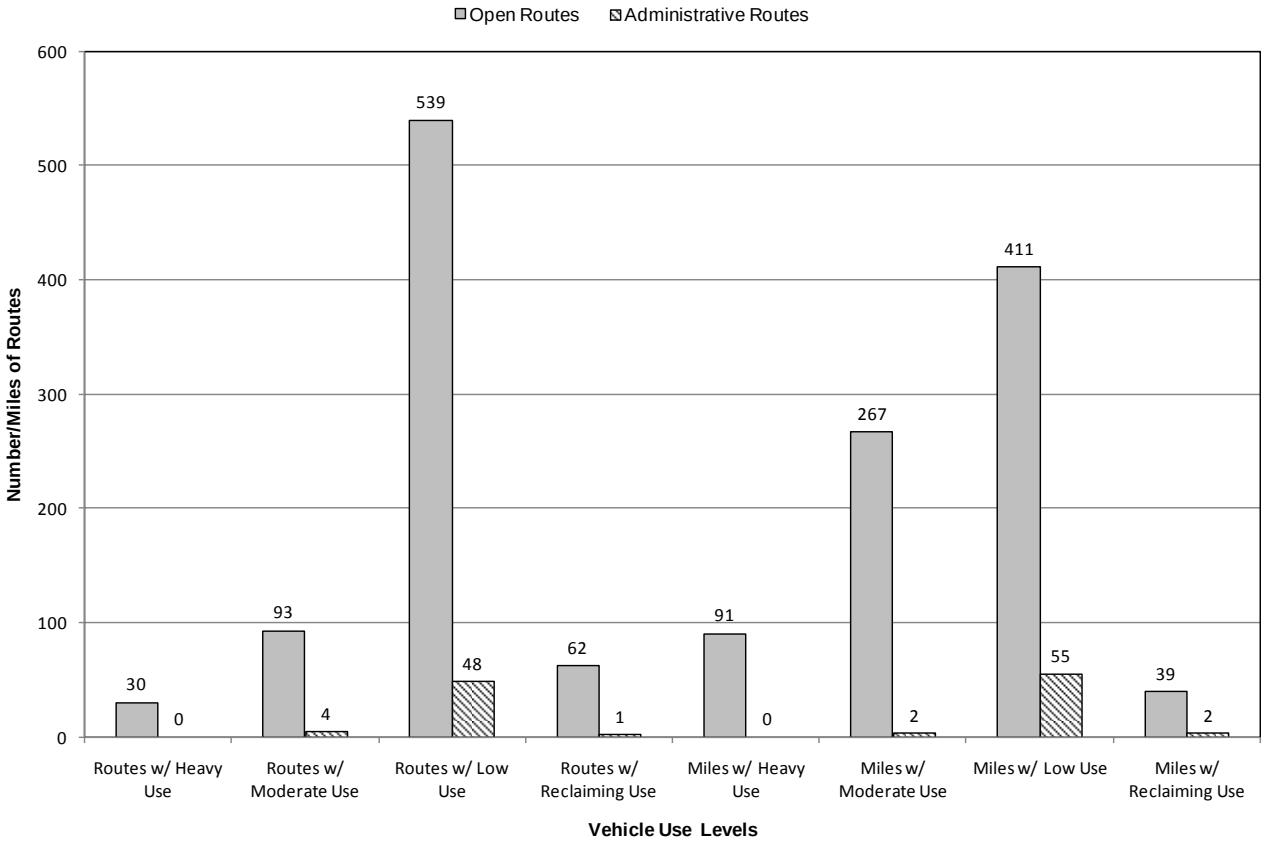
Figure 4.2.1.1a: Alternative A Route Designations in Big Game General Winter Range



Of the existing BLM routes within BGGWR under the No Action Alternative, 539 open routes (411 miles) are considered by resource specialists to have low vehicle use levels as shown in Figure 4.2.1.1b below. Conversely, 93 open routes (267 miles) have vehicle use levels estimated as moderate and only 30 open routes (91 miles) are estimated to have heavy vehicle use. The combination of 88 closed routes and the continuation of low vehicle use levels on 74% of open routes (51% of open route miles) and no observed vehicle use on 9% of open routes (5% of open route miles) in BGGWR would directly contribute, in the long-term, to lessening of the effects of route use, such as wildlife harassment, human-caused animal mortality or displacement of individual animals to a minor to moderate degree (43 CFR 8342.1 (b)).

Long term direct impacts to BGGWR would be minor to moderate for wildlife disturbance, displacement, and habitat loss due to low use or no use levels on 83% of open routes and 12% closed routes. The open road density of 1.9 miles of open routes per square mile exceeds the 1 mile per section road density recommended in the “Guidelines/ Recommendations” for road densities(Canfield, J.E. et. al. 1999).

Figure 4.2.1.1b: Alternative A Route Designations by in Big Game General Winter Range Estimated Vehicle Use Levels



Sage-Grouse

The current open route network would continue the long-term, localized conditions that directly and moderately affect sage-grouse at and near Lek sites, as well as within nesting habitat, such as impairment of species' movements, harassment by humans, and disruption of habitat through loss of, or changes to, key habitat components. Additionally, as the potential for new route development is realized with boom cycles in population, energy exploration and development, these impacts may increase to a minor, short-term local extent as these new routes potentially become available and help spread out public use.

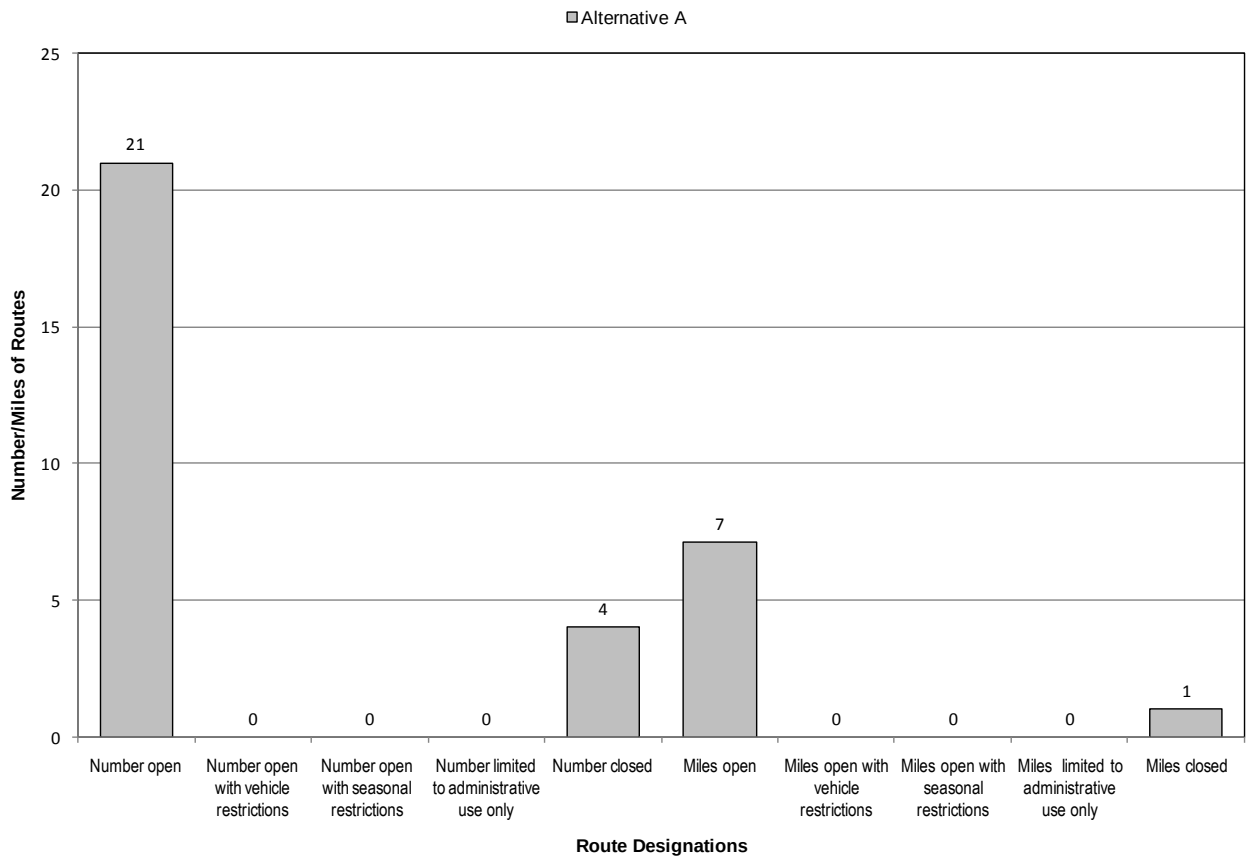
Leks and Nesting Habitat

Under the No Action Alternative, of the 25 routes that are within 0.25 miles of identified sage-grouse leks, 21 routes (7.1 miles) or 84% would be open to all types of motor vehicle use. Only 4 routes (1 mile) or 16% would be closed to motor vehicle use. The long-term, direct, localized effect of these route closures on reducing habitat fragmentation and/or minimizing the potential for wildlife harassment would be negligible, due to the availability of many open routes near the lek sites (43 CFR 8342.1(b)).

Table O-23: Alternative A Route Designations within ¼-mile of Sage-Grouse Leks

Alternative A Route Designations within ¼-mile of Sage-Grouse Leks				
Potential Route Designations	Alternative A			
	Routes	Percent	Miles	Percent
Open	21	84%	7.1	87.7%
Open with vehicle restrictions	0	0%	0	0%
Open with seasonal restrictions	0	0%	0	0%
Limited to administrative use only	0	0%	0	0%
Closed	4	16%	1.0	12.3%

Figure 4.2.1.2a: Alternative A Route Designations within1/4-mile of Sage Grouse Leks



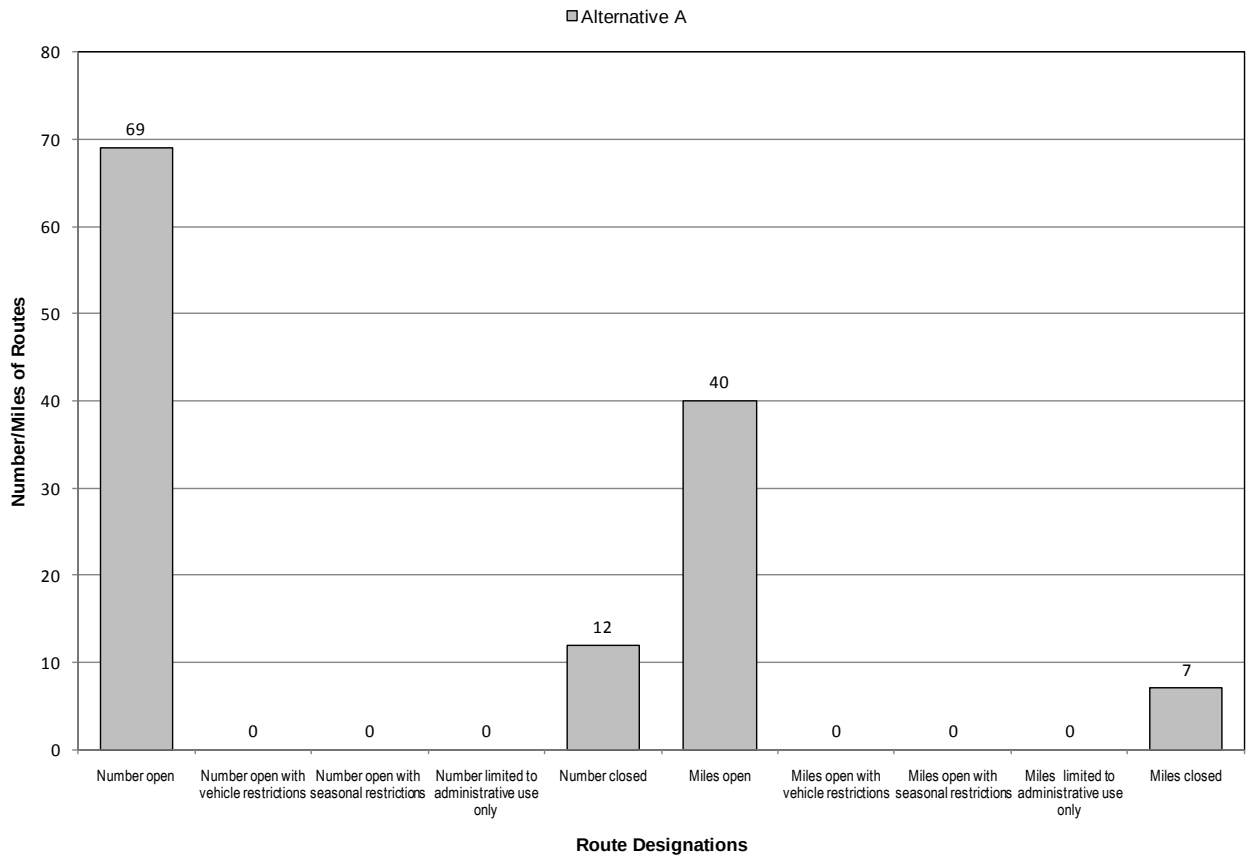
Of the 81 routes that are within 0.6 miles of identified sage-grouse leks, 69 routes (40 miles) or 85% would be open. Only 12 routes (7 miles) or 15% would be closed to motor vehicle use. The long-term, direct, localized effect of these route closures on reducing habitat fragmentation

and/or minimizing the potential for wildlife harassment would be minor, due to the availability of many open routes near the lek sites (43 CFR 8342.1(b)).

Table O-24: Alternative A Route Designations within 0.6 miles of Sage-Grouse Leks

Alternative A Route Designations within 0.6 miles of Sage-Grouse Leks				
Potential Route Designations	**Alternative A**			
	Routes	**Percent**	**Miles**	**Percent**
Open	69	85.2%	40	85.1%
Open with vehicle restrictions	0	0%	0	0%
Open with seasonal restrictions	0	0%	0	0%
Limited to administrative use only	0	0%	0	0%
Closed	12	14.8%	7	14.9%

Figure 4.2.1.2b: Alternative A Route Designations within 0.6 miles of Sage Grouse Leks



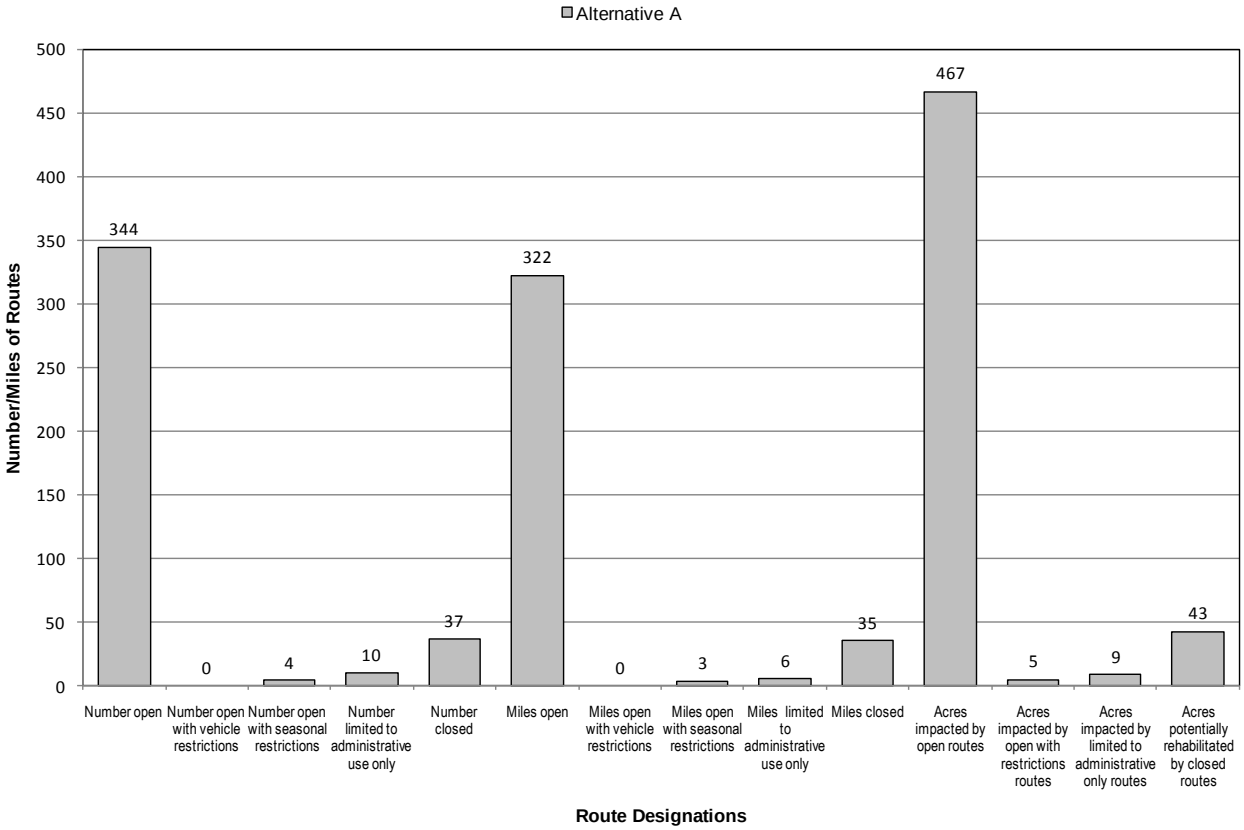
Of the 395 routes that are within nesting habitat (within 2 miles of identified sage-grouse leks), 348 routes (325 miles) or 88% would be open or open with seasonal restrictions. Only 10 routes (6 miles) or 3% would be limited to administrative use only, while 37 routes (35 miles) or 9%

would be closed to motor vehicle use. The actual footprint (area of surface disturbance) of open routes affects approximately 472 acres or 0.3% of the area within 2 miles of sage-grouse leks. In other words, for every 1 acre of route footprint within the 2-mile nesting habitat, 332 acres would be without routes. The footprint for routes that would be closed (and eventually restored to a more natural condition) would be 43 acres or 8% of the total route acreage within the 2-mile nesting habitat. This would be a continuation of a long-term, direct, localized minor reduction of fragmented habitat and the potential for wildlife harassment (43 CFR 8342.1(b)).

Table O-25: Alternative A Route Designations in Sage-Grouse Nesting Habitat (2 miles from Leks)

Alternative A Route Designations in Sage-Grouse Nesting Habitat (2 miles from Leks)						
Potential Route Designations	**Alternative A**					
	Routes	**Percent**	**Miles**	**Percent**	**Acres impacted by routes**	**Percent of total within 2 miles**
Open	344	87.1%	322	87.9%	466.8	89.3%
Open with vehicle restrictions	0	0%	0	0%	5.0	1.0%
Open with seasonal restrictions	4	1.0%	3.3	0.9%		
Limited to administrative use only	10	2.5%	5.6	1.5%	8.5	1.6%
Closed	37	9.4%	35.4	9.7%	42.7	8.2%
Percent of open route acreage					0.3%	
Ratio of open route acres to un-routed acres					1:332	

Figure 4.2.1.2c: Alternative A Route Designations in Sage Grouse Nesting Habitat (2 miles from Leks)

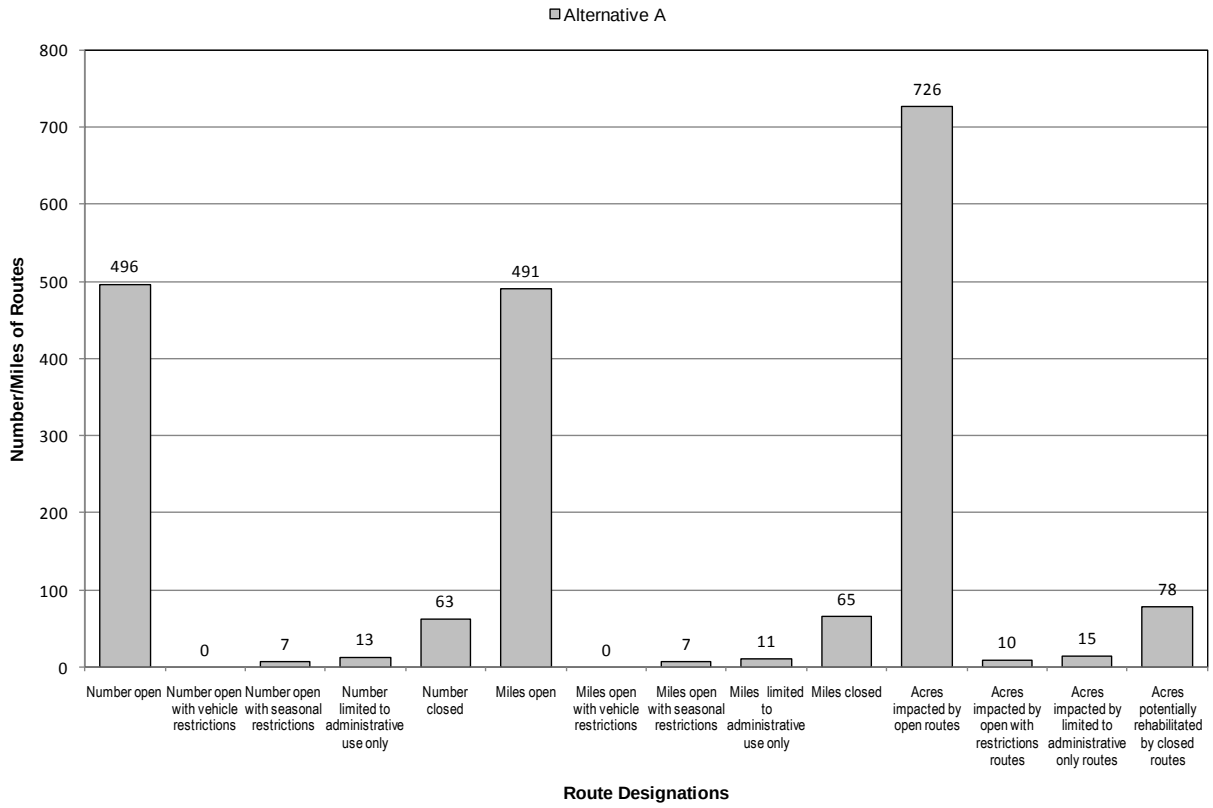


Of the 579 routes that are within nesting habitat (within 3 miles of identified sage-grouse leks), 503 routes (498 miles) or 87% would be open or open with seasonal restrictions. Only 13 routes (11 miles) or 2% would be limited to administrative use only, while 63 routes (65 miles) or 11% would be closed to motor vehicle use. The actual footprint (area of surface disturbance) of open routes affects approximately 736 acres or 0.2% of the area within 3 miles of sage-grouse leks. In other words, for every 1 acre of route footprint within the 3-mile nesting habitat, 465 acres would be without routes. The footprint for routes that would be closed within the 3-mile nesting habitat would be 78 acres or 10% of the total. This would be a continuation of a long-term, direct, localized minor reduction of fragmented habitat and the potential for wildlife harassment (43 CFR 8342.1(b)).

Table O-26: Alternative A Route Designations in Sage-Grouse Nesting Habitat (3 miles from Leks)

Alternative A Route Designations in Sage-Grouse Nesting Habitat (3 miles from Leks)						
	Alternative A					
Potential Route Designations	Routes	Percent	Miles	Percent	Acres impacted by routes	Percent of total within 3 miles
Open	496	85.7%	490.5	85.5%	726.2	87.6%
Open with vehicle restrictions	0	0%	0	0%	9.5	1.1%
Open with seasonal restrictions	7	1.2%	7.2	1.3%		
Limited to administrative use only	13	2.2%	10.9	1.9%	15.1	1.8%
Closed	63	10.9%	65.1	11.3%	78.4	9.5%
Percent of open route acreage					0.21%	
Ratio of open route acres to un-routed acres					1:465	

Figure 4.2.1.2d: Alternative A Route Designations in Sage Grouse Nesting Habitat (3 miles from Leks)



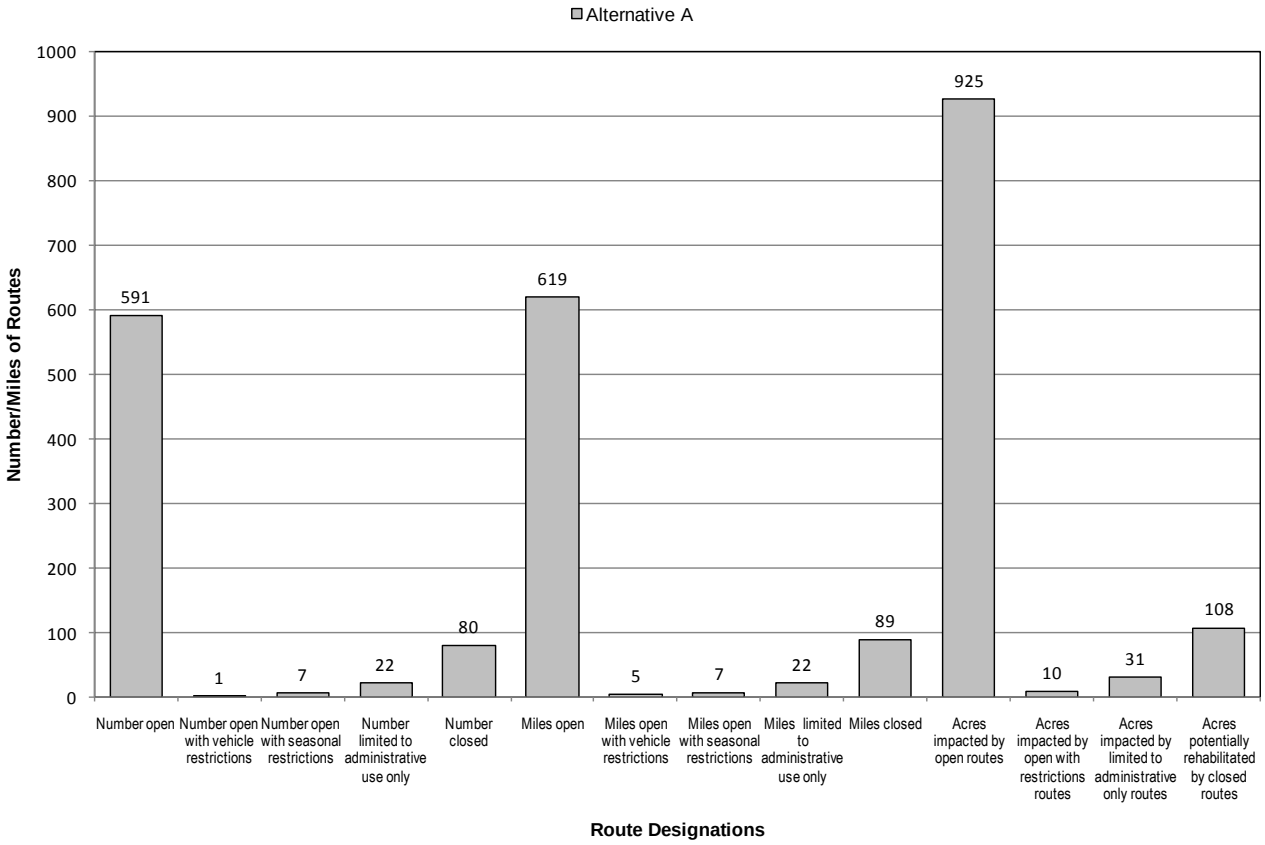
Finally, of the 701 routes that are within nesting habitat (within 4 miles of identified sage-grouse leks), 599 routes (631 miles) or 85% would be open or open with vehicle or seasonal restrictions.

Only 22 routes (22 miles) or 3% would be limited to administrative use only, while 80 routes (89 miles) or 11% would be closed to motor vehicle use. The actual footprint (area of surface disturbance) of open routes affects approximately 936 acres or 0.16% of the area within 4 miles of sage-grouse leks. In other words, for every 1 acre of route footprint within the 4-mile nesting habitat, 623 acres would be without routes. The footprint for routes that would be closed within the 4-mile nesting habitat would be 108 acres or 10% of the total. This would be a continuation of a long-term, direct, localized minor reduction of fragmented habitat and the potential for wildlife harassment (43 CFR 8342.1(b)).

Table O-27: Alternative A Route Designations in Sage-Grouse Nesting Habitat (4 miles from Leks)

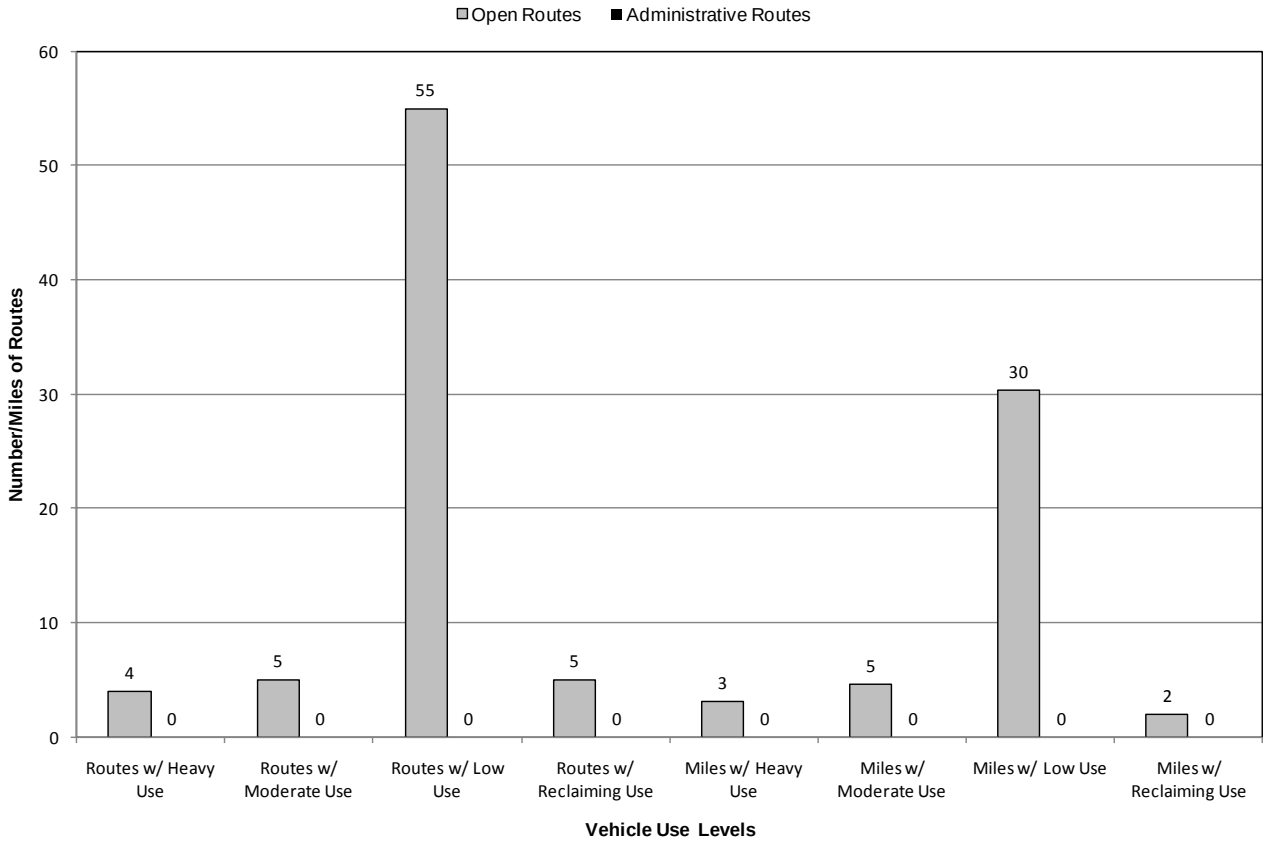
Alternative A Route Designations in Sage-Grouse Nesting Habitat (4 miles from Leks)						
Potential Route Designations	**Alternative A**					
	Routes	**Percent**	**Miles**	**Percent**	**Acres impacted by routes**	**Percent of total within 4 miles**
Open	591	84.3%	618.8	83.3%	925.4	86.2%
Open with vehicle restrictions	1	0.1%	5.4	0.7%	9.5	0.9%
Open with seasonal restrictions	7	1.0%	7.2	1.0%		
Limited to administrative use only	22	3.1%	22	3.0%	30.7	2.9%
Closed	80	11.4%	89.3	12.0%	107.7	10.0%
Percent of open route acreage					0.16%	
Ratio of open route acres to un-routed acres					1:623	

Figure 4.2.1.2e: Alternative A Route Designations in Sage Grouse Nesting Habitat (4 miles from Leks)



Of the 81 existing BLM routes (47 miles) that comprise the travel routes within 0.6 miles of sage-grouse leks under the No Action Alternative, 60 open routes (30 miles) or 80% are considered by resource specialists to have low or no observed vehicle use. Conversely, 5 open routes (5 miles) or 7% have vehicle use levels estimated as moderate and only 4 open routes (3 miles) or 6% are estimated to have heavy vehicle use levels. The combination of 12 closed routes and the continuation of low or no observed vehicle use on 87% of open routes (81% of route miles) within 0.6 miles of sage-grouse lek sites would directly contribute, in the long-term, to lessening of the effects of route use, such as wildlife harassment, human-caused animal mortality or displacement of individual animals to a minor to moderate degree (43 CFR 8342.1 (b)).

Figure 4.2.1.2f: Alternative A Route Designations by Estimated Vehicle Use Levels for Routes within 0.6 miles of Sage Grouse Leks



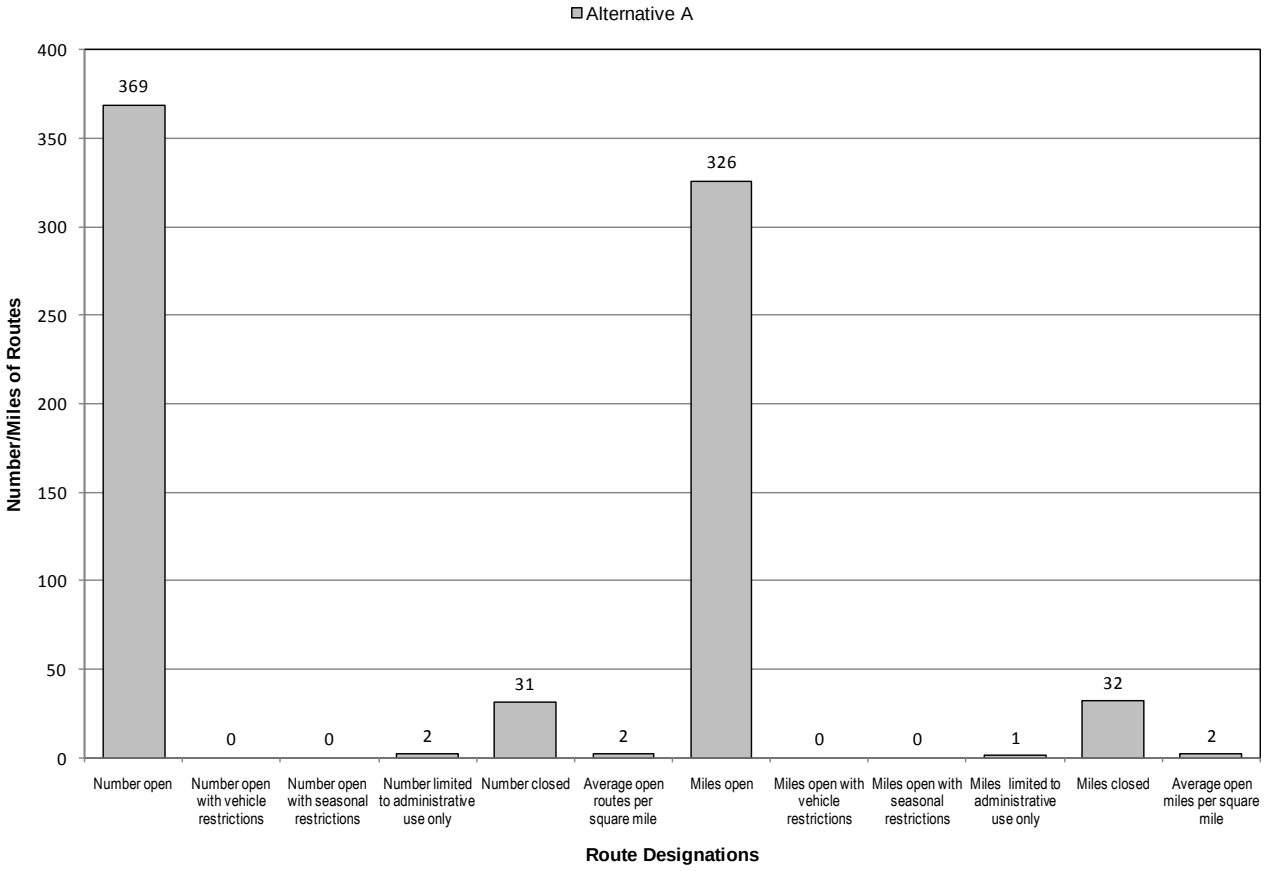
Greater Sage-Grouse Protection Priority Areas

Under the No Action Alternative, sage-grouse Protection Priority Areas (PPAs) would not be allocated. However, for analysis purposes, the route designations that follow would be for the same geographic areas that would become the PPAs in Alternatives B, C and D. Therefore, under the No Action Alternative, the 402 existing BLM routes (359 miles) that comprise the travel networks within these geographic areas would continue to be managed using five existing designation types, with more than 9 out of every 10 existing routes (92%) open to all motorized uses. Additionally, the route density within these areas would remain fairly constant for the long-term at 2 open routes per square mile and 1.8 miles of open routes per square mile. Although Alternative A carries forward closures and restrictions to administrative use only on 33 routes (33 miles) or 8% of the routes, the long-term, direct, localized effect of these restricted routes on reducing habitat fragmentation is minor, due to the availability of 369 open routes at 326 miles with the route densities that are described above (43 CFR 8342.1(b)).

Table O-28: Alternative A Route Designations in Sage-Grouse PPAs

Alternative A Route Designations in Sage-Grouse PPAs				
Potential Route Designations	**Alternative A**			
	Routes	**Percent**	**Miles**	**Percent**
Open	369	91.8%	326.1	90.9%
Open with vehicle restrictions	0	0%	0	0%
Open with seasonal restrictions	0	0%	0	0%
Limited to administrative use only	2	0.5%	0.9	0.3%
Closed	31	7.7%	31.8	8.9%
Average open routes per square mile (density)	2		1.8	

Figure 4.2.1.2g: Alternative A Route Designations in Sage Grouse PPAs



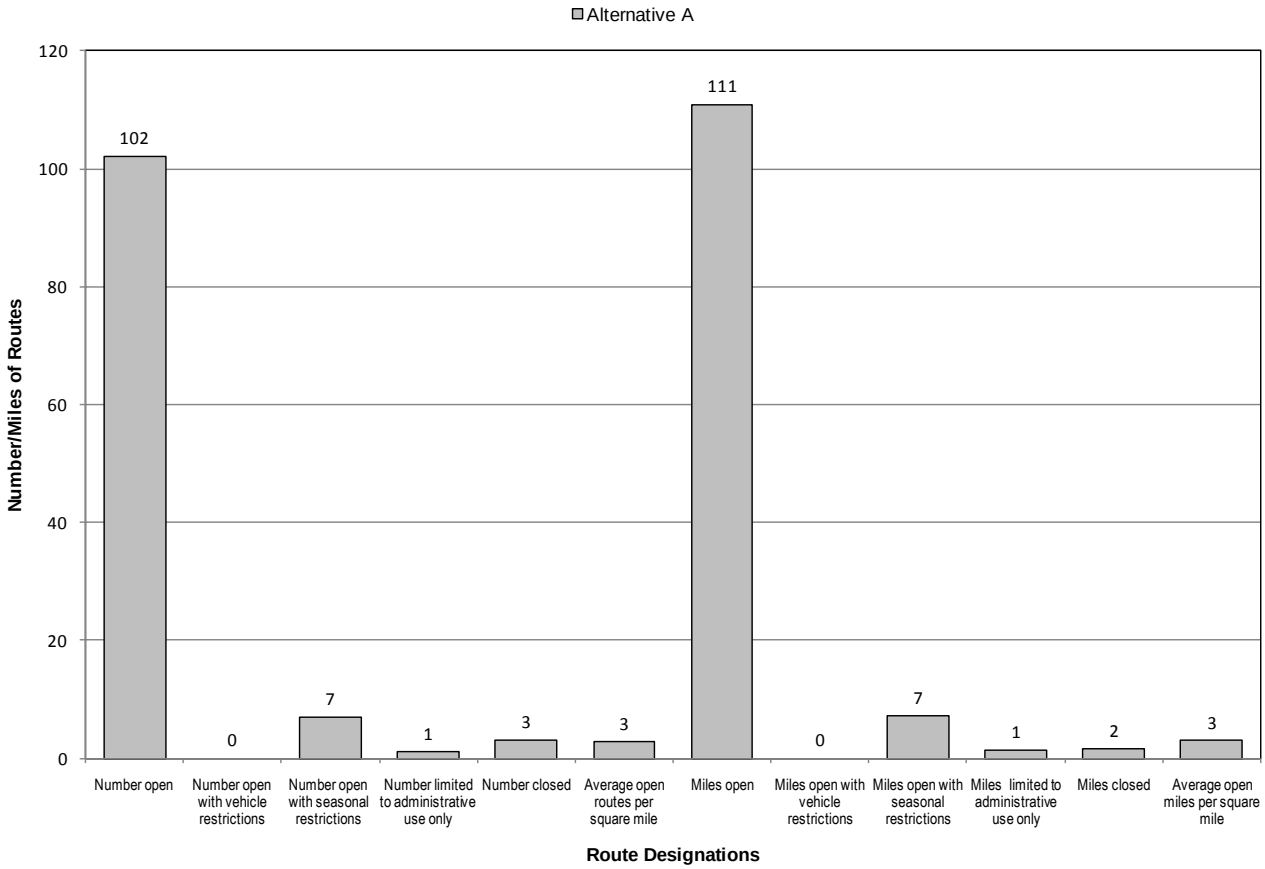
Greater Sage-Grouse Restoration Areas

Under the No Action Alternative, sage-grouse Restoration Areas (RAs) would not be allocated. However, for analysis purposes, the route designations that follow would be for the same geographic areas that would become the RAs in Alternatives B, C and D. Therefore, under the No Action Alternative, the 113 existing BLM routes (121 miles) that comprise the travel networks within these areas (RA) would continue to be managed using five existing designation types, with more than 9 out of every 10 existing routes (96%) open to all motorized uses or open with seasonal restrictions. Additionally, the route density within the RA would remain fairly constant for the long-term at 2.7 open routes per square mile and 2.9 miles of open routes per square mile. Although Alternative A carries forward closures and restrictions to administrative use only on 4 routes (3 miles) or 4% of the RA, the long-term, direct, localized effect of these restricted routes on reducing RA habitat fragmentation is negligible, due to the availability of 109 open routes at 118 miles with the route densities that are described above (43 CFR 8342.1(b)).

Table O-29: Alternative A Route Designations in Sage-Grouse RAs

Alternative A Route Designations in Sage-Grouse RAs				
Potential Route Designations	**Alternative A**			
	Routes	**Percent**	**Miles**	**Percent**
Open	102	90.3%	110.8	91.6%
Open with vehicle restrictions	0	0%	0	0%
Open with seasonal restrictions	7	6.2%	7.2	6.0%
Limited to administrative use only	1	0.9%	1.4	1.2%
Closed	3	2.7%	1.5	1.2%
Average open routes per square mile (density)	2.7		2.9	

Figure 4.2.1.2h: Alternative A Route Designations in Sage Grouse RPAs



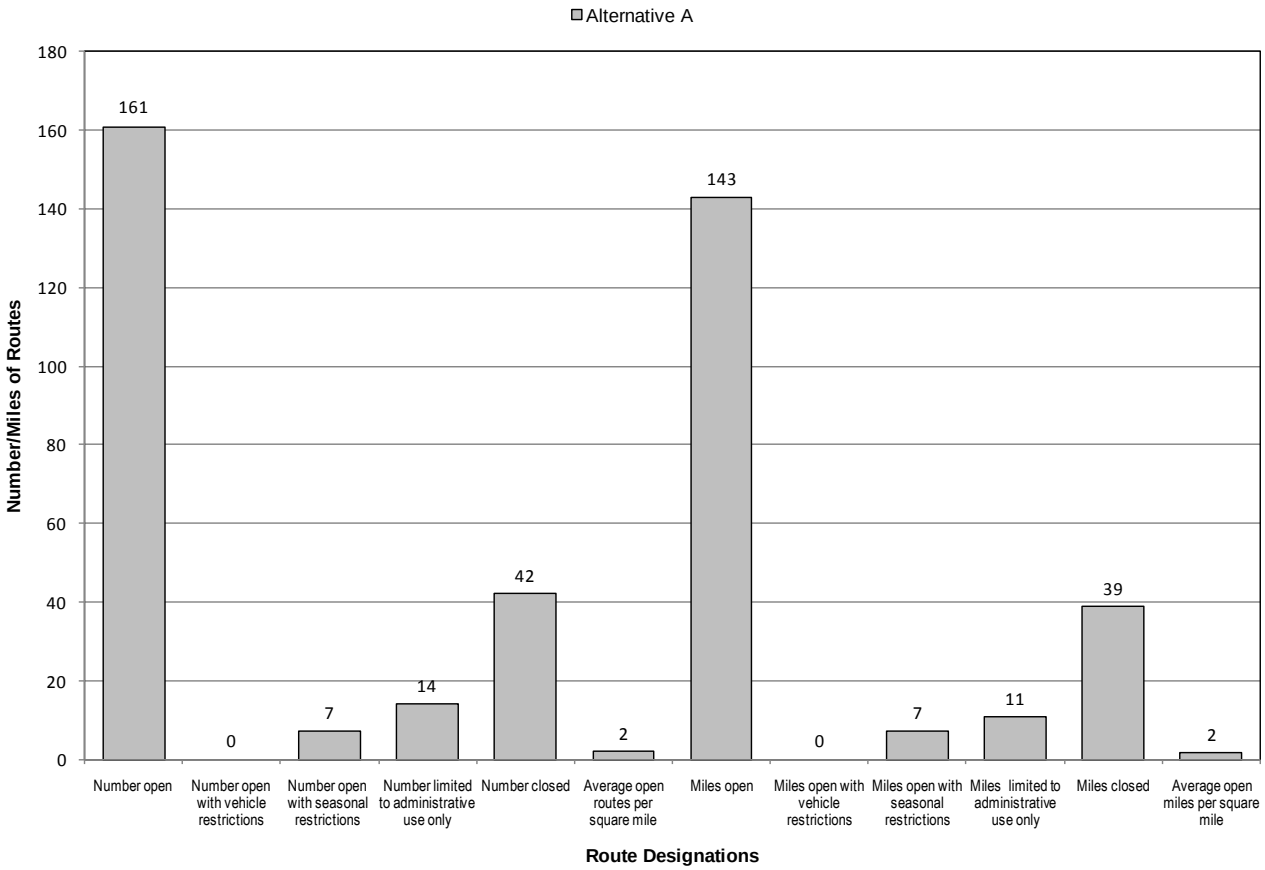
Greater Sage-Grouse General Habitat

Under the No Action Alternative, sage-grouse PPAs, RAs, and General habitat would not be allocated; however, they would be allocated in Alternatives B, C, and D. Route designations for those geographic areas (potential PPA/RA/General) are discussed in the previous two sections. However, for analysis purposes, the route designations that follow would be for the remaining sage-grouse general habitat. Under the No Action Alternative, the 224 existing BLM routes (200 miles) that comprise the travel networks within the remaining sage-grouse general habitat would continue to be managed using five existing designation types, with more than 7 out of every 10 existing routes (75%) open to all motorized uses or open with seasonal restrictions. Additionally, the route density within the remaining general habitat would remain fairly constant for the long-term at 1.8 open routes per square mile and 1.6 miles of open routes per square mile. Alternative A carries forward closures and restrictions to administrative use only on 56 routes (49 miles) or 25% of the remaining general habitat. The continued long-term, direct, localized effect of these restricted routes on reducing habitat fragmentation is minor, due to the availability of 168 open routes at 150 miles with the route densities that are described above (43 CFR 8342.1(b)).

Table O-30: Alternative A Route Designations in Sage-Grouse General Habitat

Alternative A Route Designations in Sage-Grouse General Habitat				
Potential Route Designations	**Alternative A**			
	Routes	**Percent**	**Miles**	**Percent**
Open	161	71.9%	142.9	71.6%
Open with vehicle restrictions	0	0%	0	0%
Open with seasonal restrictions	7	3.1%	7.2	3.6%
Limited to administrative use only	14	6.3%	10.7	5.4%
Closed	42	18.8%	38.7	19.4%
Average open routes per square mile (density)	1.8		1.6	

Figure 4.2.1.2i: Alternative A Route Designations in Sage Grouse General Habitat



Overall, this Alternative would provide negligible to minor protection of sage-grouse leks and nesting habitat from habitat fragmentation and disturbance from travel routes within the Travel Management Areas (TMAs). The direct, long-term, local impacts to sage-grouse would continue to occur.

Prairie Dogs

The current open route network would continue the long-term, localized conditions that directly and moderately affect prairie dogs (white-tailed and black-tailed) at or within 0.5 miles of known prairie dog communities, such as impairment of species' movements, harassment by humans, and disruption of habitat through loss of, or changes to, key habitat components. Additionally, as the potential for new route development is realized with boom cycles in population, energy exploration, and development, these impacts may increase to a minor, short-term local extent as these new routes potentially become available and help spread out public use.

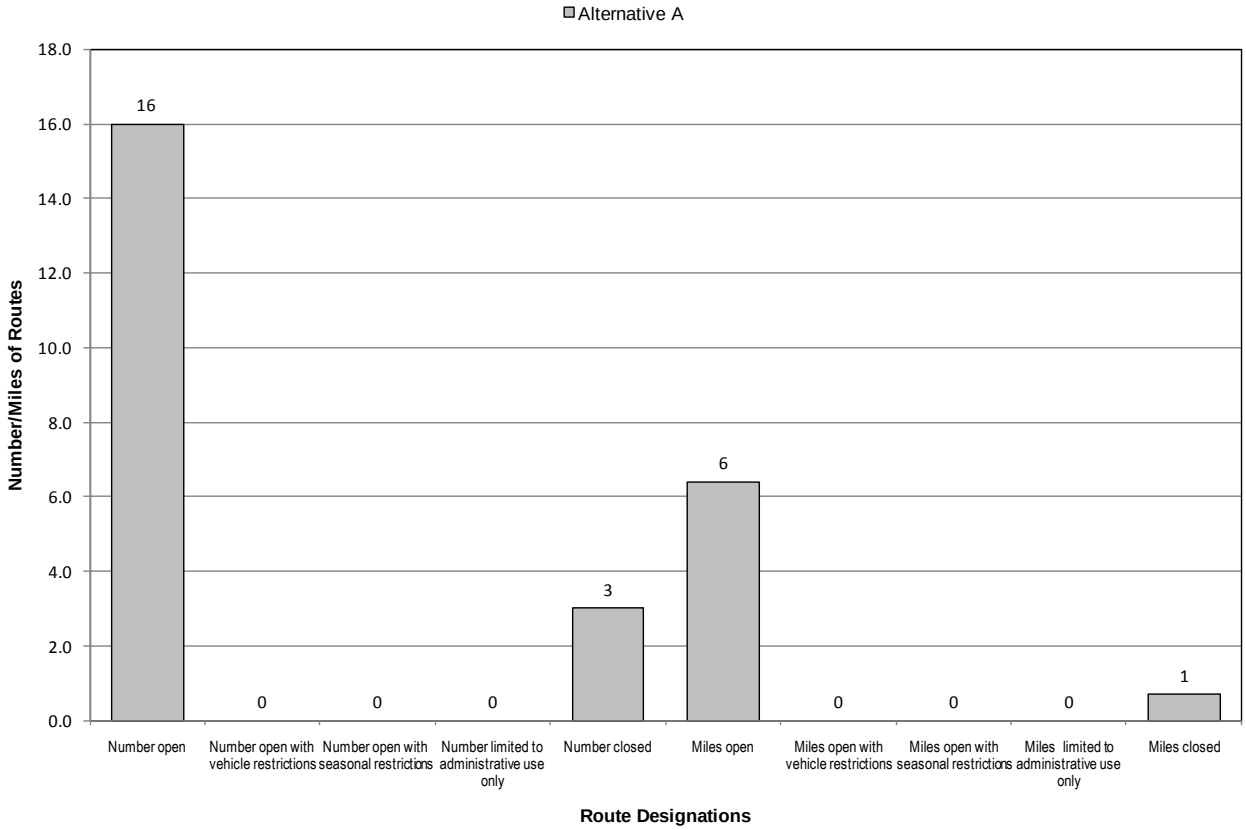
White-tailed Prairie Dogs

Under the No Action Alternative, of the 19 routes that are within 0.5 miles of identified white-tailed prairie dog "towns", 16 routes (6.4 miles) or 84% would be open to all types of motor vehicle use. Only 3 routes (0.7 mile) or 16% would be closed to motor vehicle use. The long-term, direct, localized effect of these route closures on reducing habitat fragmentation and/or minimizing the potential for wildlife harassment would be negligible, due to the availability of the 16 open routes near the "town" sites (43 CFR 8342.1(b)).

Table O-31: Alternative A Route Designations within 1/2-mile of White-tailed Prairie Dog Habitat

Alternative A Route Designations within 1/2-mile of White-tailed Prairie Dog Habitat				
Potential Route Designations	Alternative A			
	Routes	Percent	Miles	Percent
Open	16	84.2%	6.4	88.9%
Open with vehicle restrictions	0	0%	0	0%
Open with seasonal restrictions	0	0%	0	0%
Limited to administrative use only	0	0%	0	0%
Closed	3	15.8%	0.7	9.7%

Figure 4.2.1.3a: Alternative A Route Designations within 0.5 miles of White--tailed Prairie Dog Habitat



Black-tailed Prairie Dogs

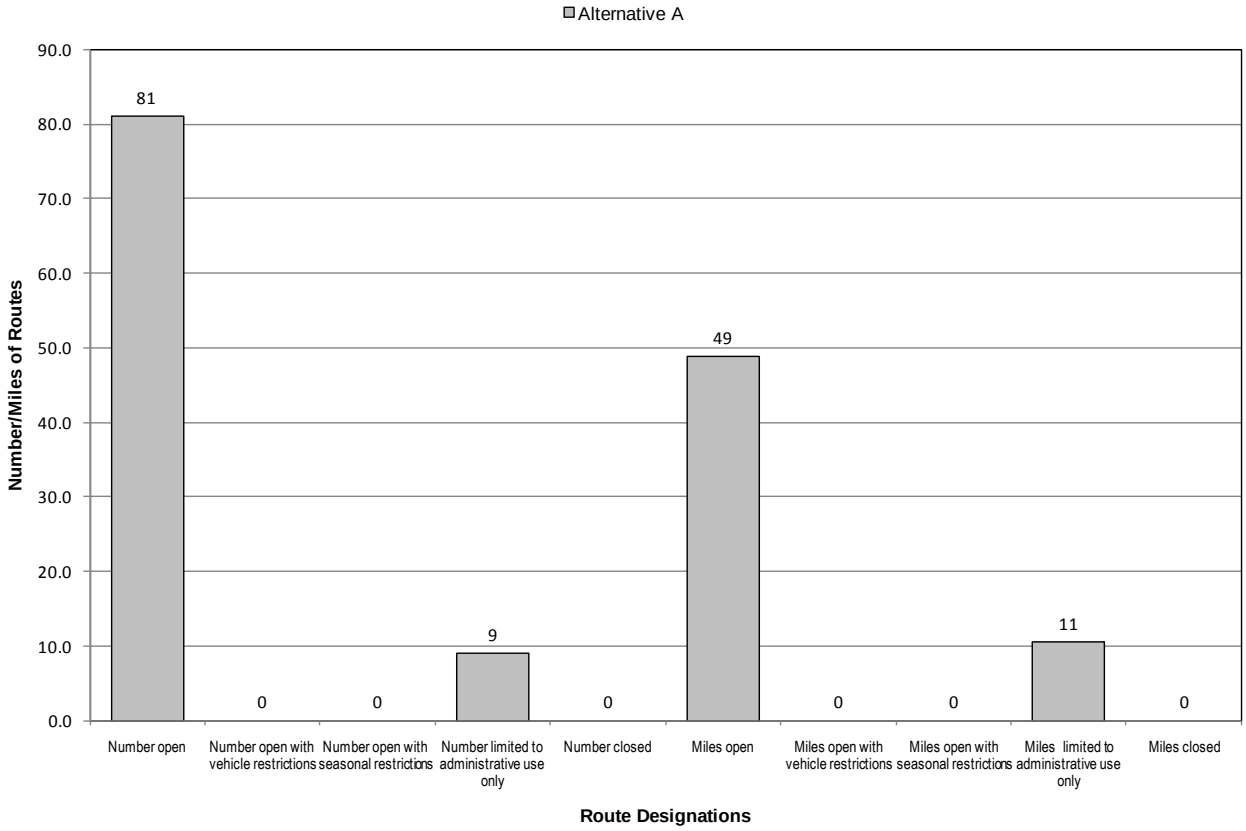
Under the No Action Alternative, of the 90 routes that are within 0.5 mile of identified black-tailed prairie dog "towns", 81 routes (48.8 miles) or 90% would be open to all types of motor vehicle. No routes would be closed and only 9 routes (10.5 mile) or 10% would be limited to administrative use only. The long-term, direct, localized effect of these route restrictions on reducing habitat fragmentation and/or minimizing the potential for wildlife harassment would be negligible, due to the availability of the 81 open routes near the "town" sites (43 CFR 8342.1(b)).

There would be negligible benefits to prairie dog habitat with this Alternative. The long-term, direct, localized, and moderate impacts on habitat fragmentation and prairie dog harassment would continue.

Table O-32: Alternative A Route Designations within 1/2-mile of Black-tailed Prairie Dog Habitat

Alternative A Route Designations within 1/2-mile of Black-tailed Prairie Dog Habitat				
Potential Route Designations	**Alternative A**			
	Routes	**Percent**	**Miles**	**Percent**
Open	81	90.0%	48.8	82.3%
Open with vehicle restrictions	0	0%	0	0%
Open with seasonal restrictions	0	0%	0	0%
Limited to administrative use only	9	10.0%	10.5	17.7%
Closed	0	0%	0	0%

Figure 4.2.1.3b: Alternative A Route Designations within 0.5 miles of Black-tailed Prairie Dog Habitat



Summary Alternative A - Impacts from Trails and Travel Management

Under Alternative A, there would be 763.6 miles of open routes and 108.6 miles of closed routes. The impacts to wildlife and special status species as a result of implementing actions associated with travel management would include conflicts with motorized activities and road densities within associated habitats. Short-term impacts would include disruption and displacement of individuals and direct mortality to less mobile species. Long-term adverse impacts would include habitat loss and fragmentation with the development of roads.

O.6.2.9.4 Alternative B

Big Game Species

Under Alternative B, the 865 existing BLM routes (974 miles) that comprise the travel networks within big game general winter range (BGGWR) would continue to be managed using five existing designation types shown, with just over 1 out of every 10 existing routes (91 routes or about 11%) open to all motorized uses or open with special seasonal or vehicular restrictions. This would result in 73% fewer open routes in Alternative B than would be open in Alternative A. Additionally; the route density within the BGGWR would be reduced by 87% for the long-term to 0.2 open routes per square mile and reduced by 57% to 0.8 miles of open routes per square mile. The footprint (actual area of surface disturbance) of open routes affects approximately 599 acres or 0.2% of the 275,839 acres of BGGWR within the TMAs. In other words, for every 1 acre of route footprint within the BGGWR, 460 acres would be without routes.

Alternative B proposes closures and restrictions to administrative use only on a combined 774 routes at 629 miles, a 73% increase from these designations in Alternative A. The long term, direct, localized effect of these restricted routes on reducing BGGWR habitat fragmentation is major, due to the reduced availability and use of open routes to only 91 (at 345 miles) with the route densities that are described above.

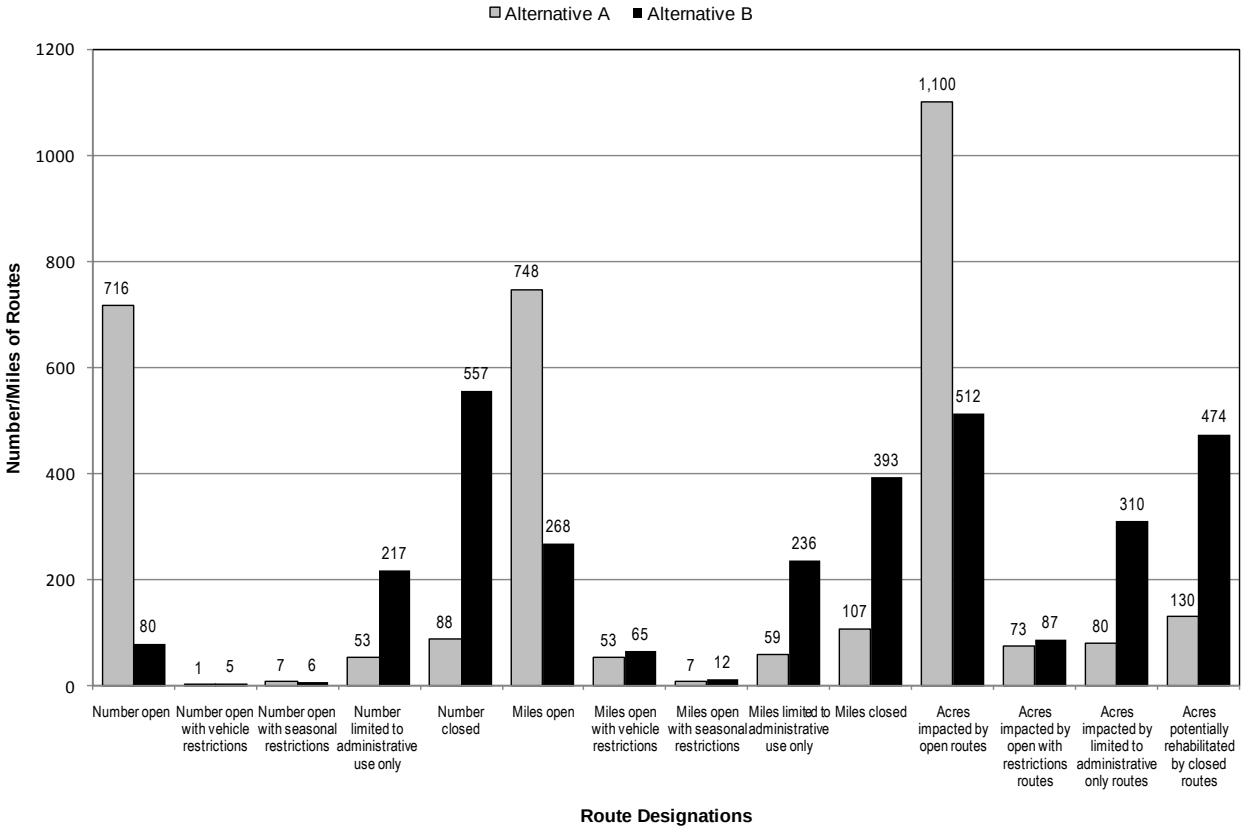
Table O-33: Alternative B Route Designations for Big Game Winter Range (compared to Alt. A)

Alternative B Route Designations for Big Game Winter Range (compared to Alt. A)

Potential Route Designations	Alternative A				Alternative B							
	Routes	Percent	Miles	Percent	Routes	Percent	# Δ from Alt. A	% Δ from Alt. A	Miles	Percent	# Δ from Alt. A	% Δ from Alt. A
Open	716	83%	747.6	76.8%	80	9.2%	-636	-73.5%	268	27.5%	-480	-49.3%
Open with vehicle restrictions	1	0.1%	52.7	5.4%	5	0.6%	4	0.5%	65.1	6.7%	12.4	1.3%
Open with seasonal restrictions	7	0.8%	7.2	0.7%	6	0.7%	-1	-0.1%	11.8	1.2%	4.6	0.5%
Limited to administrative use only	53	6.1%	59	6.1%	217	25.1%	164	19.0%	236	24.2%	177	18.2%
Closed	88	10.2%	107.4	11%	557	64.4%	469	54.2%	393	40%	285.6	29.3%
Average open routes per square mile (density)	1.7		1.9		0.2		-1.5	-87.4%	0.8		-1.1	-57.3%

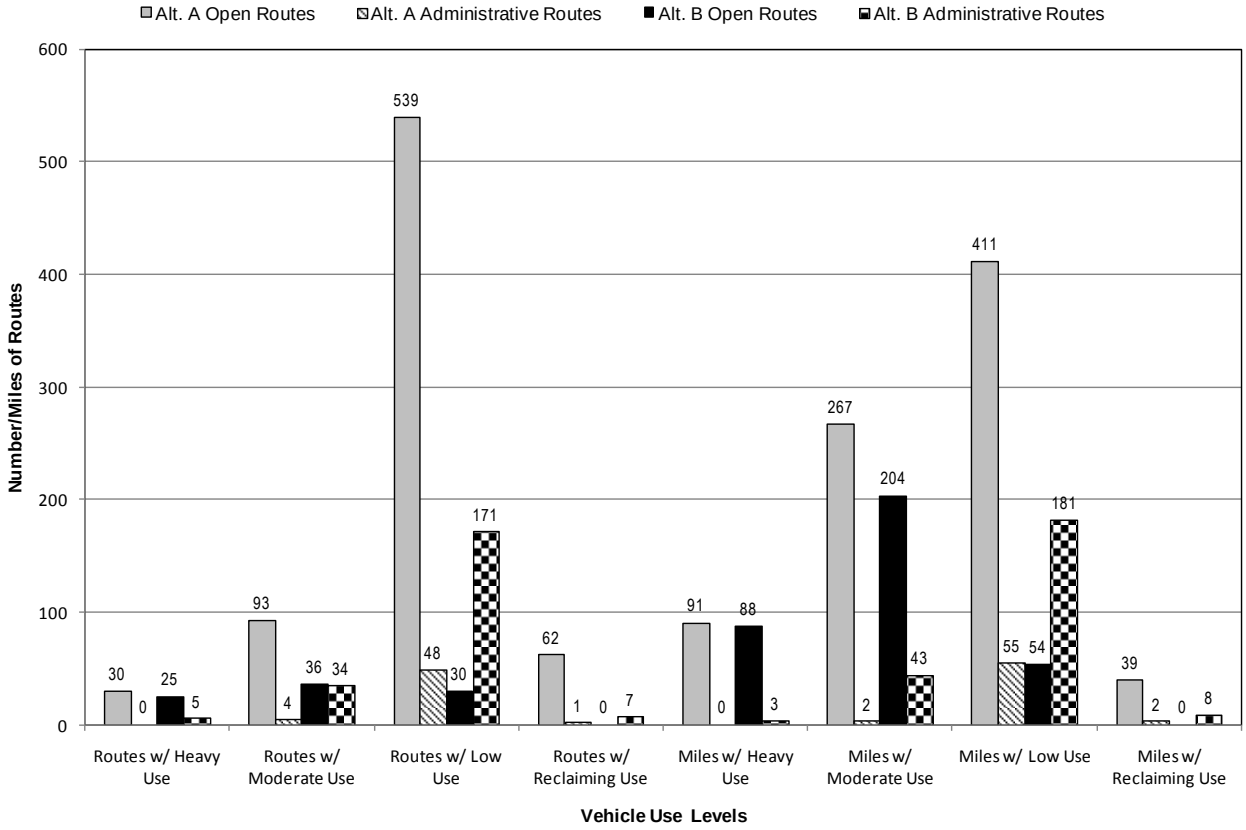
Route- Acres	Acres impacted by routes	Percent of total route acreage	Acres impacted by routes	Percent of total route acreage	Acres change from Alt. A	% change from Alt. A
Open	1100.3	79.6%	512.1	37.0%	-588.2	-42.5%
Open with restrictions	73.4	5.3%	86.6	6.3%	13.2	1.0%
Limited to administrative use only	79.6	5.8%	309.7	22.4%	230.1	16.6%
Closed	129.7	9.4%	474.4	34.3%	344.7	24.9%
Percent of open route acreage	0.4%		0.2%			
Ratio of open route acres to unrouted acres	1:234		1:460			

Figure 4.2.2.1a: Alternative B Route Designations in Big Game General Winter Range (Compared to Alt. A)



Of the existing BLM routes within BGGWR under the Alternative B, 30 open routes (54 miles) are considered by resource specialists to have low vehicle use levels. Conversely, 36 open routes (204 miles) have vehicle use levels estimated as moderate and only 25 open routes (88 miles) are estimated to have heavy vehicle use. The combination of 557 closed routes and the low vehicle use levels on 33% of open routes (16% of open route miles) and 79% of administrative use only routes (77% administrative route miles) in BGGWR would directly contribute, in the long-term, to lessening of the effects of route use, such as wildlife harassment, human-caused animal mortality or displacement of individual animals to a moderate to major degree (43 CFR 8342.1 (b)).

Figure 4.2.2.1b: Alternative B Route Designations in Big Game General Winter Range by Estimated Vehicle Use Levels (Compared to Alt. A.)



Overall, this Alternative would provide moderate to major protection of big game winter range. The direct, local, and long term effects of route use on big game winter range such as wildlife harassment, human-caused animal mortality, stress, or displacement of individual animals would be reduced to a moderate to major degree on big game winter range. Route densities would be reduced to 0.2 miles per square mile (87% less) and 73% fewer open routes versus Alternative A. The open road density of 0.2 miles of open routes per square mile is 80% below the 1 mile per section road density recommended in the "Guidelines/ Recommendations" for road densities.

BLM Road Density Analysis indicated that 1,391,647 acres of BGWR CAPS SCORE 1 and 2 areas, (of all ownerships with any public land ownership (surface or subsurface)) have road densities that exceed 0.5 miles per square mile. This Alternative would require roads to be gated or closed during crucial seasons where they impact big game winter range or parturition areas. Public access in these areas would vary dependent on the depth of winter snow. In greater snow depth years, disturbance impacts to big game would decrease due to reduced public access. In these areas, gating, closures, or reclamation of roads would reduce impacts to big game winter range by 69% and 57% respectively when compared to Alternative C and Alternative D. This would directly contribute in the long-term to decreasing the effects of route use, such as wildlife harassment, displacement, and stress to big game on winter ranges to a moderate to major degree.

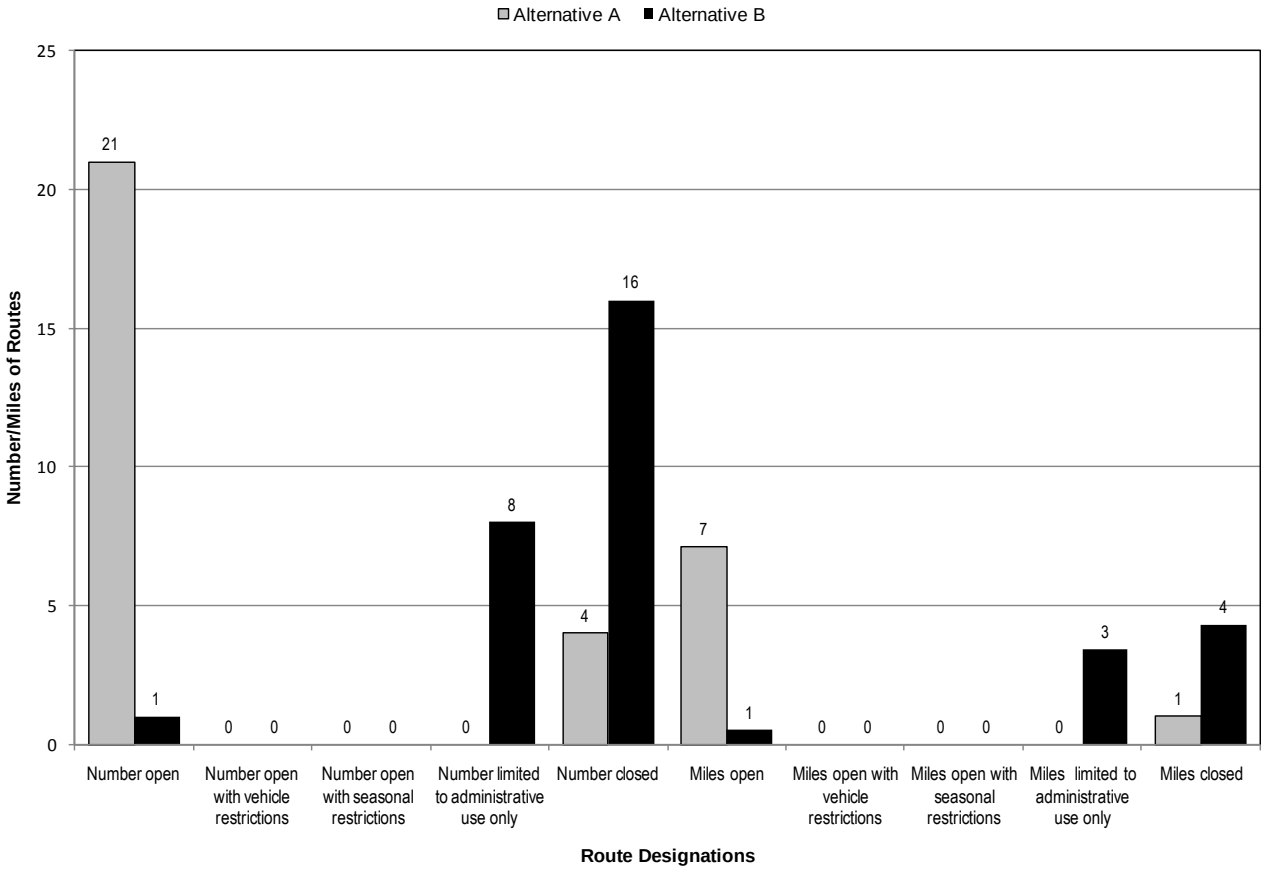
Greater Sage-Grouse Leks and Nesting Habitat

Under the Alternative B, of the 25 routes that are within 0.25 miles of identified sage-grouse leks, only 1 route (0.5 miles) or 4% would be open to all types of motor vehicle use. Conversely, 16 routes (4.3 miles) or 64% would be closed to motor vehicle use and 8 routes (3.4 miles) or 32% would be limited to administrative use only. This would result in 80% fewer open routes within 0.25 miles of leks in Alternative B than would be open in Alternative A. The long-term, direct, localized effect of these route designations on reducing habitat fragmentation and/or minimizing the potential for wildlife harassment would be major, due to the extremely limited public motorized access opportunities near the lek sites (43 CFR 8342.1(b)).

Table O-34: Alternative B Route Designations within ¼-mile of Sage-Grouse Leks (compared to Alt. A)

Alternative B Route Designations within ¼-mile of Sage-Grouse Leks (compared to Alt. A)												
Potential Route Designations	Alternative A				Alternative B							
	Routes	Percent	Miles	Percent	Routes	Percent	# Δ from Alt. A	% Δ from Alt. A	Miles	Percent	# Δ from Alt. A	% Δ from Alt. A
Open	21	84.0%	7.1	87.7%	1	4.0%	-20	-80.0%	0.5	6.1%	-6.6	-81.6%
Open with vehicle restrictions	0	0.0%	0.0	0.0%	0	0.0%	0	0.0%	0.0	0.0%	0	0.0%
Open with seasonal restrictions	0	0.0%	0.0	0.0%	0	0.0%	0	0.0%	0.0	0.0%	0	0.0%
Limited to administrative use only	0	0.0%	0.0	0.0%	8	32.0%	8	32.0%	3.4	41.5%	3.4	41.5%
Closed	4	16.0%	1.0	12.3%	16	64.0%	12	48.0%	4.3	52.4%	3.3	40.1%

Figure 4.2.2.2a: Alternative B Route Designations within1/4-mile of Sage Grouse Leks



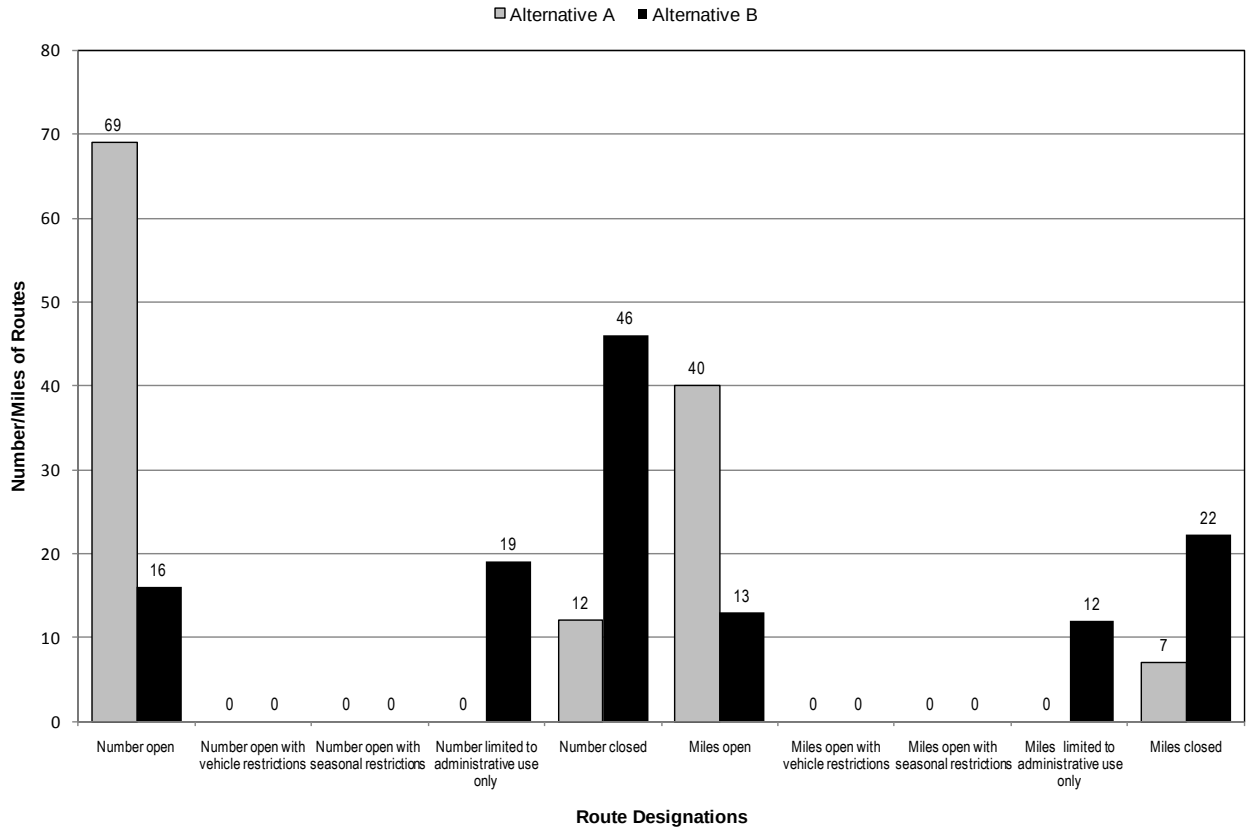
Under the Alternative B, of the 81 routes that are within 0.6 miles of identified sage-grouse leks, 16 routes (12.9 miles) or 20% would be open to all types of motor vehicle use. Conversely, 46 routes (22.2 miles) or 57% would be closed and 19 routes (11.9 miles) or 23% would be limited to administrative use only. This would result in 65% fewer open routes within 0.6 miles of leks in Alternative B than would be open in Alternative A. The long-term, direct, localized effect of these route designations on reducing habitat fragmentation and/or minimizing the potential for wildlife harassment would be moderate to major, due to the limited public motorized access opportunities near the lek sites (43 CFR 8342.1(b)).

Table O-35: Alternative B Route Designations within 0.6 miles of Sage-Grouse Leks (compared to Alt. A)

Alternative B Route Designations within 0.6 miles of Sage-Grouse Leks (compared to Alt. A)

Potential Route Designations	Alternative A				Alternative B							
	Routes	Percent	Miles	Percent	Routes	Percent	# Δ from Alt. A	% Δ from Alt. A	Miles	Percent	# Δ from Alt. A	% Δ from Alt. A
Open	69	85.2%	40.0	85.1%	16	19.8%	-53	-65.4%	12.9	27.4%	-27.1	-57.7%
Open with vehicle restrictions	0	0.0%	0.0	0.0%	0	0.0%	0	0.0%	0.0	0.0%	0	0.0%
Open with seasonal restrictions	0	0.0%	0.0	0.0%	0	0.0%	0	0.0%	0.0	0.0%	0	0.0%
Limited to administrative use only	0	0.0%	0.0	0.0%	19	23.5%	19	23.5%	11.9	25.3%	11.9	25.3%
Closed	12	14.8%	7.0	14.9%	46	56.8%	34	42%	22.2	47.2%	15.2	32.3%

Figure 4.2.2.2b: Alternative B Route Designations within 0.6 miles of Sage Grouse Leks (Compared to Alt. A)



Of the 395 routes that are within nesting habitat (within 2 miles of identified sage-grouse leks), 44 routes (106 miles) or 11% would be open or open with seasonal restrictions. Conversely, 105 routes (100 miles) or 27% would be limited to administrative use only, while 245 routes (160 miles) or 62% would be closed to motor vehicle use. This would result in 76% fewer open routes within 2 miles of leks in Alternative B than would be open in Alternative A. The actual footprint (area of surface disturbance) of open routes affects approximately 196 acres or 0.12% of the total area within 2 miles of sage-grouse leks. In other words, for every 1 acre of route footprint within the 2-mile nesting habitat, 802 acres would be without routes. This would result in 53% fewer open route acres in Alternative B than in Alternative A. The footprint for routes that would be closed (and eventually restored to a more natural condition) would be 194 acres or 37% of the total route acreage within the 2-mile nesting habitat; 29% more than in Alternative A. This would be a long-term, direct, localized moderate to major reduction of fragmented habitat and the potential for wildlife harassment (43 CFR 8342.1(b)).

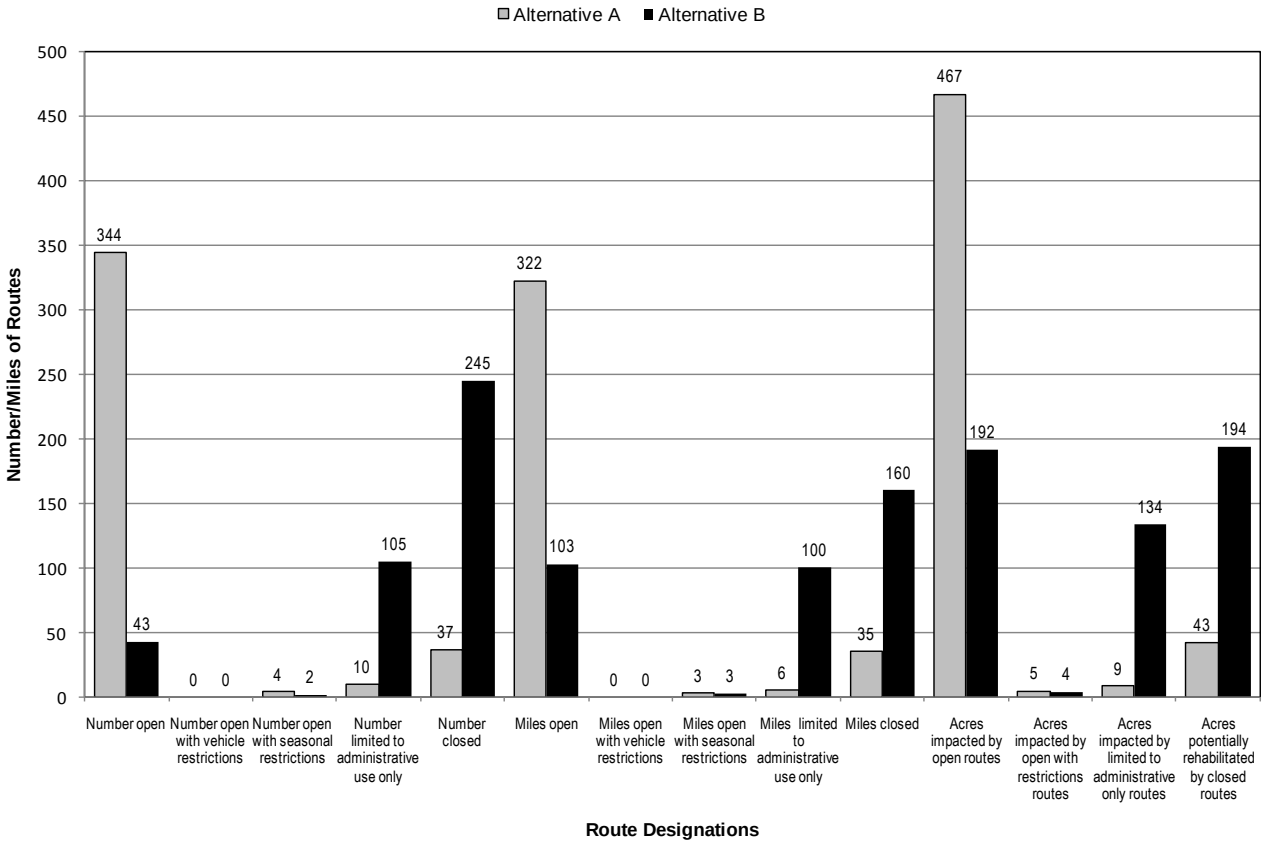
Table O-36: Alternative B Route Designations in Sage-Grouse Nesting Habitat - 2 miles from Leks (compared to Alt. A)

Alternative B Route Designations in Sage-Grouse Nesting Habitat - 2 miles from Leks (compared to Alt. A)

Potential Route Designations	Alternative A				Alternative B							
	Routes	Percent	Miles	Percent	Routes	Percent	# Δ from Alt. A	% Δ from Alt. A	Miles	Percent	# Δ from Alt. A	% Δ from Alt. A
Open	344	87.1%	322.0	87.9%	43	10.9%	-301	-76.2%	103.1	28.1%	-218.9	-59.8%
Open with vehicle restrictions	0	0.0%	0.0	0.0%	0	0.0%	0	0.0%	0.0	0.0%	0	0.0%
Open with seasonal restrictions	4	1.0%	3.3	0.9%	2	0.5%	-2	-0.5%	2.7	0.7%	-0.6	-0.2%
Limited to administrative use only	10	2.5%	5.6	1.5%	105	26.6%	95	24.1%	100.4	27.4%	94.8	25.9%
Closed	37	9.4%	35.4	9.7%	245	62%	208	52.7%	160.1	43.7%	124.7	34.0%

Route- Acres	Acres impacted by routes	Percent of total route acreage	Acres impacted by routes	Percent of total route acreage	Acres change from Alt. A	% change from Alt. A
Open	466.8	89.3%	191.5	36.6%	-275.3	-52.7%
Open with restrictions	5.0	1.0%	4.3	0.8%	-0.7	-0.1%
Limited to administrative use only	8.5	1.6%	133.8	25.6%	125.3	23.9%
Closed	42.7	8.2%	193.6	37.0%	150.9	28.8%
Percent of open route acreage	0.3%		0.12%			
Ratio of open route acres to unrouted acres	1:332		1:802			

Figure 4.2.2.2c: Alternative B Route Designations in Sage Grouse Nesting Habitat - 2 miles from Leks (Compared to Alt. A)



Of the 579 routes that are within nesting habitat (within 3 miles of identified sage-grouse leks), 64 routes (178 miles) or 11% would be open or open with vehicle or seasonal restrictions. Conversely, 154 routes (149 miles) or 27% would be limited to administrative use only, while 361 routes (246 miles) or 62% would be closed to motor vehicle use. This would result in 76% fewer open routes within 3 miles of leks in Alternative B than would be open in Alternative A. The actual footprint (area of surface disturbance) of open routes affects approximately 335 acres or 0.10% of the total area within 3 miles of sage-grouse leks. In other words, for every 1 acre of route footprint within the 3-mile nesting habitat, 1,023 acres would be without routes. This would result in 48% fewer open route acres in Alternative B than in Alternative A. The footprint for routes that would be closed (and eventually restored to a more natural condition) would be 297 acres or 36% of the total route acreage within the 3-mile nesting habitat; 26% more than in Alternative A. This would be a long-term, direct, localized moderate reduction of fragmented habitat and the potential for wildlife harassment (43 CFR 8342.1(b)).

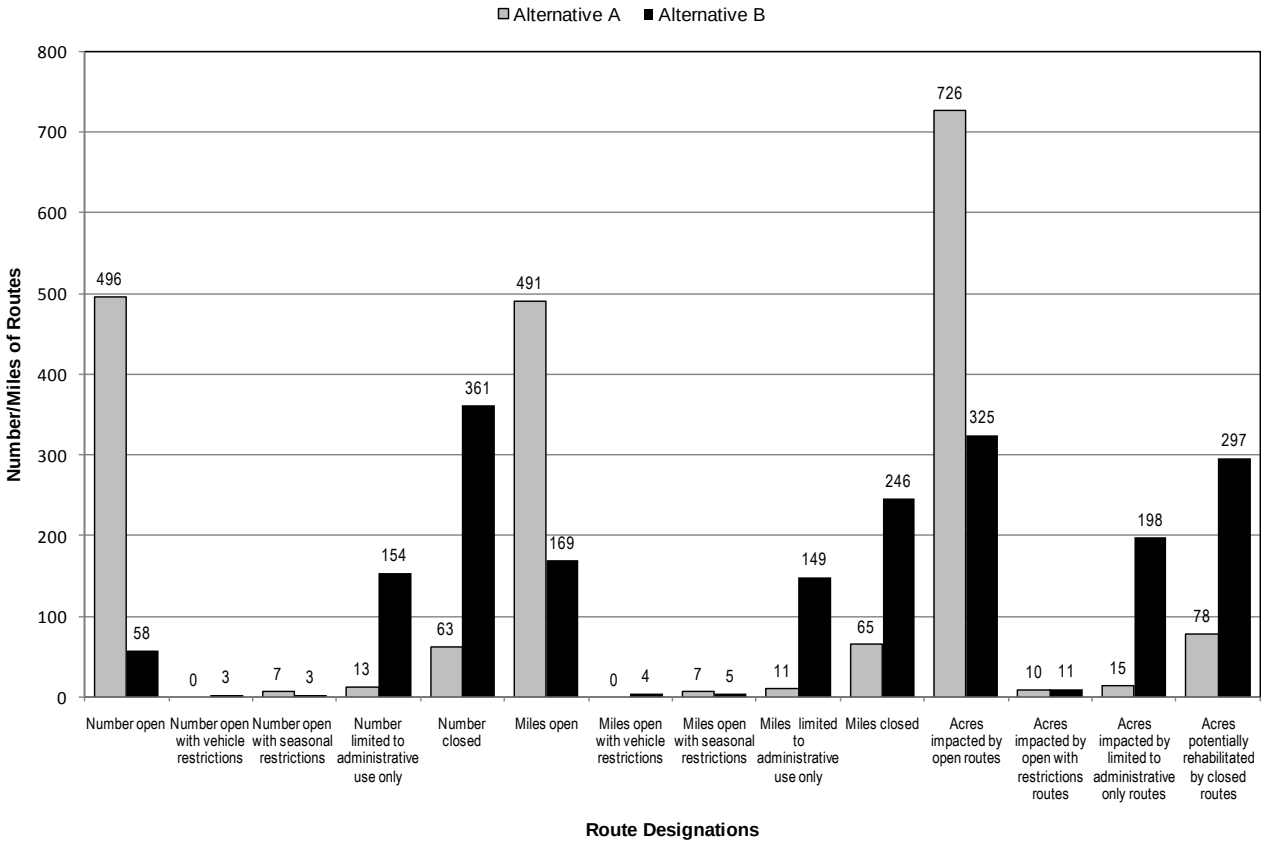
Table O-37: Alternative B Route Designations in Sage-Grouse Nesting Habitat - 3 miles from Leks (compared to Alt. A)

Alternative B Route Designations in Sage-Grouse Nesting Habitat - 3 miles from Leks (compared to Alt. A)

Potential Route Designations	Alternative A				Alternative B							
	Routes	Percent	Miles	Percent	Routes	Percent	# Δ from Alt. A	% Δ from Alt. A	Miles	Percent	# Δ from Alt. A	% Δ from Alt. A
Open	496	85.7%	490.5	85.5%	58	10.0%	-438	-76%	169.0	29.5%	-321.5	-56.0%
Open with vehicle restrictions	0	0.0%	0.0	0.0%	3	0.5%	3	0.5%	4.3	0.7%	4.3	0.7%
Open with seasonal restrictions	7	1.2%	7.2	1.3%	3	0.5%	-4	-0.7%	5.1	0.9%	-2.1	-0.4%
Limited to administrative use only	13	2.2%	10.9	1.9%	154	26.6%	141	24%	149.0	26.0%	138.1	24.1%
Closed	63	10.9%	65.1	11.3%	361	62.3%	298	51.5%	246.3	42.9%	181.2	31.6%

Route- Acres	Acres impacted by routes	Percent of total route acreage	Acres impacted by routes	Percent of total route acreage	Acres change from Alt. A	% change from Alt. A
Open	726.2	87.6%	324.5	39.1%	-401.7	-48.5%
Open with restrictions	9.5	1.1%	10.5	1.3%	1.0	0.1%
Limited to administrative use only	15.1	1.8%	197.8	23.8%	182.7	22.0%
Closed	78.4	9.5%	296.6	35.8%	218.2	26.3%
Percent of open route acreage	0.21%		0.10%			
Ratio of open route acres to unrouted acres	1:465		1:1023			

Figure 4.2.2.2d: Alternative B Route Designations in Sage Grouse Nesting Habitat - 3 miles from Leks (Compared to Alt. A)



Of the 701 routes that are within nesting habitat (within 4 miles of identified sage-grouse leks), 73 routes (240 miles) or 10% would be open or open with seasonal restrictions. Conversely, 180 routes (186 miles) or 26% would be limited to administrative use only, while 448 routes (316 miles) or 64% would be closed to motor vehicle use. This would result in 75% fewer open routes within 4 miles of leks in Alternative B than would be open in Alternative A. The actual footprint (area of surface disturbance) of open routes affects approximately 443 acres or 0.08% of the total area within 4 miles of sage-grouse leks. In other words, for every 1 acre of route footprint within the 4-mile nesting habitat, 1,313 acres would be without routes. This would result in 46% fewer open route acres in Alternative B than in Alternative A. The footprint for routes that would be closed (and eventually restored to a more natural condition) would be 381 acres or 36% of the total route acreage within the 4-mile nesting habitat; 26% more than in Alternative A. This would be a long-term, direct, localized moderate reduction of fragmented habitat and the potential for wildlife harassment (43 CFR 8342.1(b)).

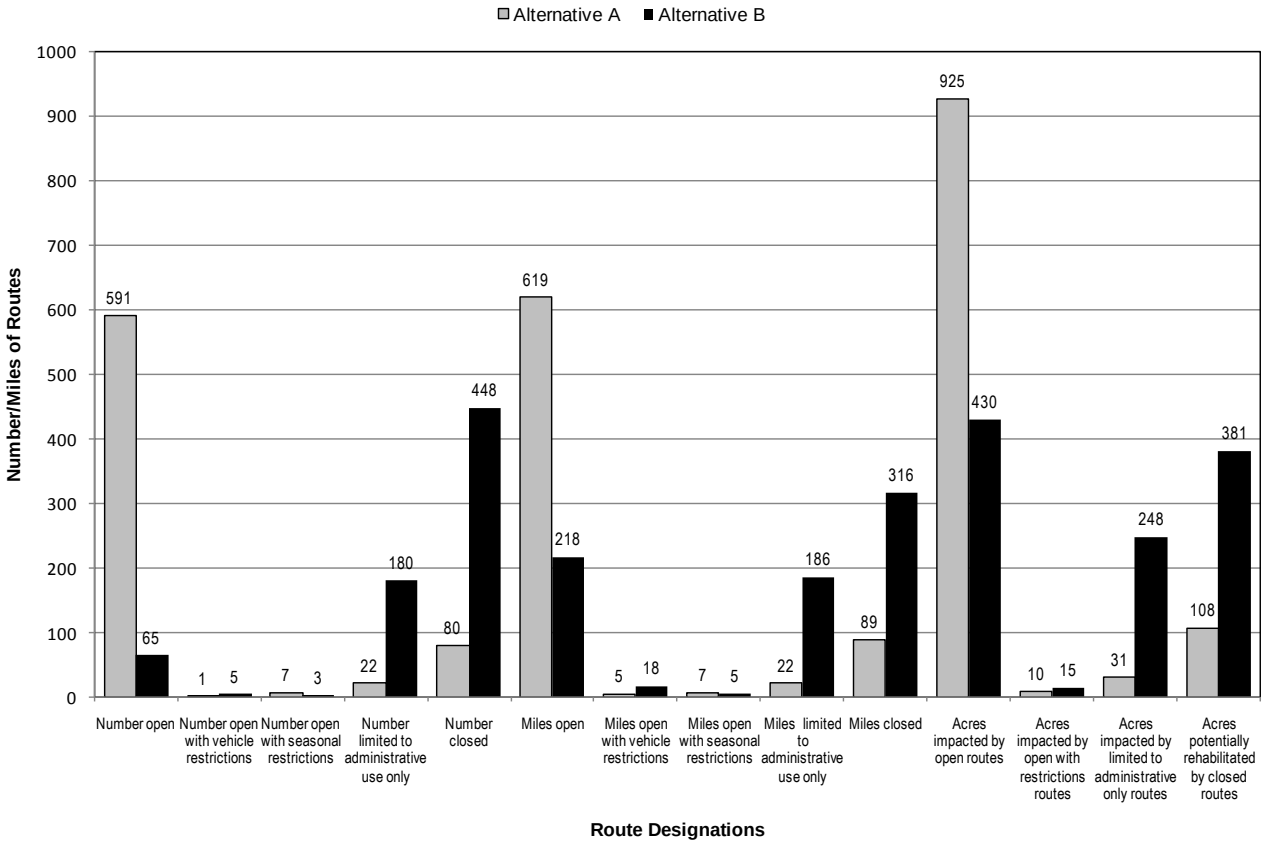
Table O-38: Alternative B Route Designations in Sage-Grouse Nesting Habitat - 4 miles from Leks (compared to Alt. A)

Alternative B Route Designations in Sage-Grouse Nesting Habitat - 4 miles from Leks (compared to Alt. A)

Potential Route Designations	Alternative A				Alternative B							
	Routes	Percent	Miles	Percent	Routes	Percent	# Δ from Alt. A	% Δ from Alt. A	Miles	Percent	# Δ from Alt. A	% Δ from Alt. A
Open	591	84.3%	618.8	83.3%	65	9.3%	-526	-75.0%	217.5	29.3%	-401.3	-54.0%
Open with vehicle restrictions	1	0.1%	5.4	0.7%	5	0.7%	4	0.6%	17.8	2.4%	12.4	1.7%
Open with seasonal restrictions	7	1.0%	7.2	1.0%	3	0.4%	-4	-0.6%	5.1	0.7%	-2.1	-0.3%
Limited to administrative use only	22	3.1%	22.0	3.0%	180	25.7%	158	22.5%	186.1	25.1%	164.1	22.1%
Closed	80	11.4%	89.3	12.0%	448	63.9%	368	52.5%	316.2	42.6%	226.9	30.6%

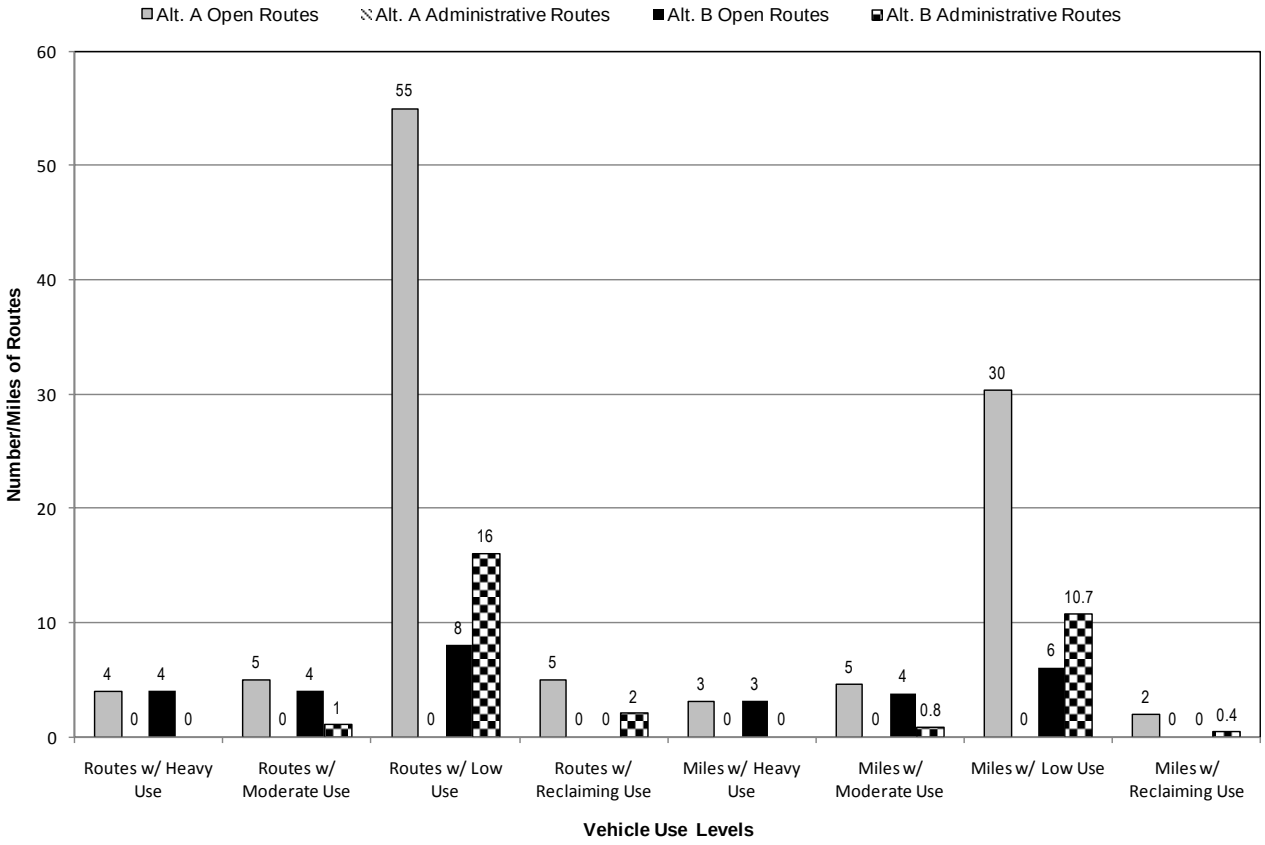
Route- Acres	Acres impacted by routes	Percent of total route acreage	Acres impacted by routes	Percent of total route acreage	Acres change from Alt. A	% change from Alt. A
Open	925.4	86.2%	429.7	40.0%	-495.7	-46.2%
Open with restrictions	9.5	0.9%	14.6	1.4%	5.1	0.5%
Limited to administrative use only	30.7	2.9%	248.0	23.1%	217.3	20.2%
Closed	107.7	10.0%	381.0	35.5%	273.3	25.5%
Percent of open route acreage	0.16%		0.08%			
Ratio of open route acres to unrouted acres	1:623		1:1313			

Figure 4.2.2.2e: Alternative B Route Designations in Sage Grouse Nesting Habitat - 4 miles from Leks (Compared to Alt. A)



Of the 81existing BLM routes (47 miles) within 0.6 miles of sage-grouse leks under the Alternative B, 8 open routes (6 miles) are considered by resource specialists to have low vehicle use. Conversely, 4 open routes (4 miles) have vehicle use levels estimated as moderate and only 4 open routes (3 miles) are estimated to have heavy vehicle use. The combination of 46 closed routes and the low vehicle use levels on 50% of open routes (47% of open route miles) and low use or no observed use on 95% of administrative use only routes (93% administrative route miles) within 0.6 miles of sage-grouse leks would directly contribute, in the long-term, to lessening of the effects of route use, such as wildlife harassment, human-caused animal mortality or displacement of individual animals to a major degree (43 CFR 8342.1 (b)).

Figure 4.2.2.2f: Alternative B Route Designations by Estimated Vehicle Use Levels for Routes within 0.6 miles of Sage Grouse Leks



Greater Sage-Grouse Protection Priority Areas

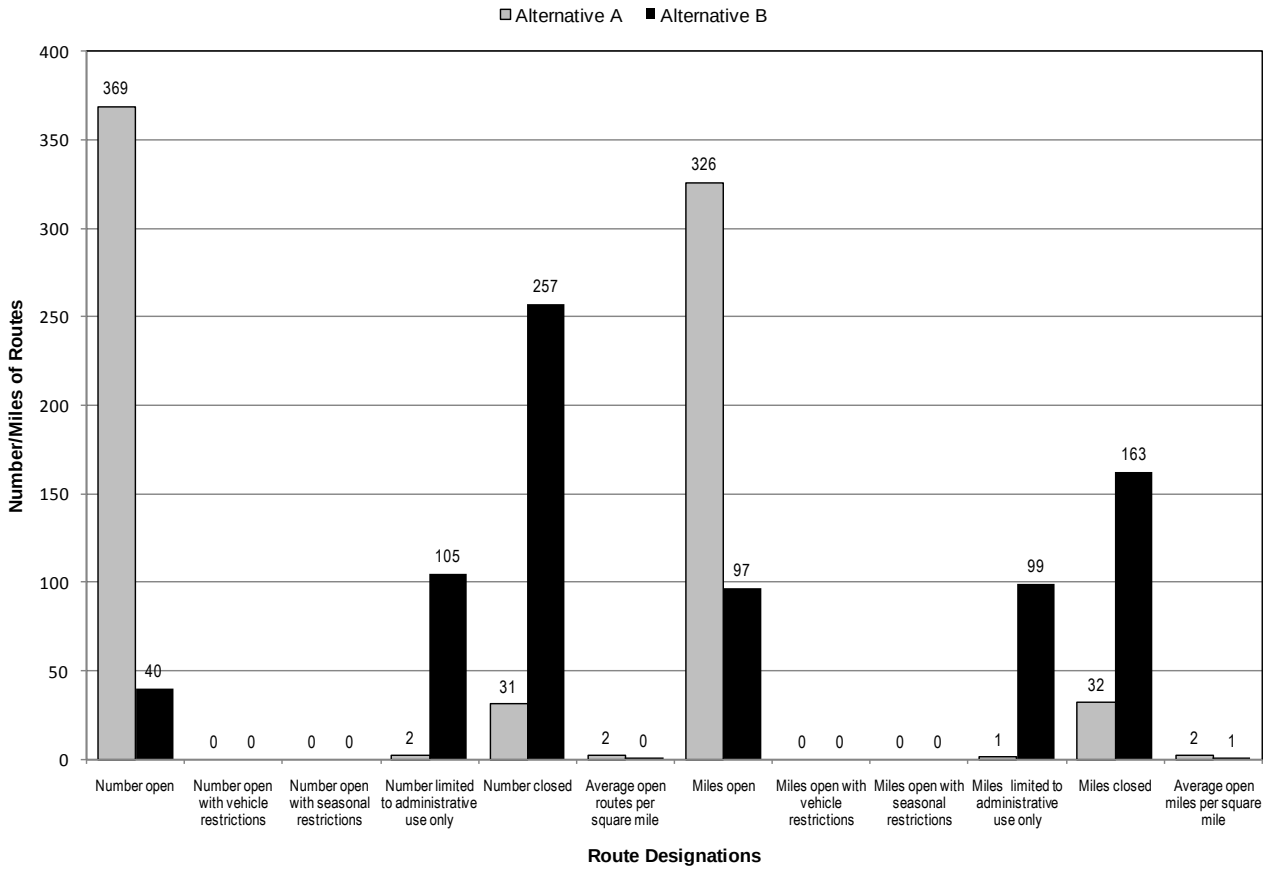
Under Alternative B, sage-grouse Protection Priority Areas (PPAs) would be allocated and the 402 existing BLM routes (359 miles) that comprise the travel networks within the PPAs would be managed using five existing designation types, with only 1 out of every 10 existing routes (10%) open to all motorized uses. This would result in 82% fewer open routes within PPAs in Alternative B than would be open in Alternative A. Additionally; the route density within the PPAs would drop to 0.2 open routes per square mile and 0.5 miles of open routes per square mile. This would be an 89% reduction in open route density (70% reduction in the density of open route miles) in the PPAs from Alternative A. Alternative B would close and restrict to administrative use only 362 routes (262 miles) or 90% of the PPA routes. The long-term, direct, localized effect of these restricted routes on reducing PPA habitat fragmentation is major, due in part to the much smaller supply of 40 open routes at 97 miles with the route densities that are described above (43 CFR 8342.1(b)).

Table O-39: Alternative B Route Designations in Sage-Grouse PPAs (compared to Alt. A)

Alternative B Route Designations in Sage-Grouse PPAs (compared to Alt. A)

Potential Route Designations	Alternative A				Alternative B							
	Routes	Percent	Miles	Percent	Routes	Percent	# Δ from Alt. A	% Δ from Alt. A	Miles	Percent	# Δ from Alt. A	% Δ from Alt. A
Open	369	91.8%	326.1	90.9%	40	10.0%	-329	-81.8%	96.9	27.0%	-229.2	-63.9%
Open with vehicle restrictions	0	0.0%	0.0	0.0%	0	0.0%	0	0.0%	0.0	0.0%	0	0.0%
Open with seasonal restrictions	0	0.0%	0.0	0.0%	0	0.0%	0	0.0%	0.0	0.0%	0	0.0%
Limited to administrative use only	2	0.5%	0.9	0.3%	105	26.1%	103	25.6%	99.3	27.7%	98.4	27.4%
Closed	31	7.7%	31.8	8.9%	257	63.9%	226	56.2%	162.5	45.3%	130.7	36.4%
Average open routes per square mile (density)	2.0		1.8		0.2		-1.8	-89.2%	0.5		-1.3	-70.3%

Figure 4.2.2.2g: Alternative B Route Designations in Sage Grouse PPAs



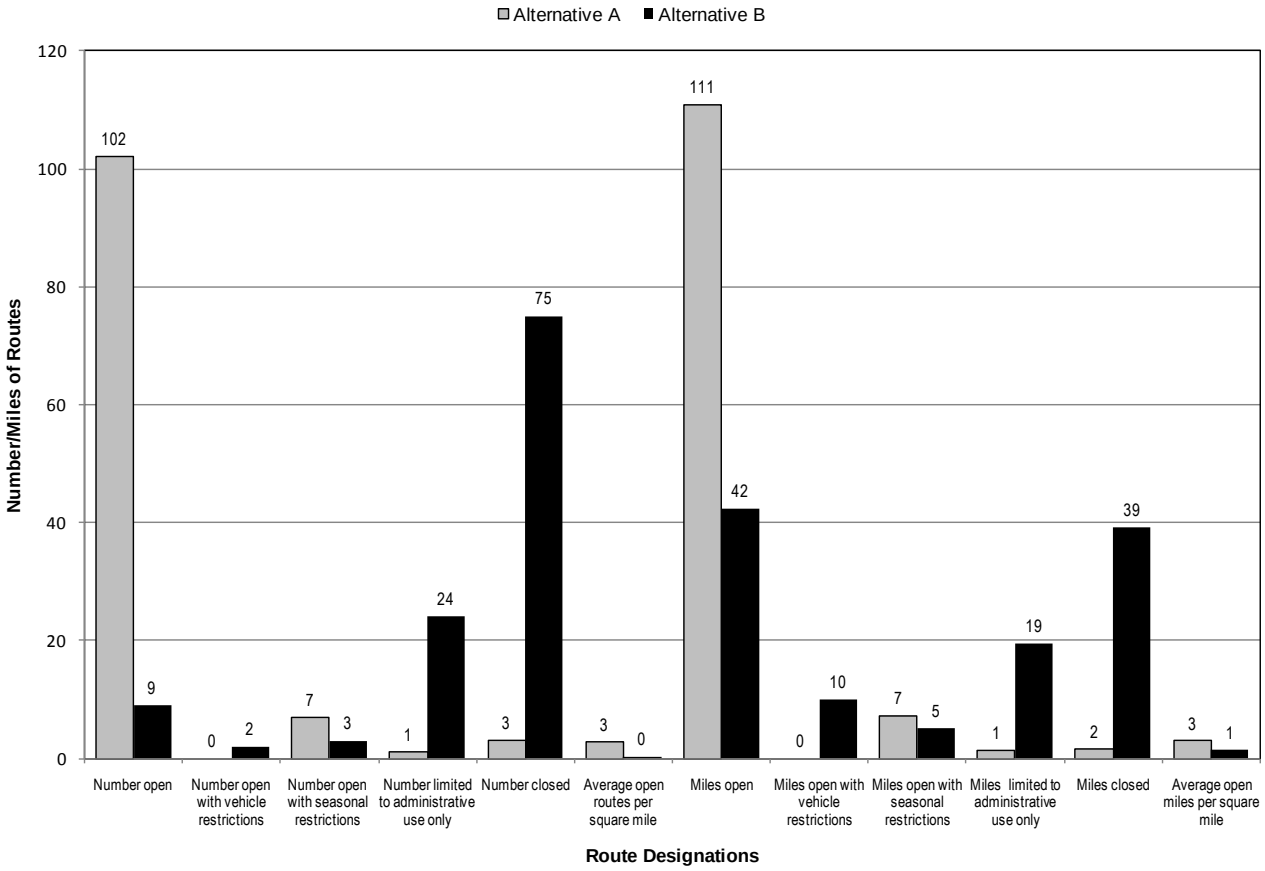
Greater Sage-Grouse Restoration Areas

Under Alternative B, sage-grouse Restoration Areas (RAs) would be allocated and the 113 existing BLM routes (121 miles) that comprise the travel networks within the RAs would continue to be managed using five existing designation types, with a little more than 1 out of every 10 existing routes (13%) open to all motorized uses and open with restrictions. This would result in 84% fewer open routes within RAs in Alternative B than would be open in Alternative A. Additionally; the route density within the RAs would drop to 0.3 open routes per square mile and 1.4 miles of open routes per square mile. This would be an 87% reduction in open route density (51% reduction in the density of open route miles) in the RAs from Alternative A. Alternative B would close and restrict to administrative use only 99 routes (59 miles) or 88% of the RA routes. The long-term, direct, localized effect of these restricted routes on reducing RA habitat fragmentation is major, due in part to the much smaller supply of 14 open routes at 57 miles with the route densities that are described above (43 CFR 8342.1(b)).

Table O-40: Alternative B Route Designations in Sage-Grouse RAs (compared to Alt. A)

Alternative B Route Designations in Sage-Grouse RAs (compared to Alt. A)												
Potential Route Designations	**Alternative A**				**Alternative B**							
	Routes	**Percent**	**Miles**	**Percent**	**Routes**	**Percent**	**# Δ from Alt. A**	**% Δ from Alt. A**	**Miles**	**Percent**	**# Δ from Alt. A**	**% Δ from Alt. A**
Open	102	90.3%	110.8	91.6%	9	8.0%	-93	-82.3%	42.3	36.5%	-68.5	-55.1%
Open with vehicle restrictions	0	0.0%	0.0	0.0%	2	1.8%	2	1.8%	9.9	8.5%	9.9	8.5%
Open with seasonal restrictions	7	6.2%	7.2	6.0%	3	2.7%	-4	-3.5%	5.1	4.4%	-2.1	-1.6%
Limited to administrative use only	1	0.9%	1.4	1.2%	24	21.2%	23	20.4%	19.4	16.8%	18	15.6%
Closed	3	2.7%	1.5	1.2%	75	66.4%	72	63.7%	39.1	33.8%	37.6	32.5%
Average open routes per square mile (density)	2.7		2.9		0.3		-2.4	-87.2%	1.4		-1.5	-51.4%

Figure 4.2.2.2h: Alternative B Route Designations in Sage Grouse RPAs



Greater Sage-Grouse General Habitat

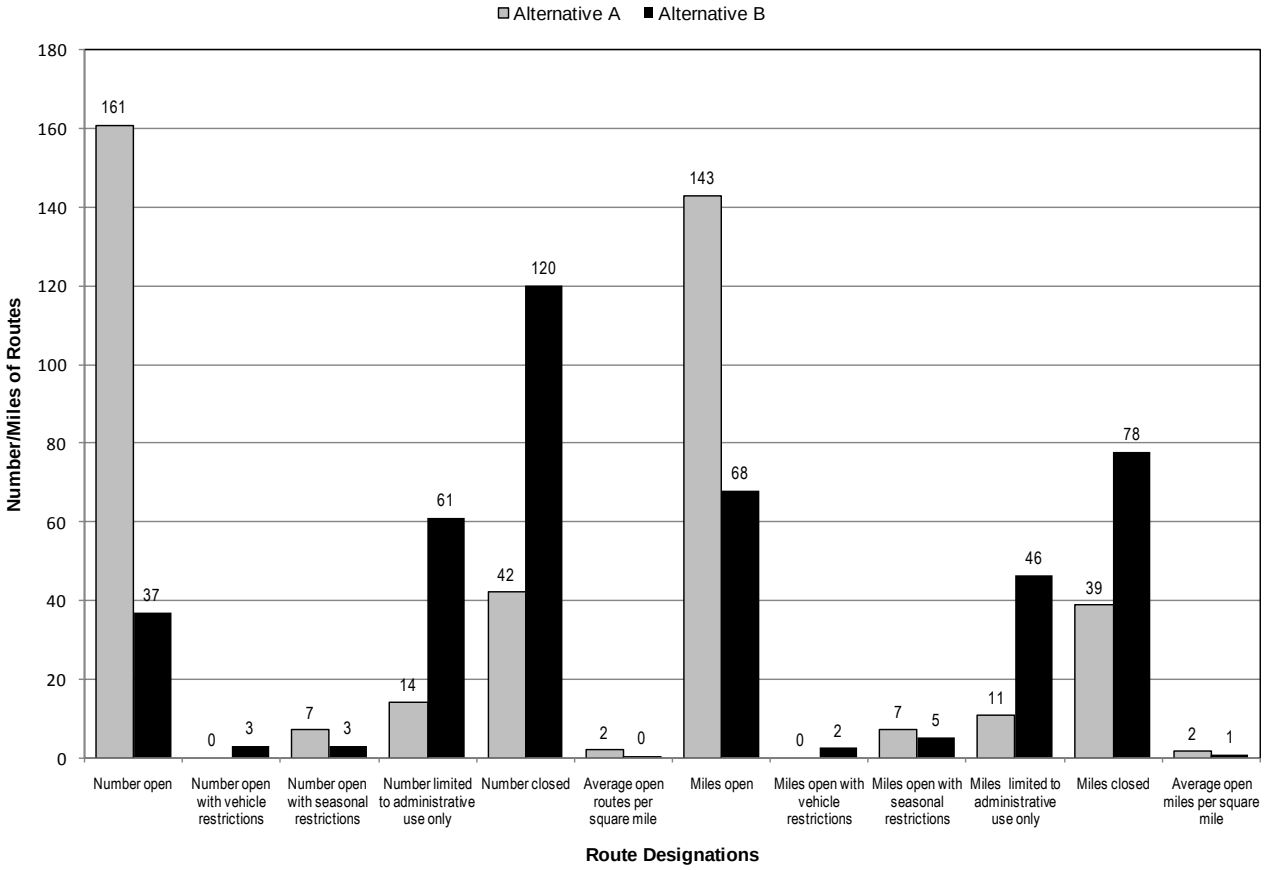
Under Alternative B, the 224 existing BLM routes (200 miles) that comprise the travel networks within the remaining sage-grouse general habitat would continue to be managed using five existing designation types, with almost 2 out of every 10 existing routes (19%) open to all motorized uses and open with restrictions. This would result in 57% fewer open routes within general habitat in Alternative B than would be open in Alternative A. Additionally; the route density within the general habitat would drop to 0.5 open routes per square mile and 0.8 miles of open routes per square mile. This would be a 74% reduction in open route density (50% reduction in the density of open route miles) in the general habitat from Alternative A.

Alternative B would close and restrict to administrative use only 181 routes (124 miles) or 81% of the general habitat routes. The long-term, direct, localized effect of these restricted routes on reducing general habitat fragmentation is major, due in part to the much smaller supply of 43 open routes at 75 miles with the route densities that are described above (43 CFR 8342.1(b)).

Table O-41: Alternative B Route Designations in Sage-Grouse General Habitat (compared to Alt. A)

Alternative B Route Designations in Sage-Grouse General Habitat (compared to Alt. A)												
Potential Route Designations	Alternative A				Alternative B							
	Routes	Percent	Miles	Percent	Routes	Percent	# Δ from Alt. A	% Δ from Alt. A	Miles	Percent	# Δ from Alt. A	% Δ from Alt. A
Open	161	71.9%	142.9	71.6%	37	16.5%	-124	-55.4%	67.9	34.0%	-75	-37.6%
Open with vehicle restrictions	0	0.0%	0.0	0.0%	3	1.3%	3	1.3%	2.4	1.2%	2.4	1.2%
Open with seasonal restrictions	7	3.1%	7.2	3.6%	3	1.3%	-4	-1.8%	5.1	2.6%	-2.1	-1.1%
Limited to administrative use only	14	6.3%	10.7	5.4%	61	27.2%	47	21.0%	46.2	23.2%	35.5	17.8%
Closed	42	18.8%	38.7	19.4%	120	53.6%	78	34.8%	77.9	39.0%	39.2	19.6%
Average open routes per square mile (density)	1.8		1.6		0.5		-1.4	-74.4%	0.8		-0.8	-49.8%

Figure 4.2.2.2i: Alternative B Route Designations in Sage Grouse General Habitat



Overall, this Alternative would provide moderate to major protection of sage-grouse leks and nesting habitat from habitat fragmentation and disturbance from travel routes within the Travel Management Areas (TMAs). The direct, long-term, local impacts to sage-grouse would be reduced to a moderate to major degree when compared to Alternative A.

Prairie Dogs

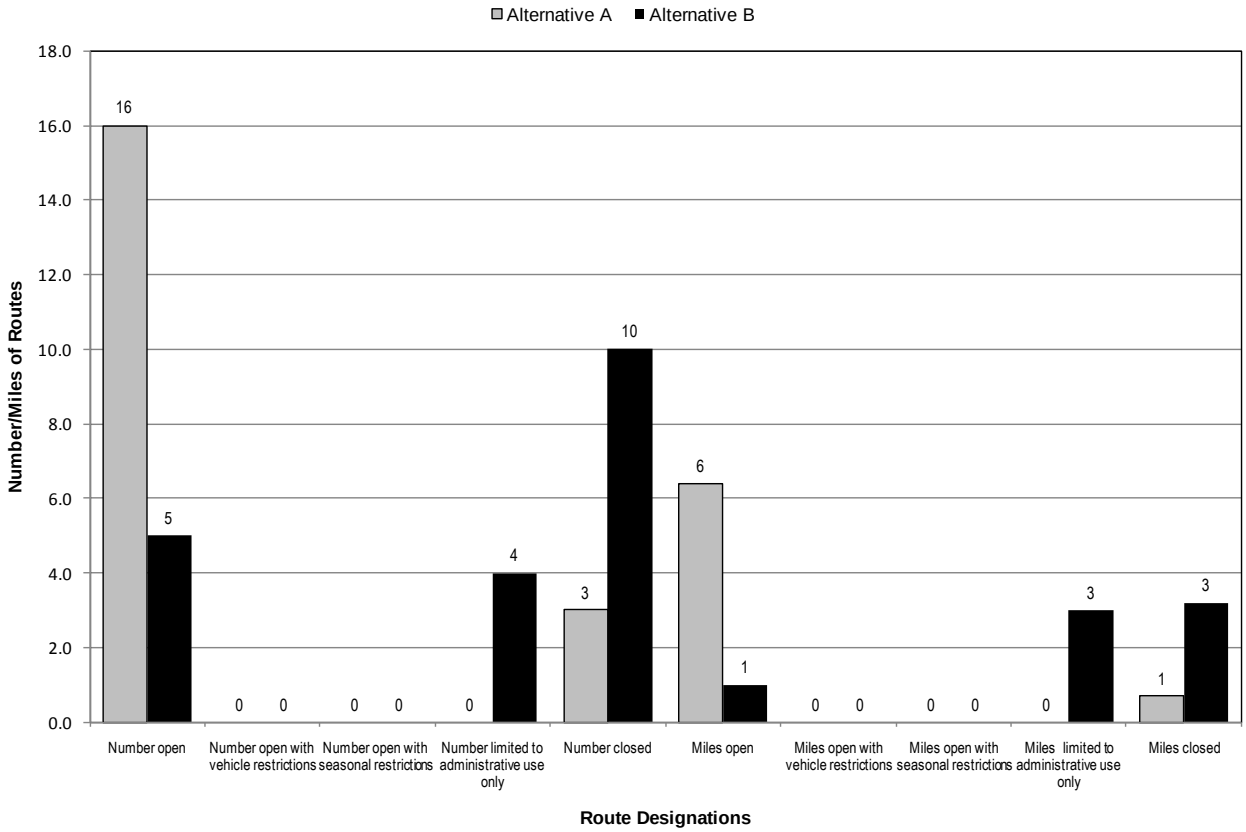
White-tailed Prairie Dogs

Under Alternative B, of the 19 routes that are within 0.5 miles of identified white-tailed prairie dog "towns", 5 routes (1 mile) or 26% would be open to all types of motor vehicle use. This would result in 58% fewer open routes within 0.5 miles of prairie dog "towns" in Alternative B than would be open in Alternative A. Only 4 routes (3 mile) or 21% would be limited to administrative use only and 10 routes (3.2 miles) or 53% would be closed to motor vehicle use. The long-term, direct, localized effect of these route designations on reducing habitat fragmentation and/or minimizing the potential for wildlife harassment would be major, due in large part to limited public access in only 5 open routes near the "town" sites (43 CFR 8342.1(b)).

Table O-42: Alternative B Route Designations within 1/2-mile of White-tailed Prairie Dog Habitat (compared to Alt. A)

Alternative B Route Designations within 1/2-mile of White-tailed Prairie Dog Habitat (compared to Alt. A)												
Potential Route Designations	Alternative A				Alternative B							
	Routes	Percent	Miles	Percent	Routes	Percent	# Δ from Alt. A	% Δ from Alt. A	Miles	Percent	# Δ from Alt. A	% Δ from Alt. A
Open	16.0	84.2%	6.4	88.9%	5.0	26.3%	-11	-57.9%	1.0	13.9%	-5.4	-75.0%
Open with vehicle restrictions	0.0	0.0%	0.0	0.0%	0.0	0.0%	0	0.0%	0.0	0.0%	0	0.0%
Open with seasonal restrictions	0.0	0.0%	0.0	0.0%	0.0	0.0%	0	0.0%	0.0	0.0%	0	0.0%
Limited to administrative use only	0.0	0.0%	0.0	0.0%	4.0	21.1%	4	21.1%	3.0	41.7%	3	41.7%
Closed	3.0	15.8%	0.7	9.7%	10.0	52.6%	7	36.8%	3.2	44.4%	2.5	34.7%

Figure 4.2.2.3a: Alternative B Route Designations within 0.5 miles of White--tailed Prairie Dog Habitat (Compared to Alt. A)



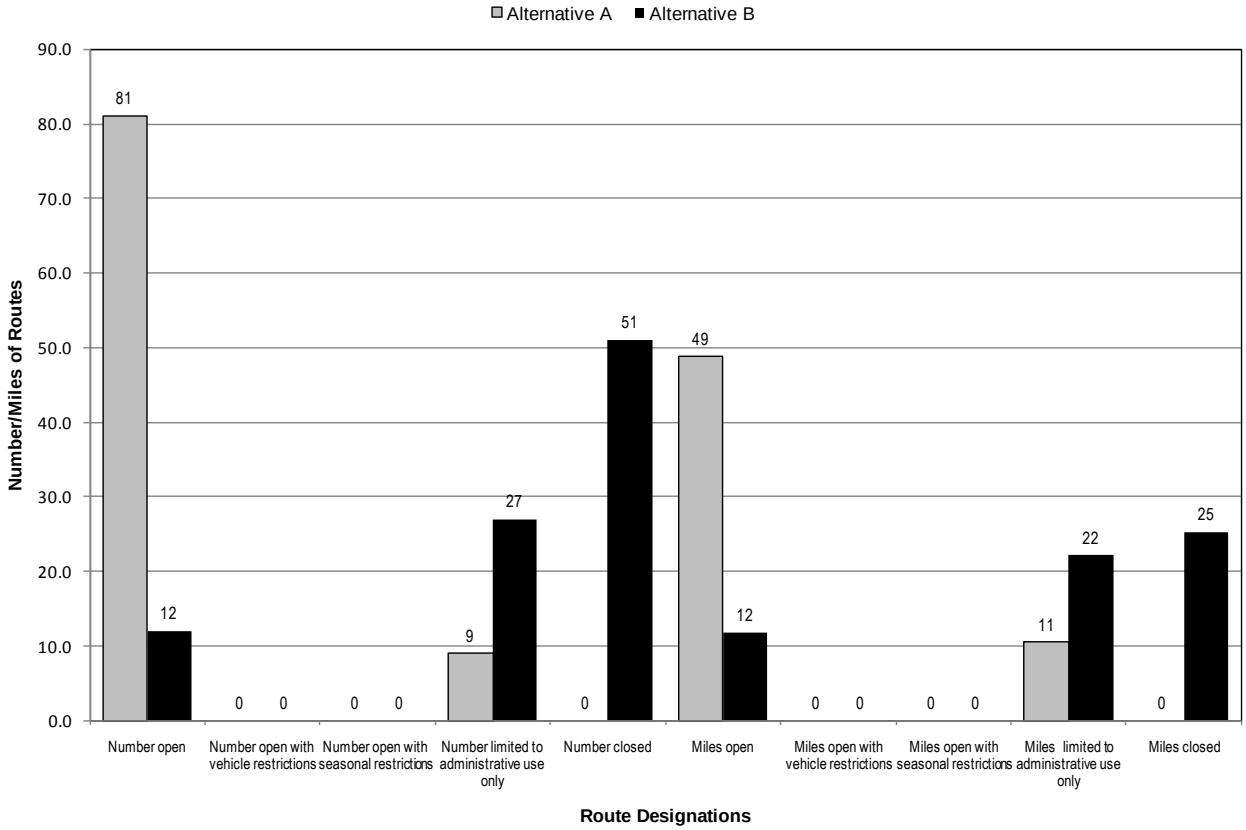
Black-tailed Prairie Dogs

Under Alternative B, of the 90 routes that are within 0.5 miles of identified black-tailed prairie dog "towns", 12 routes (11.8 miles) or 13% would be open to all types of motor vehicle use. This would result in 77% fewer open routes within 0.5 miles of prairie dog "towns" in Alternative B than would be open in Alternative A. Only 27 routes (22.1 mile) or 30% would be limited to administrative use only and 51 routes (25.3 miles) or 57% would be closed to motor vehicle use. The long-term, direct, localized effect of these route designations on reducing habitat fragmentation and/or minimizing the potential for wildlife harassment would be major, due in large part to limited public access in only 12 open routes near the "town" sites (43 CFR 8342.1(b)).

Table O-43: Alternative B Route Designations within 1/2-mile of Black-tailed Prairie Dog Habitat (compared to Alt. A)

Alternative B Route Designations within 1/2-mile of Black-tailed Prairie Dog Habitat (compared to Alt. A)												
Potential Route Designations	Alternative A				Alternative B							
	Routes	Percent	Miles	Percent	Routes	Percent	# Δ from Alt. A	% Δ from Alt. A	Miles	Percent	# Δ from Alt. A	% Δ from Alt. A
Open	81.0	90.0%	48.8	82.3%	12.0	13.3%	-69	-76.7%	11.8	19.9%	-37	-62.4%
Open with vehicle restrictions	0.0	0.0%	0.0	0.0%	0.0	0.0%	0	0.0%	0.0	0.0%	0	0.0%
Open with seasonal restrictions	0.0	0.0%	0.0	0.0%	0.0	0.0%	0	0.0%	0.0	0.0%	0	0.0%
Limited to administrative use only	9.0	10.0%	10.5	17.7%	27.0	30.0%	18	20.0%	22.1	37.3%	11.6	19.6%
Closed	0.0	0.0%	0.0	0.0%	51.0	56.7%	51	56.7%	25.3	42.7%	25.3	42.7%

Figure 4.2.2.3b: Alternative B Route Designations within 0.5 miles of Black-tailed Prairie Dog Habitat (Compared to Alt. A)



There would be major benefits to prairie dog habitat with this Alternative. The long-term, direct, and localized impacts to habitat fragmentation and prairie dog harassment would be reduced by the closure to motor vehicle use of 53-57% of routes when compared to Alternative A.

Summary Alternative B

Impacts would be the same as described under Alternative A, except more restrictive with 272.4 miles of open routes and 396.5 miles of closed routes.

O.6.2.9.5 Alternative C

General impacts are the same as those described in impacts common to all alternatives and under Alternative B. Other specific analysis, relative to Alternative C, of sensitive habitats and species follows.

Big Game Species

Under Alternative C, the 865 existing BLM routes (974 miles) that comprise the travel networks within big game general winter range (BGGWR) would continue to be managed using five existing designation types, with just over 8 out of every 10 existing routes (725 routes or about 84%) open to all motorized uses or open with special seasonal or vehicular restrictions. This would result in only 0.1% more open routes in Alternative C than would be open in Alternative A, but 8% more open route miles than in Alternative A. Additionally, the route density within

the BGGWR would remain the same at 1.7 open routes per square mile but would increase from Alternative A by 9% to 2 open route miles per square mile for Alternative C. The footprint (actual area of surface disturbance) of open routes affects approximately 1,267 acres or 0.5% of the 275,839 acres of BGGWR within the TMAs. In other words, for every 1 acre of route footprint within the BGGWR, 217 acres would be without routes.

Alternative C proposes closures and restrictions to administrative use only on a combined 140 routes at 93 miles, a 0.1% decrease from these designations in Alternative A. The long-term, direct, localized effect of these restricted routes on reducing BGGWR habitat fragmentation is negligible, due to the availability and ongoing use of 725 open routes (at 882 miles) with the route densities that are described above.

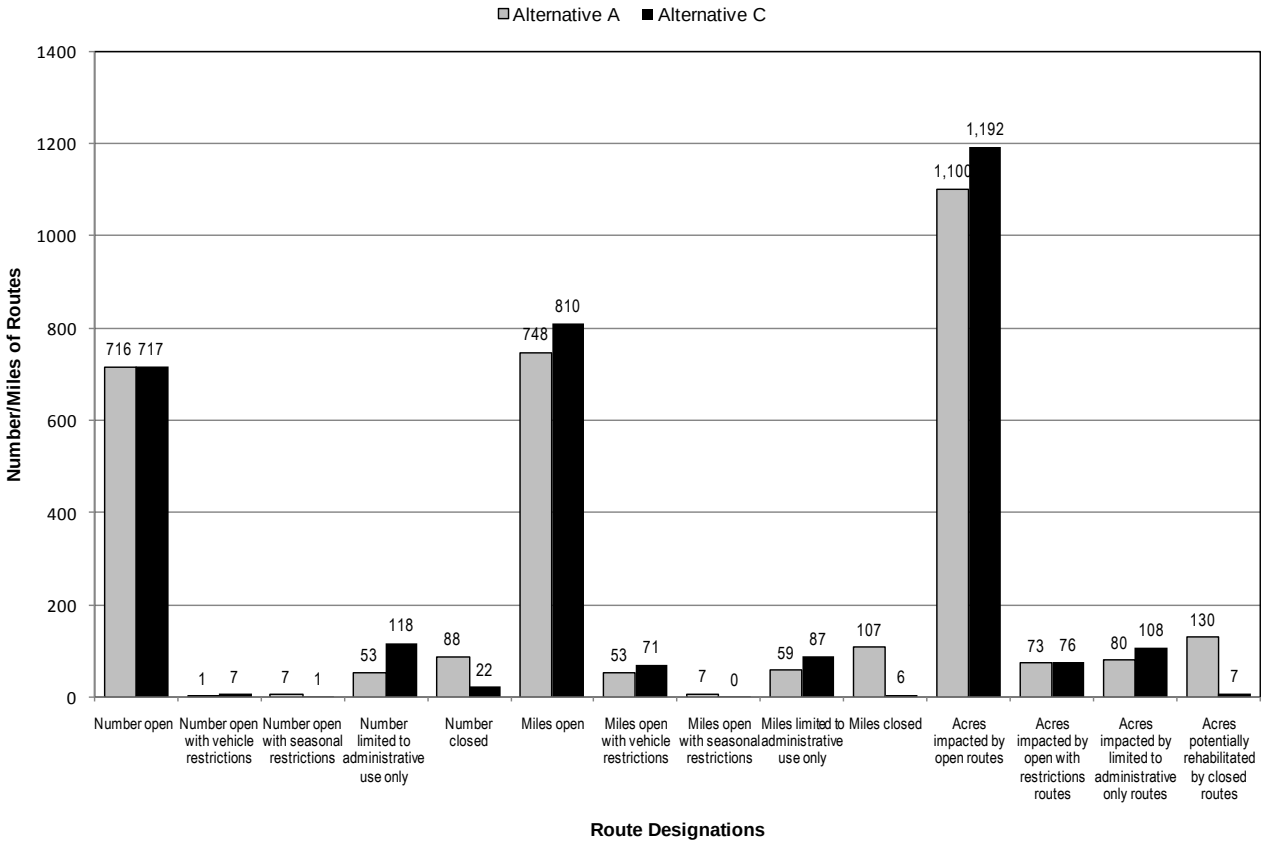
Table O-44: Alternative C Route Designations for Big Game Winter Range (compared to Alt. A)

Alternative C Route Designations for Big Game Winter Range (compared to Alt. A)

Potential Route Designations	Alternative A				Alternative C							
	Routes	Percent	Miles	Percent	Routes	Percent	# Δ from Alt. A	% Δ from Alt. A	Miles	Percent	# Δ from Alt. A	% Δ from Alt. A
Open	716	83%	747.6	76.8%	717	82.9%	1	0.1%	809.7	83.1%	62.1	6.4%
Open with vehicle restrictions	1	0.1%	52.7	5.4%	7	0.8%	6	0.7%	70.7	7.3%	18	1.8%
Open with seasonal restrictions	7	0.8%	7.2	0.7%	1	0.1%	-6	-0.7%	0.2	0.0%	-7	-0.7%
Limited to administrative use only	53	6.1%	59	6.1%	118	13.6%	65	7.5%	87.3	9.0%	28.3	2.9%
Closed	88	10.2%	107.4	11%	22	2.5%	-66	-7.6%	5.9	0.6%	-101.5	-10.4%
Average open routes per square mile (density)	1.7		1.9		1.7		0	0%	2.0		0.2	9.1%

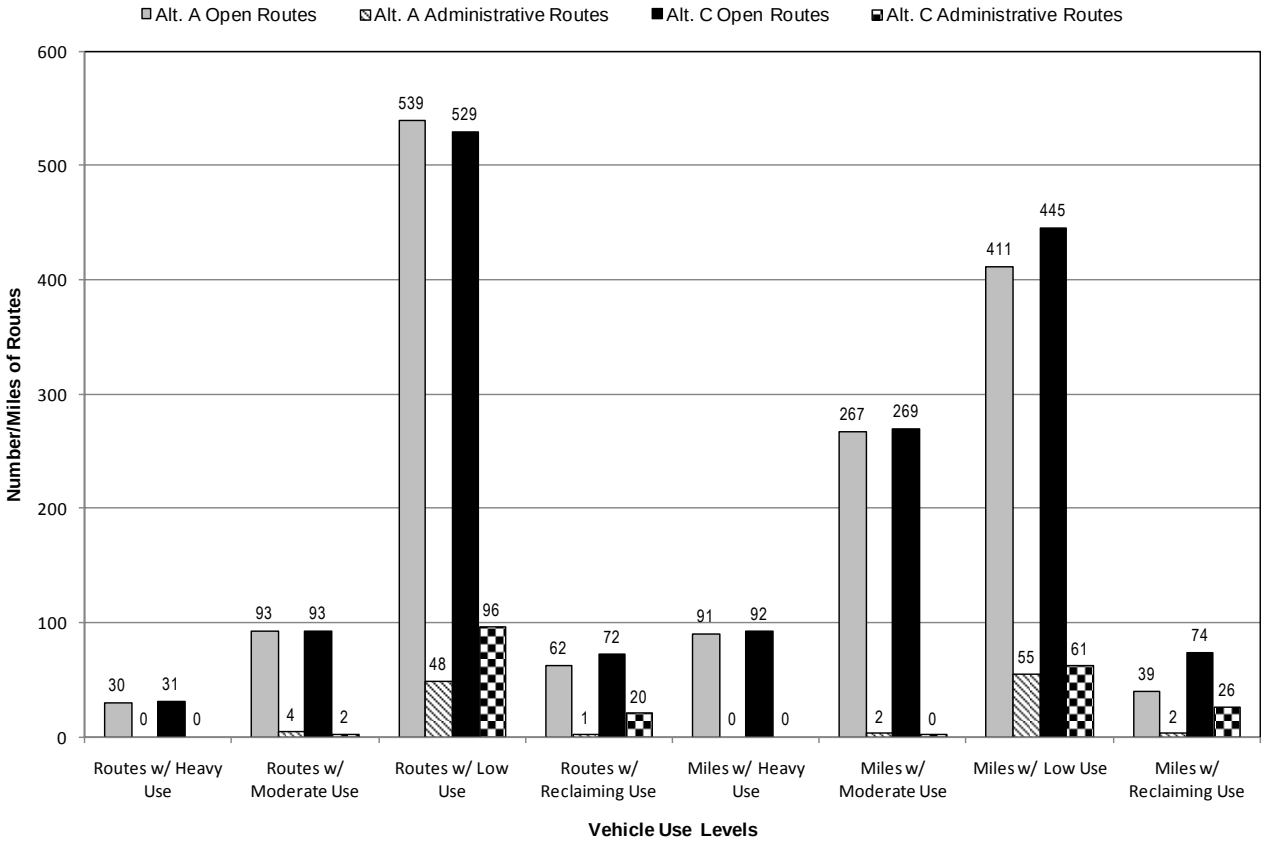
Route- Acres	Acres impacted by routes	Percent of total route acreage	Acres impacted by routes	Percent of total route acreage	Acres change from Alt. A	% change from Alt. A
Open	1100.3	79.6%	1191.6	86.2%	91.3	6.6%
Open with restrictions	73.4	5.3%	75.8	5.5%	2.4	0.2%
Limited to administrative use only	79.6	5.8%	108.4	7.8%	28.8	2.1%
Closed	129.7	9.4%	7.2	0.5%	-122.5	-8.9%
Percent of open route acreage	0.4%		0.5%			
Ratio of open route acres to unrouted acres	1:234		1:217			

Figure 4.2.3.1a: Alternative C Route Designations in Big Game General Winter Range (Compared to Alt. A)



Of the existing BLM routes within BGGWR under the Alternative C, 529 open routes (445 miles) are considered by resource specialists to have low vehicle use levels. Conversely, 93 open routes (269 miles) have vehicle use levels estimated as moderate and only 31 open routes (92 miles) are estimated to have heavy vehicle use. The combination of 22 closed routes, the low vehicle use levels on 73% of open routes (51% of open route miles and 81% of administrative use only routes (70% administrative route miles), and no observed vehicle use on 10% of open routes (8% of open route miles) in BGGWR would directly contribute, in the long-term, to lessening of the effects of route use, such as wildlife harassment, human-caused animal mortality or displacement of individual animals to a minor degree (43 CFR 8342.1 (b)).

Figure 4.2.3.1b: Alternative C Route Designations by in Big Game General Winter Range Estimated Vehicle Use Levels (Compared to Alt. A.)



Long term direct impacts to BGGWR would be a negligible to minor decrease of the effects from wildlife disturbance, displacement, and habitat loss from Alternative A. This is due to low use or no use levels on 83% of open routes and 16% closures and restriction to administrative use only routes. The open road density of 2.0 miles of open routes per square mile exceeds the 1 mile per section road density recommended in the "Guidelines/ Recommendations" for road densities.

The BLM Road Density Analysis indicated that 433,129 acres of BGWR CAPS SCORE 1 and 2 areas, (of all ownerships with any public land ownership (surface or subsurface)) have road densities that exceed 1.5 miles per square mile. This Alternative would require roads to be gated or closed during crucial seasons where they impact big game winter range or parturition areas. Public access in these areas would vary dependent on the depth of winter snow. In greater snow depth years, disturbance impacts to big game would decrease due to reduced public access. In these areas, gating, closures, or reclamation of roads would increase impacts to big game winter range by 69% and 28% respectively when compared to Alternative B and Alternative D. This would directly contribute in the long-term to decreasing the effects of route use, such as wildlife harassment, displacement, and stress to big game on winter ranges to a moderate degree.

Greater Sage-Grouse – Leks and Nesting Habitat

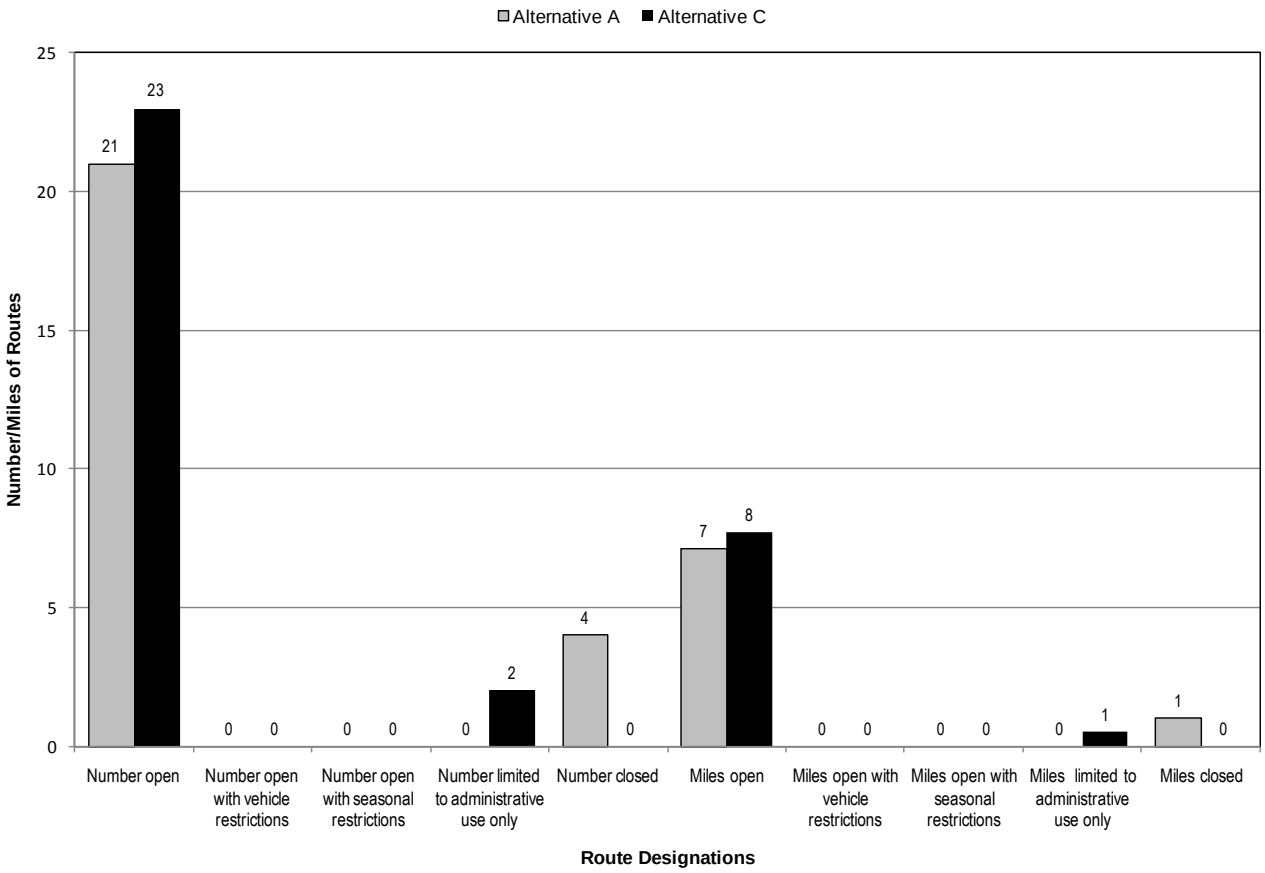
Under the Alternative C, of the 25 routes that are within 0.25 miles of identified sage-grouse leks, 23 routes (7.7 miles) or 92% would be open to all types of motor vehicle use. Conversely,

no routes would be closed and 2 routes (0.5 miles) or 8% would be limited to administrative use only. This would result in 8% more open routes within 0.25 miles of leks in Alternative C than would be open in Alternative A. The long-term, direct, localized effect of these route designations on reducing habitat fragmentation and/or minimizing the potential for wildlife harassment would be negligible, due to the availability of many open routes near the lek sites (43 CFR 8342.1(b)).

Table O-45: Alternative C Route Designations within ¼-mile of Sage-Grouse Leks (compared to Alt. A)

Alternative C Route Designations within ¼-mile of Sage-Grouse Leks (compared to Alt. A)												
Potential Route Designations	**Alternative A**				**Alternative C**							
	Routes	**Percent**	**Miles**	**Percent**	**Routes**	**Percent**	**# Δ from Alt. A**	**% Δ from Alt. A**	**Miles**	**Percent**	**# Δ from Alt. A**	**% Δ from Alt. A**
Open	21	84.0%	7.1	87.7%	23	92.0%	2	8.0%	7.7	93.9%	0.6	6.2%
Open with vehicle restrictions	0	0.0%	0.0	0.0%	0	0.0%	0	0.0%	0.0	0.0%	0	0.0%
Open with seasonal restrictions	0	0.0%	0.0	0.0%	0	0.0%	0	0.0%	0.0	0.0%	0	0.0%
Limited to administrative use only	0	0.0%	0.0	0.0%	2	8.0%	2	8.0%	0.5	6.1%	0.5	6.1%
Closed	4	16.0%	1.0	12.3%	0	0.0%	-4	-16.0%	0.0	0.0%	-1	-12.3%

Figure 4.2.3.2a: Alternative C Route Designations within1/4-mile of Sage Grouse Leks



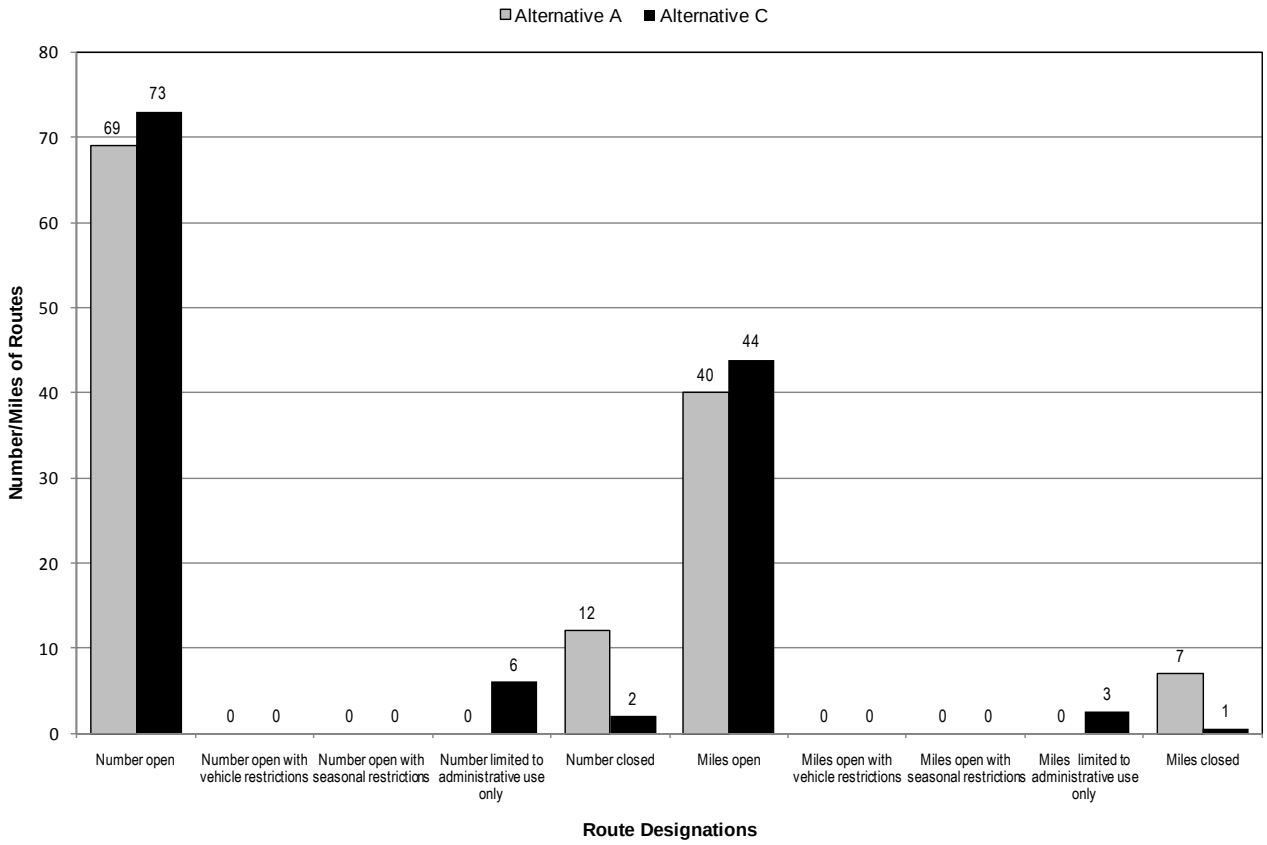
Under the Alternative C, of the 81 routes that are within 0.6 miles of identified sage-grouse leks, 73 routes (44 miles) or 90% would be open to all types of motor vehicle use. Conversely, 6 routes (2.6 miles) or 7% would be limited to administrative use only, while 2 routes (0.5 miles) or 3% would be closed to motor vehicle use. This would result in 5% more open routes within 0.6 miles of leks in Alternative C than would be open in Alternative A. The long-term, direct, localized effect of these route designations on reducing habitat fragmentation and/or minimizing the potential for wildlife harassment would be negligible, due to the availability of many open routes near the lek sites (43 CFR 8342.1(b)).

Table O-46: Alternative C Route Designations within 0.6 miles of Sage-Grouse Leks (compared to Alt. A)

Alternative C Route Designations within 0.6 miles of Sage-Grouse Leks (compared to Alt. A)

Potential Route Designations	Alternative A				Alternative C							
	Routes	Percent	Miles	Percent	Routes	Percent	# Δ from Alt. A	% Δ from Alt. A	Miles	Percent	# Δ from Alt. A	% Δ from Alt. A
Open	69	85.2%	40.0	85.1%	73	90.1%	4	4.9%	43.9	93.4%	3.9	8.3%
Open with vehicle restrictions	0	0.0%	0.0	0.0%	0	0.0%	0	0.0%	0.0	0.0%	0	0.0%
Open with seasonal restrictions	0	0.0%	0.0	0.0%	0	0.0%	0	0.0%	0.0	0.0%	0	0.0%
Limited to administrative use only	0	0.0%	0.0	0.0%	6	7.4%	6	7.4%	2.6	5.5%	2.6	5.5%
Closed	12	14.8%	7.0	14.9%	2	2.5%	-10	-12.3%	0.5	1.1%	-6.5	-13.8%

Figure 4.2.3.2b: Alternative C Route Designations within 0.6 miles of Sage Grouse Leks (Compared to Alt. A)



Of the 395 routes that are within nesting habitat (within 2 miles of identified sage-grouse leks), 404 routes (334 miles) or 88% would be open or open with seasonal restrictions. Conversely, 49 routes (29 miles) or 11% would be limited to administrative use only, while 7 routes (2.8 miles) or 2% would be closed to motor vehicle use. This would result in 0.3% fewer open routes within 2 miles of leks in Alternative C than would be open in Alternative A. The actual footprint (area of surface disturbance) of open routes affects approximately 484 acres or 0.31% of the total area within 2 miles of sage-grouse leks. In other words, for every 1 acre of route footprint within the 2-mile nesting habitat, 324 acres would be without routes. This would result in 2% more open route acres in Alternative B than in Alternative A. The footprint for routes that would be closed (and eventually restored to a more natural condition) would be 3.4 acres or 0.7% of the total route acreage within the 2-mile nesting habitat; 8% less than in Alternative A. This would be a long-term, direct, localized minor reduction of fragmented habitat and the potential for wildlife harassment (43 CFR 8342.1(b)).

Of the 579 routes that are within nesting habitat (within 3 miles of identified sage-grouse leks), 505 routes (530 miles) or 87% would be open or open with vehicle restrictions. Conversely, 65 routes (40 miles) or 11% would be limited to administrative use only, while 9 routes (3 miles) or 2% would be closed to motor vehicle use. This would result in 0.4% more open routes within 3 miles of leks in Alternative C than would be open in Alternative A. The actual footprint (area of surface disturbance) of open routes affects approximately 777 acres or 0.23% of the total area within 3 miles of sage-grouse leks. In other words, for every 1 acre of route footprint within the 3-mile nesting habitat, 441 acres would be without routes. This would result in 5% more open route acres in Alternative C than in Alternative A. The footprint for routes that would be closed (and eventually restored to a more natural condition) would be 3.8 acres or 0.5% of the total route acreage within the 3-mile nesting habitat; 9% fewer than in Alternative A. This would be a long-term, direct, localized minor reduction of fragmented habitat and the potential for wildlife harassment (43 CFR 8342.1(b)).

Of the 701 routes that are within nesting habitat (within 4 miles of identified sage-grouse leks), 611 routes (690 miles) or 87% would be open or open with vehicle restrictions. Conversely, 77 routes (48 miles) or 11% would be limited to administrative use only, while 13 routes (4.2 miles) or 2% would be closed to motor vehicle use. This would result in 2% more open routes within 2 miles of leks in Alternative C than would be open in Alternative A. The actual footprint (area of surface disturbance) of open routes affects approximately 1,011 acres or 0.17% of the total area within 2 miles of sage-grouse leks. In other words, for every 1 acre of route footprint within the 2-mile nesting habitat, 577 acres would be without routes. This would result in 7% more open route acres in Alternative C than in Alternative A. The footprint for routes that would be closed (and eventually restored to a more natural condition) would be 5.1 acres or 0.5% of the total route acreage within the 2-mile nesting habitat; 10% fewer than in Alternative A. This would be a long-term, direct, localized minor reduction of fragmented habitat and the potential for wildlife harassment (43 CFR 8342.1(b)).

Of the 81existing BLM routes (47 miles) within 0.6 miles of sage-grouse leks under the Alternative C, 64 open routes (36 miles) are considered by resource specialists to have low or no observed vehicle use. Conversely, 5 open routes (4.6 miles) have vehicle use levels estimated as moderate and only 4 open routes (3.1 miles) are estimated to have heavy vehicle use. The combination of 2 closed routes and the low or no observed vehicle use on 88% of open routes

(83% of open route miles) and low or no observed vehicle use on 100% of administrative use only routes (100% administrative route miles) within 0.6 miles of sage-grouse leks would directly contribute, in the long-term, to lessening of the effects of route use, such as wildlife harassment, human-caused animal mortality or displacement of individual animals to a minor degree (43 CFR 8342.1 (b)).

Greater Sage-Grouse Protection Priority Areas

Under Alternative C, sage-grouse Protection Priority Areas (PPAs) would be allocated and the 402 existing BLM routes (359 miles) that comprise the travel networks within the PPAs would continue to be managed using five existing designation types, with more than 9 out of every 10 existing routes (91%) open to all motorized uses. This would result in only 1% fewer open routes within PPAs in Alternative C than would be open in Alternative A. Additionally, the route density within the PPAs would remain at almost 2.0 open routes per square mile but the increase slightly to 1.9 miles of open routes per square mile. This would be a 1% reduction in open route density and a 4% increase in the density of open route miles in the PPAs from Alternative A. Alternative C would close and restrict to administrative use only 38 routes (19 miles) or 9% of the PPA routes. The long-term, direct, localized effect of these restricted routes on reducing PPA habitat fragmentation is minor, due to the availability of 364 open routes at 340 miles with the route densities that are described above (43 CFR 8342.1(b)).

Greater Sage-Grouse Restoration Areas

Under Alternative C, sage-grouse Restoration Areas (RAs) would be allocated and the 113 existing BLM routes (121 miles) that comprise the travel networks within the RAs would continue to be managed using five existing designation types, with just over 7 out of every 10 existing routes (71%) open to all motorized uses and open with vehicle restrictions. This would result in 26% fewer open routes within RAs in Alternative C than would be open in Alternative A. Additionally; the route density within the RAs would drop to 2.0 open routes per square mile and 2.7 miles of open routes per square mile. This would be a 27% reduction in open route density (9% reduction in the density of open route miles) in the RAs from Alternative A. Alternative C would close and restrict to administrative use only 33 routes (12.8 miles) or 29% of the RA routes. The long-term, direct, localized effect of these restricted routes on reducing RA habitat fragmentation is minor, due in part to the supply of 80 open routes at 108 miles with the route densities that are described above (43 CFR 8342.1(b)).

Greater Sage-Grouse General Habitat

Under Alternative C, the 224 existing BLM routes (200 miles) that comprise the travel networks within the remaining sage-grouse general habitat would be managed using five existing designation types, with just over 9 out of every 10 existing routes (91%) open to all motorized uses and open with vehicle restrictions. This would result in 16% more open routes within general habitat in Alternative C than would be open in Alternative A. Additionally, the route density within the general habitat would increase to 2.2 open routes per square mile and 2.0 miles of open routes per square mile. This would be a 21% increase in open route density (a 23% increase in the density of open route miles) in the general habitat from Alternative A. Alternative C would close and restrict to administrative use only 20 routes (15.5 miles) or 9% of the general habitat routes. The long-term, direct, localized effect of these restricted routes on reducing general habitat fragmentation is negligible, and in fact, offset to a minor degree due to the 21%

increase from Alternative A in the supply of 204 open routes at 184 miles with the route densities that are described above (43 CFR 8342.1(b)).

Overall, this Alternative would provide negligible to minor protection of sage-grouse leks and nesting habitat from habitat fragmentation and disturbance from travel routes within the Travel Management Areas (TMAs). There would be a minor increase in sage-grouse habitat protected in this Alternative compared to Alternative A. Lek habitat would receive less protection and nesting habitat would receive slightly greater protection than Alternative A. The direct, long term, local impacts to sage-grouse would continue to occur in the majority of habitat.

Prairie Dogs

White-tailed Prairie Dogs

Under Alternative C, of the 19 routes that are within 0.5 miles of identified white-tailed prairie dog "towns", 19 routes (7.2 miles) or 100% would be open to all types of motor vehicle use. This would result in 16% fewer open routes within 0.5 miles of prairie dog "towns" from Alternative A. No routes would be limited to administrative use only or closed to motor vehicle use. The long-term, direct, localized effect of these route designations on increasing habitat fragmentation and/or the potential for wildlife harassment would be minor, due to increased public access near the "town" sites (43 CFR 8342.1(b)).

Black-tailed Prairie Dogs

Under Alternative C, of the 90 routes that are within 0.5 miles of identified black-tailed prairie dog "towns", 57 routes (37.9 miles) or 63% would be open to all types of motor vehicle use. This would result in 27% fewer open routes within 0.5 miles of prairie dog "towns" from Alternative A. Only 33 routes (21.3 mile) or 37% would be limited to administrative use only and no routes would be closed to motor vehicle use. The long-term, direct, localized effect of these route designations on reducing habitat fragmentation and/or minimizing the potential for wildlife harassment would be minor, due to limiting public access to only 57 open routes near the "town" sites (43 CFR 8342.1(b)).

There would be negligible to minor benefits to prairie dog habitat with this Alternative. The long-term, direct, and localized impacts to habitat fragmentation and prairie dog harassment would be reduced by the closure to motor vehicle use of 16-27% of routes when compared to Alternative A.

Summary Alternative C

Impacts would be the same as described under Alternative A, except there would be 825 miles of open routes and 5.9 miles of closed routes. Alternative C is therefore, less restrictive than Alternative A.

O.6.2.9.6 Alternative D

Impacts would be similar to impacts from impacts common to all and Alternative B, except for species or habitat specific impacts presented below.

Big Game Species

Under Alternative D, the 865 existing BLM routes (974 miles) that comprise the travel networks within big game general winter range (BGGWR) would continue to be managed using the five existing designations shown in **Error! Reference source not found.** and Figure 4.2.4.1a below, with 4 out of every 10 existing routes (341 routes or about 40%) open to all motorized uses or open with special seasonal or vehicular restrictions. This would result in 44% fewer open routes in Alternative D than would be open in Alternative A. Additionally; the route density within the BGGWR would be reduced by 53% for the long-term to 0.8 open routes per square mile and reduced by 26% to 1.4 miles of open routes per square mile. The footprint (actual area of surface disturbance) of open routes affects approximately 922 acres or 0.3% of the 275,839 acres of BGGWR within the TMAs. In other words, for every 1 acre of route footprint within the BGGWR, 298 acres would be without routes.

Alternative D proposes closures and restrictions to administrative use only on a combined 524 routes at 372 miles, a 44% increase from these designations in Alternative A. The long-term, direct, localized effect of these restricted routes on reducing BGGWR habitat fragmentation is moderate, due to the continued availability and use of 341 open routes (at 601 miles) with the route densities that are described above.

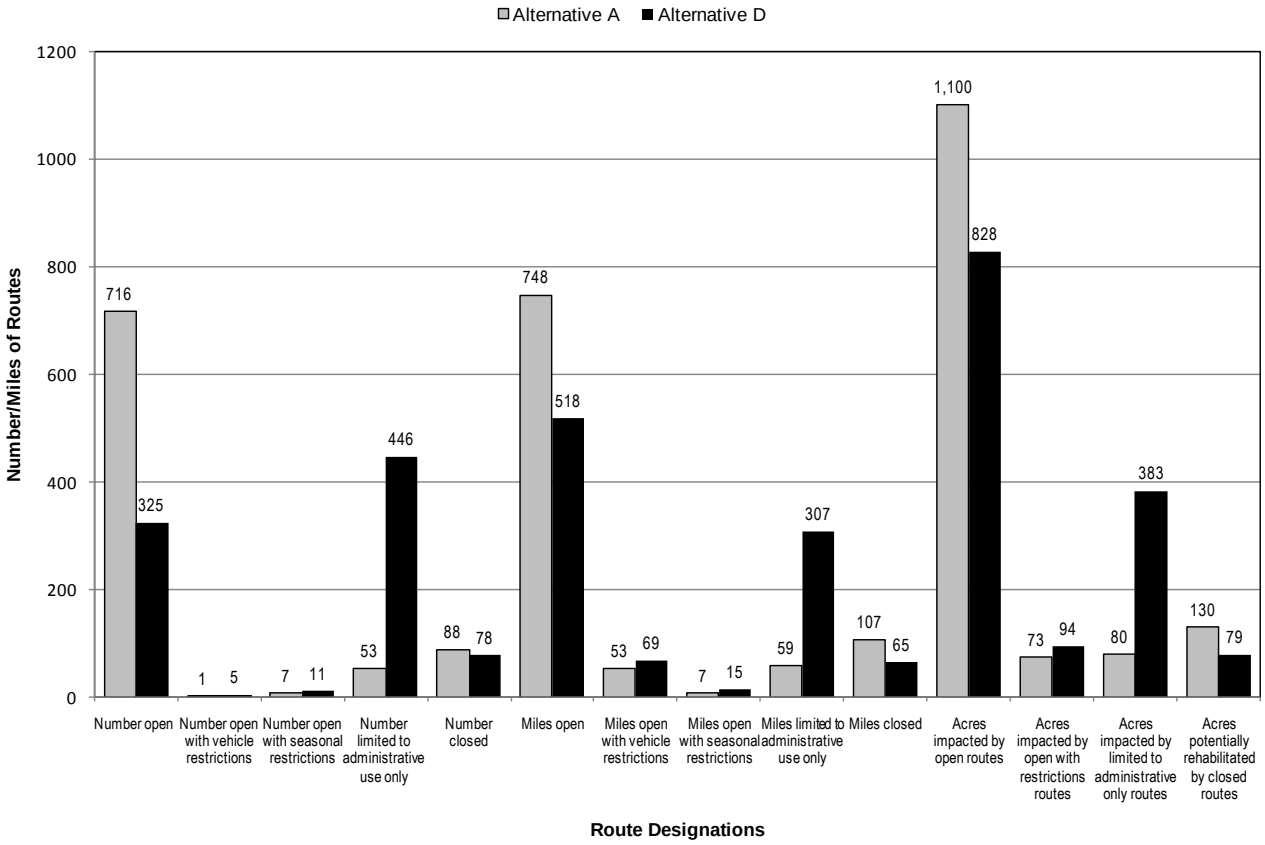
Table O-47: Alternative D Route Designations for Big Game Winter Range (compared to Alt. A)

Alternative D Route Designations for Big Game Winter Range (compared to Alt. A)

Potential Route Designations	Alternative A				Alternative D							
	Routes	Percent	Miles	Percent	Routes	Percent	# Δ from Alt. A	% Δ from Alt. A	Miles	Percent	# Δ from Alt. A	% Δ from Alt. A
Open	716	83%	747.6	76.8%	325	37.6%	-391	-45.2%	517.5	53.1%	-230.1	-23.6%
Open with vehicle restrictions	1	0.1%	52.7	5.4%	5	0.6%	4	0.5%	68.7	7.1%	16	1.6%
Open with seasonal restrictions	7	0.8%	7.2	0.7%	11	1.3%	4	0.5%	15.1	1.6%	7.9	0.8%
Limited to administrative use only	53	6.1%	59	6.1%	446	51.6%	393	45.4%	307.2	31.5%	248.2	25.5%
Closed	88	10.2%	107.4	11%	78	9.0%	-10	-1.2%	65.2	6.7%	-42.2	-4.3%
Average open routes per square mile (density)	1.7		1.9		0.8		-0.9	-52.9%	1.4		-0.5	-25.5%

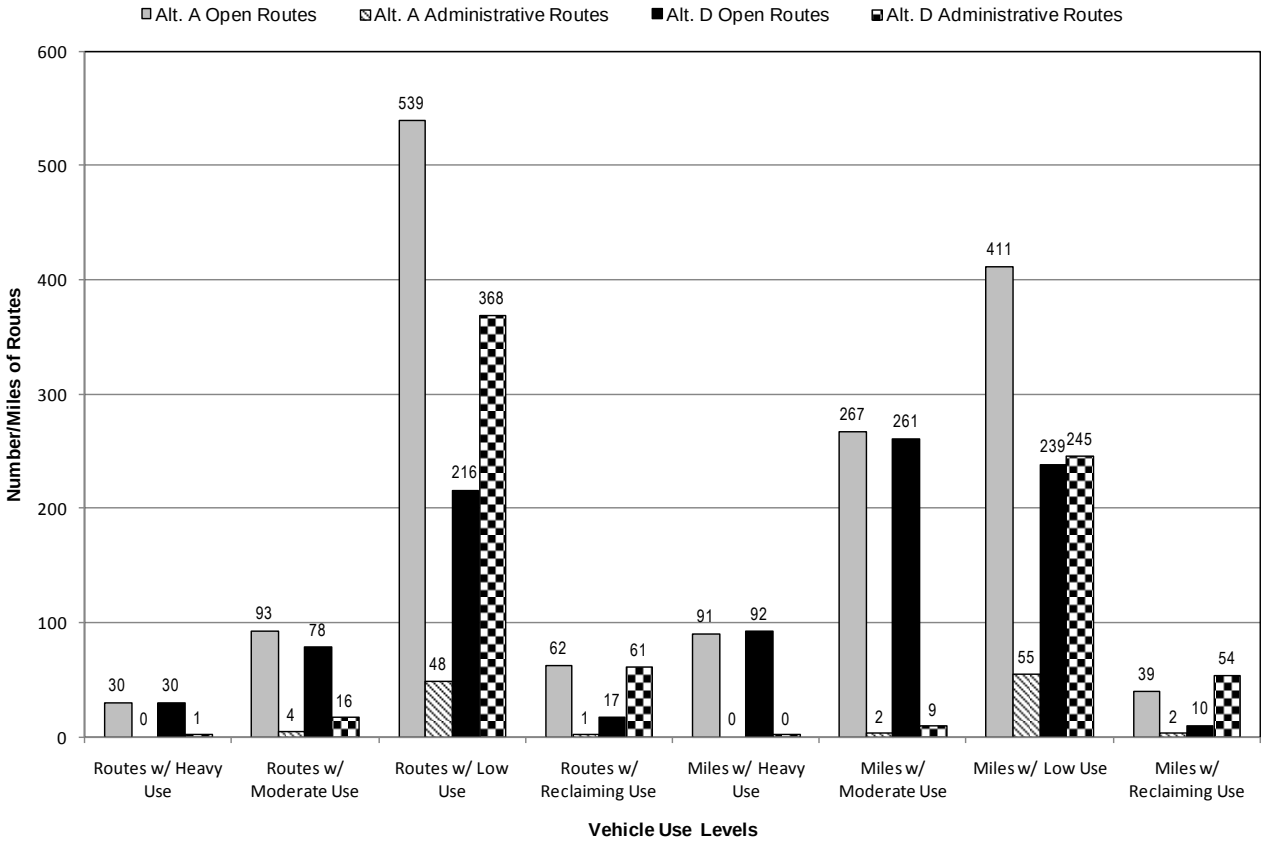
Route- Acres	Acres impacted by routes	Percent of total route acreage	Acres impacted by routes	Percent of total route acreage	Acres change from Alt. A	% change from Alt. A
Open	1100.3	79.6%	827.8	59.9%	-272.5	-19.7%
Open with restrictions	73.4	5.3%	93.8	6.8%	20.4	1.5%
Limited to administrative use only	79.6	5.8%	383.0	27.7%	303.4	21.9%
Closed	129.7	9.4%	78.7	5.7%	-51.0	-3.7%
Percent of open route acreage	0.4%		0.3%			
Ratio of open route acres to unrouted acres	1:234		1:298			

Figure 4.2.4.1a: Alternative D Route Designations in Big Game General Winter Range (Compared to Alt. A)



Of the existing BLM routes within BGGWR under the Alternative D, 216 open routes (239 miles) are considered by resource specialists to have low vehicle use levels as shown in Figure 4.2.4.1b below. Conversely, 78 open routes (261 miles) have vehicle use levels estimated as moderate and only 30 open routes (92 miles) are estimated to have heavy vehicle use. The combination of 78 closed routes and the low vehicle use levels on 63% of open routes (40% of open route miles) and 83% of administrative use only routes (80% administrative route miles) in BGGWR would directly contribute, in the long-term, to lessening of the effects of route use, such as wildlife harassment, human-caused animal mortality or displacement of individual animals to a moderate degree (43 CFR 8342.1 (b)).

Figure 4.2.4.1b: Alternative D Route Designations by in Big Game General Winter Range Estimated Vehicle Use Levels (Compared to Alt. A.)



Overall, this alternative would provide moderate protection of big game winter range. The direct, local, and long term effects of route use on big game winter range such as wildlife harassment, human-caused animal mortality, stress, or displacement of individual animals would be reduced to a moderate degree on big game winter range. Route densities would be reduced to 1.4 miles per square mile (26% less) and 44% fewer open routes versus Alternative A. The open road density of 1.4 miles of open routes per square mile is 40% above the 1 mile per section road density recommended in the "Guidelines/ Recommendations" for road densities. (Canfield, J.E. et. al. 1999. Ungulates. in G. Joslin and H. Youmans, coordinators. Effects of recreation on Rocky Mountain Wildlife: A review for Montana. Committee on Effects of Recreation on Wildlife, MT. Chapter of the Wildlife Society. Pg. 6.12).

The BLM Road Density Analysis indicated that 595,259 acres of BGWR CAPS SCORE 1 and 2 areas, (of all ownerships with any public land ownership (surface or subsurface)) have road densities that exceed 1.0 miles per square mile. This alternative would require roads to be gated or closed during crucial seasons where they impact big game winter range or parturition areas. Public access in these areas will vary dependent on the depth of winter snow. In greater snow depth years, disturbance impacts to big game will decrease due to reduced public access. In these areas, gating, closures, or reclamation of roads would increase impacts to big game winter range by 57% compared to Alternative B and reduce impacts by 28% when compared to Alternative C. This would directly contribute in the long-term to decreasing the effects of route use, such as

wildlife harassment , displacement, and stress to big game on winter ranges to a moderate degree.

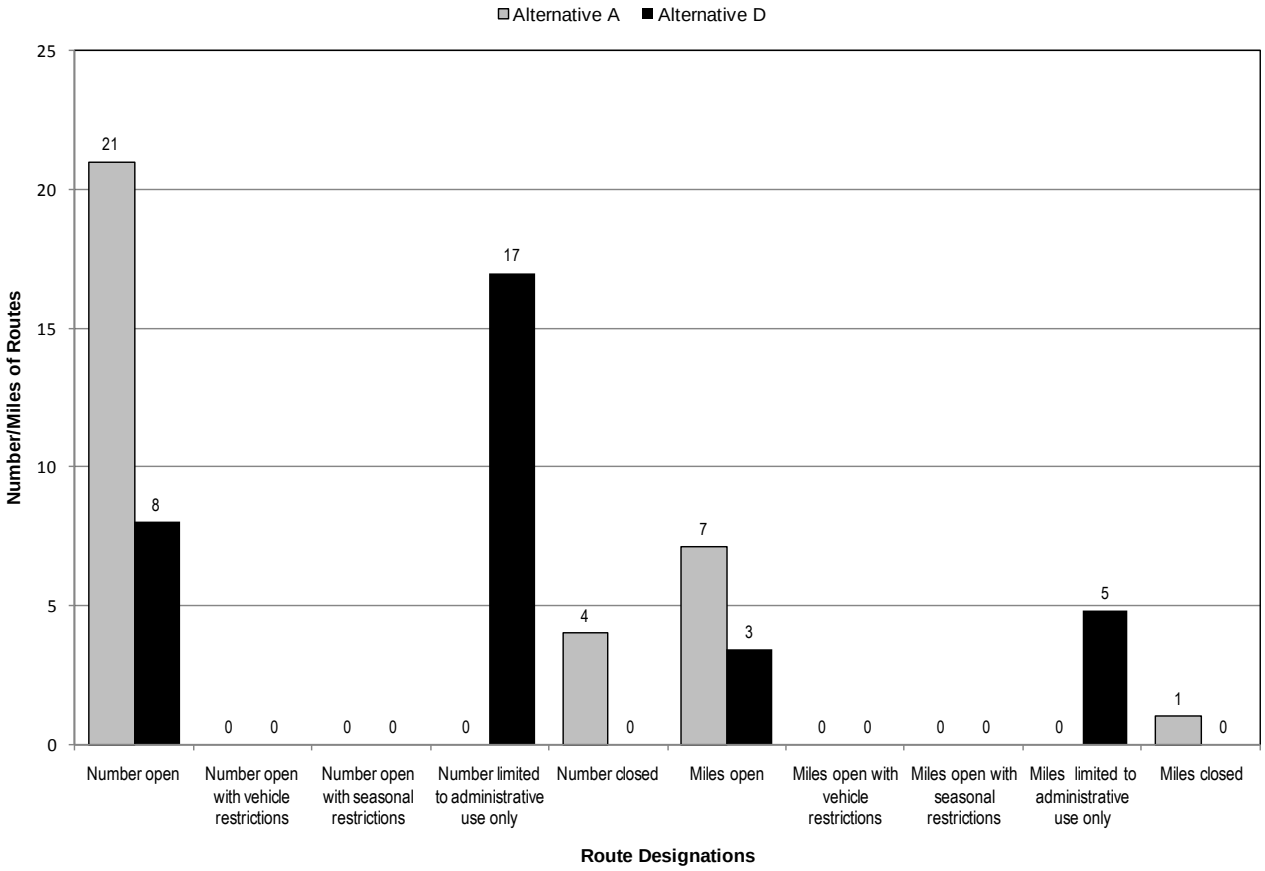
Greater Sage-Grouse – Leks and Nesting Habitat

Under the Alternative D, of the 25 routes that are within 0.25 miles of identified sage-grouse leks, only 8 routes (3.4 miles) or 32% would be open to all types of motor vehicle use. Conversely, no routes would be closed to motor vehicle use and 17 routes (4.8 miles) or 68% would be limited to administrative use only. This would result in 52% fewer open routes within 0.25 miles of leks in Alternative D than would be open in Alternative A.

Table O-48: Alternative D Route Designations within ¼-mile of Sage-Grouse Leks (compared to Alt. A)

Alternative D Route Designations within ¼-mile of Sage-Grouse Leks (compared to Alt. A)												
Potential Route Designations	Alternative A				Alternative D							
	Routes	Percent	Miles	Percent	Routes	Percent	# Δ from Alt. A	% Δ from Alt. A	Miles	Percent	# Δ from Alt. A	% Δ from Alt. A
Open	21	84.0%	7.1	87.7%	8	32.0%	-13	-52.0%	3.4	41.5%	-3.7	-46.2%
Open with vehicle restrictions	0	0.0%	0.0	0.0%	0	0.0%	0	0.0%	0.0	0.0%	0	0.0%
Open with seasonal restrictions	0	0.0%	0.0	0.0%	0	0.0%	0	0.0%	0.0	0.0%	0	0.0%
Limited to administrative use only	0	0.0%	0.0	0.0%	17	68.0%	17	68.0%	4.8	58.5%	4.8	58.5%
Closed	4	16.0%	1.0	12.3%	0	0.0%	-4	-16.0%	0.0	0.0%	-1	-12.3%

Figure 4.2.4.2a: Alternative D Route Designations within1/4-mile of Sage Grouse Leks



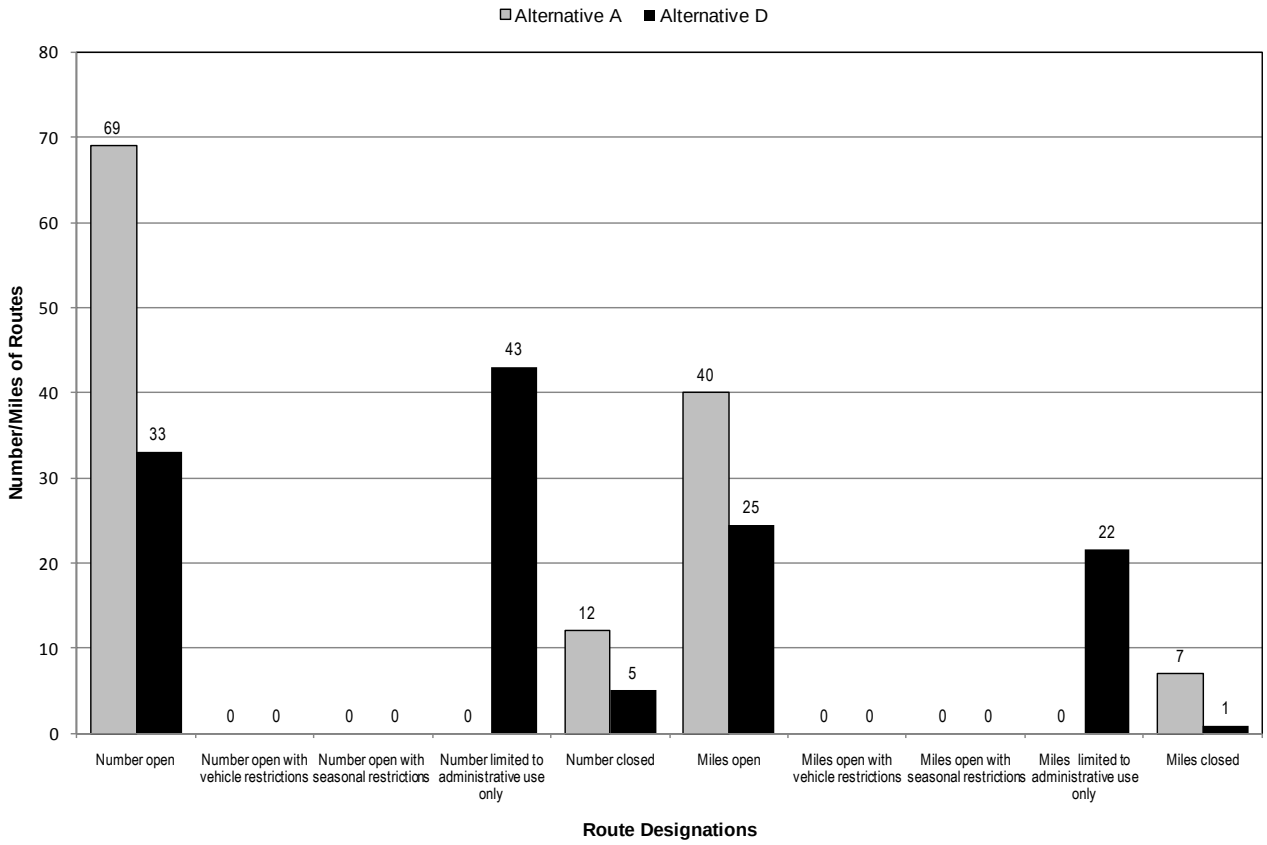
Under the Alternative D, of the 81 routes that are within 0.6 miles of identified sage-grouse, 33 routes (12.9 miles) or 46% would be open to all types of motor vehicle use. Conversely, 5 routes (0.9 miles) or 6% would be would be closed and 43 routes (21.6 miles) or 53% would be limited to administrative use only. This would result in 44% fewer open routes within 0.6 miles of leks in Alternative D than would be open in Alternative A. The long-term, direct, localized effect of these route designations on reducing habitat fragmentation and/or minimizing the potential for wildlife harassment would be minor to moderate, due to the limited public motorized access opportunities near the lek sites (43 CFR 8342.1(b)).

Table O-49: Alternative D Route Designations within 0.6 miles of Sage-Grouse Leks (compared to Alt. A)

Alternative D Route Designations within 0.6 miles of Sage-Grouse Leks (compared to Alt. A)

Potential Route Designations	Alternative A				Alternative D							
	Routes	Percent	Miles	Percent	Routes	Percent	# Δ from Alt. A	% Δ from Alt. A	Miles	Percent	# Δ from Alt. A	% Δ from Alt. A
Open	69	85.2%	40.0	85.1%	33	40.7%	-36	-44.4%	24.5	52.1%	-15.5	-33.0%
Open with vehicle restrictions	0	0.0%	0.0	0.0%	0	0.0%	0	0.0%	0.0	0.0%	0	0.0%
Open with seasonal restrictions	0	0.0%	0.0	0.0%	0	0.0%	0	0.0%	0.0	0.0%	0	0.0%
Limited to administrative use only	0	0.0%	0.0	0.0%	43	53.1%	43	53.1%	21.6	46.0%	21.6	46.0%
Closed	12	14.8%	7.0	14.9%	5	6.2%	-7	-8.6%	0.9	1.9%	-6.1	-13.0%

Figure 4.2.4.2b: Alternative D Route Designations within 0.6 miles of Sage Grouse Leks (Compared to Alt. A)



Of the 395 routes that are within nesting habitat (within 2 miles of identified sage-grouse leks), 160 routes (215 miles) or 41% would be open or open with restrictions. Conversely, 209 routes (141 miles) or 53% would be limited to administrative use only, while 26 routes (10.3 miles) or 7% would be closed to motor vehicle use. This would result in 48% fewer open routes within 2 miles of leks in Alternative D than would be open in Alternative A. The actual footprint (area of surface disturbance) of open routes affects approximately 338 acres or 0.21% of the total area within 2 miles of sage-grouse leks. In other words, for every 1 acre of route footprint within the 2-mile nesting habitat, 465 acres would be without routes. This would result in 26% fewer open route acres in Alternative D than in Alternative A. The footprint for routes that would be closed (and eventually restored to a more natural condition) would be 12.8 acres or 2.4% of the total route acreage within the 2-mile nesting habitat; 6% fewer than in Alternative A. This would be a long-term, direct, localized moderate reduction of fragmented habitat and the potential for wildlife harassment (43 CFR 8342.1(b)).

Of the 579 routes that are within nesting habitat (within 3 miles of identified sage-grouse leks), 240 routes (349 miles) or 41% would be open or open with seasonal restrictions. Conversely, 299 routes (197 miles) or 52% would be limited to administrative use only, while 40 routes (28.5 miles) or 7% would be closed to motor vehicle use. This would result in 45% fewer open routes within 3 miles of leks in Alternative D than would be open in Alternative A. The actual footprint (area of surface disturbance) of open routes affects approximately 555 acres or 0.16% of the total area within 3 miles of sage-grouse leks. In other words, for every 1 acre of route footprint within the 3-mile nesting habitat, 618 acres would be without routes. This would result in 22% fewer open route acres in Alternative D than in Alternative A. The footprint for routes that would be closed (and eventually restored to a more natural condition) would be 36.6 acres or 4% of the total route acreage within the 3-mile nesting habitat; 5% fewer than in Alternative A. This would be a long-term, direct, localized minor to moderate reduction of fragmented habitat and the potential for wildlife harassment (43 CFR 8342.1(b)).

Of the 701 routes that are within nesting habitat (within 4 miles of identified sage-grouse leks), 285 routes (451 miles) or 41% would be open or open with vehicle restrictions. Conversely, 350 routes (236 miles) or 51% would be limited to administrative use only, while 58 routes (48 miles) or 8% would be closed to motor vehicle use. This would result in 43% fewer open routes within 4 miles of leks in Alternative D than would be open in Alternative A. The actual footprint (area of surface disturbance) of open routes affects approximately 726 acres or 0.12% of the total area within 4 miles of sage-grouse leks. In other words, for every 1 acre of route footprint within the 4-mile nesting habitat, 803 acres would be without routes. This would result in 20% fewer open route acres in Alternative D than in Alternative A. The footprint for routes that would be closed (and eventually restored to a more natural condition) would be 57 acres or 5% of the total route acreage within the 4-mile nesting habitat; 5% fewer than in Alternative A. This would be a long-term, direct, localized minor to moderate reduction of fragmented habitat and the potential for wildlife harassment (43 CFR 8342.1(b)).

Of the 81 existing BLM routes (47 miles) within 0.6 miles of sage-grouse leks under the Alternative D, 24 open routes (16.8 miles) are considered by resource specialists to have low vehicle use levels. Conversely, 5 open routes (4.6 miles) have vehicle use levels estimated as moderate and only 4 open routes (3 miles) are estimated to have heavy vehicle use. The combination of 5 closed routes and the low vehicle use levels on 73% of open routes (69% of

open route miles) and low use or no observed use on 100% of administrative use only routes (100% administrative route miles) within 0.6 miles of sage-grouse leks would directly contribute, in the long-term, to lessening of the effects of route use, such as wildlife harassment, human-caused animal mortality or displacement of individual animals to a moderate to major degree (43 CFR 8342.1 (b)).

Greater Sage-Grouse Protection Priority Areas (PPAs)

Under Alternative D, sage-grouse Protection Priority Areas (PPAs) would be allocated and the 402 existing BLM routes (359 miles) that comprise the travel networks within the PPAs would continue to be managed using five existing designation types, with only 4 out of every 10 existing routes (40%) open to all motorized uses. This would result in 52% fewer open routes within PPAs in Alternative D than would be open in Alternative A. Additionally; the route density within the PPAs would drop to 0.9 open routes per square mile and 1.1 miles of open routes per square mile. This would be a 56% reduction in open route density (37% reduction in the density of open route miles) in the PPAs from Alternative A. Alternative D would close and restrict to administrative use only 241 routes (153 miles) or 60% of the PPA routes. The long-term, direct, localized effect of these restricted routes on reducing PPA habitat fragmentation is moderate, due in part to the much smaller supply of 161 open routes at 206 miles with the route densities that are described above (43 CFR 8342.1(b)).

Greater Sage-Grouse Restoration Areas

Under Alternative D, sage-grouse Restoration Areas (RAs) would be allocated and the 113 existing BLM routes (121 miles) that comprise the travel networks within the RAs would continue to be managed using five existing designation types, with almost 4 out of every 10 existing routes (39%) open to all motorized uses and open with restrictions. This would result in 58% fewer open routes within RAs in Alternative D than would be open in Alternative A. Additionally, the route density within the RAs would drop to 1.1 open routes per square mile and 2.2 miles of open routes per square mile. This would be a 60% reduction in open route density (25% reduction in the density of open route miles) in the RAs from Alternative A. Alternative D would close and restrict to administrative use only 69 routes (32 miles) or 61% of the RA routes. The long-term, direct, localized effect of these restricted routes on reducing RA habitat fragmentation is moderate, due in part to the much smaller supply of 44 open routes at 89 miles with the route densities that are described above (43 CFR 8342.1(b)).

Greater Sage-Grouse General Habitat

Under Alternative D, the 224 existing BLM routes (200 miles) that comprise the travel networks within the remaining sage-grouse general habitat areas would continue to be managed using five existing designation types, with over 5 out of every 10 existing routes (56%) open to all motorized uses and open with restrictions. This would result in 19% fewer open routes within general habitat in Alternative D than would be open in Alternative A. Additionally, the route density within the general habitat would drop to 1.4 open routes per square mile and 1.5 miles of open routes per square mile. This would be a 26% reduction in open route density (12% reduction in the density of open route miles) in the general habitat from Alternative A. Alternative D would close and restrict to administrative use only 99 routes (67 miles) or 44% of the general habitat routes. The long-term, direct, localized effect of these restricted routes on reducing general habitat fragmentation is moderate, due in part to the much smaller supply of

125 open routes at 133 miles with the route densities that are described above (43 CFR 8342.1(b)).

Overall, this alternative would provide moderate to major protection of sage-grouse leks and nesting habitat from habitat fragmentation and disturbance from travel routes within the Travel Management Areas (TMAs). The direct, long-term, local impacts to sage-grouse would be reduced to a moderate to major degree when compared to Alternative A.

Prairie Dogs

White-tailed Prairie Dogs

Under the Alternative D, of the 19 routes that are within 0.5 miles of identified white-tailed prairie dog "towns", 10 routes (3.4 miles) or 53% would be open to all types of motor vehicle use. This would result in 32% fewer open routes within 0.5 miles of prairie dog "towns" from Alternative A. Only 8 routes (3.5 mile) or 42% would be limited to administrative use only and 1 route (0.3 miles) or 5% would be closed to motor vehicle use. The long-term, direct, localized effect of these route designations on reducing habitat fragmentation and/or the potential for wildlife harassment would be moderate, due to limiting public access to only 10 open routes near the "town" sites (43 CFR 8342.1(b)).

Black-tailed Prairie Dogs

Under the Alternative D, of the 90 routes that are within 0.5 miles of identified black-tailed prairie dog "towns", 35 routes (28.1 miles) or 39% would be open to all types of motor vehicle. This would result in 51% fewer open routes within 0.5 miles of prairie dog "towns" from Alternative A. Over half of the total routes (53 routes (30.8 mile) or 59%) would be limited to administrative use only and 2 routes (0.4 miles) or 2% would be closed to motor vehicle use. The long-term, direct, localized effect of these route designations on reducing habitat fragmentation and/or minimizing the potential for wildlife harassment would be minor to moderate, due to limiting public access to only 35 open routes near the "town" sites (43 CFR 8342.1(b)).

There would be minor to moderate benefits to prairie dog habitat with this alternative. The long-term, direct, and localized impacts to habitat fragmentation and prairie dog harassment would be reduced by the closure to motor vehicle use of 2-5% of routes and administrative use only restrictions on 59% of the routes or 51% fewer open routes when compared to Alternative A.

O.6.2.10 Fisheries Habitat and Special Status Species

O.6.2.10.1 Impacts Common to All Alternatives

Motorized and mechanized modes of travel on BLM-administered land (outside of established TMAs) would be limited to existing roads and trails. Site specific travel planning would be initiated if resources were impacted (not meeting Land Health Standards, excessive erosion). In all alternatives, the BLM may close or restore unauthorized, user created roads and trails to prevent resource damage. Prohibiting off road travel reduces erosion and protects water quality and fisheries habitat. General impacts associated with travel management, pertaining to fisheries resources, are related to: weed infestations that degrade upland and riparian health; erosion and un-natural drainage that results in sedimentation and other non-point source pollution to streams.

O.6.2.10.2 Alternative A

The primary issues related to fisheries are the preservation of water quality, erosion, and drainage from road surfaces into stream channels. More specifically, the existence of routes with their areas of surface disturbance, as well as the use of motor vehicles on those routes that drain into with water courses and/or are through sensitive soils constitutes a primary activity that has the potential to adversely affect fisheries. Relative to travel management, this can occur by improper placement of routes; inappropriate behavior by visitors in these areas; intense rainfall events or unauthorized off-road vehicle use. Therefore, the supply and spatial extent of travel access networks for motor vehicles is an important component for managing or providing various levels of protection for fisheries.

The species of concern with regard to route designations is Yellowstone cutthroat trout, which, within the context of this analysis, only occur in the Pryor TMA. The analysis results are derived from looking at all routes that underwent route evaluation that are within .5 miles (in/through/to/proximate) of the YCT Suitable and YCT Conservation habitat areas depicted in the BLM's GIS data. Only one route (PM1088 at 0.14 miles within the Pryor TMA) was apparently in or very close to a YCT Conservation population. The No Action Alternative and Alternative B proposed closure for the route, while Alternative C proposed to open to all vehicles and Alternative D proposed administrative uses only for the route. Topographic features associated with this route negate impacts to YCT habitat.

Table O-50: Alternative A: Number of Routes Associated with Yellowstone cutthroat trout habitat

Alternative A: Number of Routes Associated with Yellowstone cutthroat trout habitat				
	Alternative A			
Potential Route Designations	Within 0.5 miles from YCT habitat)	% of routes within 0.5 miles of YCT habitat	Within 0.5 miles from YCT habitat and in sensitive soils	% of routes within 0.5 miles of YCT habitat in soils
Open	14	61	6	100
Open with vehicle restrictions	0	0	0	0
Open with seasonal restrictions	0	0	0	0
Limited to administrative use only	0	0	0	0
Closed	9	39	0	0

Routes in, through, crossing, or proximate within 0.5 miles of YCT suitable habitat and conservation population habitat: Under the No Action Alternative, of the 23 routes that are in or through or proximate within 0.5 miles of YCT habitat, 10.2 miles (63%) on 14 routes would be open to all types of motor vehicle use, while no routes would be limited to administrative use only; and 5.9 miles (37%) on 9 routes would be closed. In the long-term, 6 out of every 10 miles of existing BLM routes in or through or within 0.5 miles of YCT habitat would remain available for public access in the No Action Alternative. With 63% of existing routes potentially open and 37% potentially closed to motor vehicle use, the localized, long-term effect of these route restrictions on reducing erosion and drainage from road surfaces into stream channels and

wetlands with the potential for direct and indirect impacts to YCT habitat would be moderate (43 CFR 8342.1(a)(b)(d)).

Routes in, through, crossing, or proximate within 0.5 miles of YCT suitable habitat and conservation population habitat in severe/moderate water erosion rated soils: Of the 6 routes that are in, through or within 0.5 miles of YCT habitat that are also in severe or moderate water erosion rated soils, 7.1 miles on 6 routes, or 100% would be open to all vehicle uses. No routes would be limited to administrative use only or closed to motor vehicle use. The actual footprint (area of surface disturbance) of open routes would be approximately 12 acres in these areas. The footprint for routes that would be closed (and eventually restored to a more natural condition) would be 0 acres. In the long-term, 10 out of every 10 existing BLM routes in, through or within 0.5 miles of YCT habitats in these soil types would remain available for public access in the No Action Alternative. With 100% of existing routes potentially open and 0% potentially limited to administrative use only or closed to motor vehicle use, the localized, long-term effect of these route restrictions on reducing erosion and drainage from road surfaces into stream channels and wetlands with the potential for direct and indirect impacts to YCT habitat would be major (43 CFR 8342.1(a)(b)(d)).

Each route is unique in its potential to impact fisheries resources and quantitative data is not available specific to each route, however, assumptions lead to the conclusion that more open routes adjacent to fisheries resources will lead to degraded fisheries habitat from sedimentation/erosion and invasive species infestations. Impacts from travel route designations are addressed specifically when riparian areas are monitored for functionality. It should be noted, there is no evidence that any routes analyzed above are having adverse impacts on fisheries resources, this analysis depicts potential impacts from route designations.

O.6.2.10.3 Alternative B

In action alternatives (B, C, D) the BLM established 11 Travel Management Areas (TMAs) to minimize impacts and provide a spectrum of motorized and non-motorized recreational opportunities. In each TMA, motorized and mechanized travel would be limited to designated roads and trails, except in designated open areas (ex: South Hills Motorcycle Area). Routes on BLM lands but outside of TMAs would be managed as in Alternative A, “limited to existing roads and trails”.

An implementation and monitoring plan would be initiated for the TMAs within 3-5 years of the ROD. The plan would include signing, mapping, information and education, and monitoring of impacts associated with continued use on designated open routes, etc. Implementation plan would also identified criteria for route variances specific to each TMA. In this plan, the BLM may close or restore unauthorized, user created roads and trails to prevent resource damage. The travel plan would also allow for, upon project completion, roads used for commercial or administrative access on BLM-administered lands would be reclaimed, unless the route provides specific benefits for public access, minimizes impacts to the resource and would be considered on a case-by-case basis.

The following analysis determines the impacts of potential water pollution sources associated with routes in proximity to different types of water and fisheries resources and when in areas

where severe or moderate erosion rated soils were identified. These characteristics were determined to have the most potential to impact water resources, pertaining to travel management.

Table O-51: Alternative B: Number of Routes Associated with Yellowstone cutthroat trout habitat (compared to Alt. A)

Alternative B: Number of Routes Associated with Yellowstone cutthroat trout habitat (compared to Alt. A)										
	Alternative A				**Alternative B**					
Potential Route Designations	**Within 0.5 miles**	**% of routes within 0.5 miles**	**Within 0.5 miles and in sensitive soils**	**% of routes within 0.5 miles and in soils**	**Within 0.5 miles**	**% of routes within 0.5 miles**	**% Δ from Alt. A**	**Within 0.5 miles and in sensitive soils**	**% of routes within 0.5 miles and in soils**	**% Δ from Alt. A**
Open	14	61	6	100	4	17	-44	2	33	-67
Open with vehicle restrictions	0	0	0	0	0	0	0	0	0	0
Open with seasonal restrictions	0	0	0	0	1	4	4	1	17	17
Limited to administrative use only	0	0	0	0	2	9	9	0	0	0
Closed	9	39	0	0	16	70	30	3	50	50

Routes in, through, crossing, proximate within 0.5 miles of YCT habitat: Under alternative B, of the 23 routes (16.1 miles) that are in or through or proximate within 0. 5 miles of YCT habitat, 4 routes with 4.9 miles (30%) would be open to all types of motor vehicle use, with 1 route at 2 miles (12%) open with seasonal restrictions (for a total of 21% fewer open miles (3.3 miles) than in alternative A). Additionally, 2 routes with 1.2 miles (8%) would be limited to administrative use only (7% more miles open than alternative A) and 16 routes with 8 miles (50%) would be closed (13% more than Alternative A). In the long-term, 6.9 miles out of 16.1 existing miles in or through or proximate within 0.5 miles of YCT habitat would remain available for public access in alternative B. With 43% of existing route miles potentially open and 57% potentially limited to administrative use only or closed to motor vehicle use, the localized, long-term effect of these route restrictions on reducing erosion and drainage from road surfaces into stream channels and wetlands with the potential for direct and indirect impacts to YCT habitat would be moderate, speaking of miles of routes (43 CFR 8342.1(a)(d)). As described in alternative A, the actual impacts to YCT habitat and fish populations cannot be quantified due to minimal data concerning erosion and input to these aquatic systems.

Routes in, through, crossing, proximate within 0.5 miles of YCT habitat in severe/moderate water erosion rated soils: Of the 6 routes (7.1 miles) that are in, through or within 0.5 miles of YCT habitat that are also in severe or moderated water erosion rated soils, 2 routes with 2.9 miles or (41%) would be open to all vehicle uses and 1 route at 2 miles (28%) would be open with seasonal restrictions (for a total of 18% fewer miles than Alternative A). Additionally, no routes would be limited to administrative use only (same as Alternative A) and 3 routes with 2.2

miles (31%) would be closed to motor vehicle use (31% more miles than Alternative A). The actual footprint (area of surface disturbance) of open routes would be approximately 9.4 acres in these areas (21% fewer than Alternative A). The footprint for routes that would be closed (and eventually restored to a more natural condition) would be 2.7 acres (22% more than Alternative A). In the long-term, 5 out of every 10 existing BLM routes in, through or within 0.5 miles of YCT habitat in these soil types would remain available for public access in Alternative B. With 69% of existing routes potentially open and 31% potentially closed to motor vehicle use, the localized, long-term effect of these route restrictions on reducing erosion and drainage from road surfaces into stream channels and wetlands with the potential for direct and indirect impacts to YCT habitat would be moderate (43 CFR 8342.1(a)(d)).

The determination, by this analysis, only reflects the relative impacts of open versus closed route miles, as opposed to the detailed potential impacts that may arise from issues to resources by route designations. Each route is unique in its potential to impact fisheries resources and quantitative data is not available specific to each route, however, assumptions lead to the conclusion that more open routes adjacent to fisheries resources will lead to degraded fisheries habitat from sedimentation/erosion and invasive species infestations. Impacts from travel route designations are addressed specifically when riparian areas are monitored for functionality.

O.6.2.10.4 Alternative C

Alternative C designates the most open routes in the established Travel Management Areas and continues to restrict motorized vehicle use to existing roads and trails in the rest of the field office. The following analysis determines the impacts of potential water pollution sources associated with routes in proximity to different types of water and fisheries resources and when in areas where severe or moderate erosion rated soils were identified. These characteristics were determined to have the most potential to impact water resources, pertaining to travel management.

Table O-52: Alternative C: Number of Routes Associated with Yellowstone cutthroat trout habitat (compared to Alt. A)

Alternative C: Number of Routes Associated with Yellowstone cutthroat trout habitat (compared to Alt. A)										
	Alternative A				**Alternative C**					
Potential Route Designations	**Within 0.5 miles**	**% of routes within 0.5 miles**	**Within 0.5 miles and in sensitive soils**	**% of routes within 0.5 miles and in soils**	**Within 0.5 miles**	**% of routes within 0.5 miles**	**% Δ from Alt. A**	**Within 0.5 miles and in sensitive soils**	**% of routes within 0.5 miles and in soils**	**% Δ from Alt. A**
Open	14	61	6	100	22	96	35	6	100	0
Open with vehicle restrictions	0	0	0	0	0	0	0	0	0	0
Open with seasonal restrictions	0	0	0	0	0	0	0	0	0	0
Limited to administrative use only	0	0	0	0	1	4	4	0	0	0
Closed	9	39	0	0	0	0	-39	0	0	0

Routes in, through, crossing, proximate within 0.5 miles of YCT habitat: Under Alternative C, of the 23 routes (16.1 miles) that are in or through or within 0.5 miles of YCT habitat, 22 routes with 15.6 miles (97%) would be open to all types of motor vehicle use (34% more miles than in Alternative A). Additionally, 1 route at 0.5 miles (3%) would be limited to administrative use only and no routes would be closed (63% fewer miles than Alternative A). In the long-term, with 97% of BLM route miles in or through or within 0.5 miles of YCT habitat remaining available for public access in Alternative C, the localized, long-term effect on reducing erosion and drainage from road surfaces into stream channels and wetlands with the potential for direct and indirect impacts to fisheries values would be major (43 CFR 8342.1(a)(d)).

Routes in, through, crossing, proximate within 0.5 miles of YCT habitat in severe/moderate water erosion rated soils: Of the 6 routes (7.1 miles) that are in, through or within 0.5 miles of YCT habitat that are also in severe or moderated water erosion rated soils, 6 routes (7.1 miles) or 100% would be open to all vehicle uses (same as Alternative A). Additionally, no routes would be limited to administrative use only or closed to motor vehicle use (same as Alternative A). The actual footprint (area of surface disturbance) of open routes would be approximately 12.1 acres in these areas (same as Alternative A). The footprint for routes that would be closed (and eventually restored to a more natural condition) would be 0 acres (same as Alternative A). The impacts for Alternative C would be the same as Alternative A.

The determination, by this analysis, only reflects the relative impacts of open versus closed route miles, as opposed to the detailed potential impacts that may arise from issues to resources by route designations. Each route is unique in its potential to impact fisheries resources and quantitative data is not available specific to each route, however, assumptions lead to the conclusion that more open routes adjacent to fisheries resources will lead to degraded fisheries habitat from sedimentation/erosion and invasive species infestations. Impacts from travel route designations are addressed specifically when riparian areas are monitored for functionality.

O.6.2.10.5 Alternative D

Impacts would be the same as described in impacts from in Alternative B. Based on assumptions, the more route miles open will have more impacts to fisheries resources.

Under Alternative D, there would be 624 miles of open routes (62% of all route miles). This Alternative closes or limits to administrative access more route miles than alternatives A and C, but less than Alternative B. Alternative A designates 83% of route miles as open, Alternative B designates 35% of route miles as open and Alternative C designates 90% of route miles as open.

Table O-53: Alternative D: Number of Routes Associated with Yellowstone cutthroat trout habitat (compared to Alt. A)

Alternative D: Number of Routes Associated with Yellowstone cutthroat trout habitat (compared to Alt. A)										
	Alternative A				Alternative D					
Potential Route Designations	Within 0.5 miles	% of routes within 0.5 miles	Within 0.5 miles and in sensitive soils	% of routes within 0.5 miles and in soils	Within 0.5 miles	% of routes within 0.5 miles	% Δ from Alt. A	Within 0.5 miles and in sensitive soils	% of routes within 0.5 miles and in soils	% Δ from Alt. A
Open	14	61	6	100	5	22	-39	2	33	-67
Open with vehicle restrictions	0	0	0	0	0	0	0	0	0	0
Open with seasonal restrictions	0	0	0	0	1	4	4	1	17	17
Limited to administrative use only	0	0	0	0	12	52	52	2	33	33
Closed	9	39	0	0	5	22	-17	1	17	17

Routes in, through, crossing, proximate within 0.5 miles of YCT habitat: Under Alternative D, of the 23 routes that are in or through or within 0.5 miles of YCT habitat, 5 routes with 6 miles (37%) would be open to all types of motor vehicle use, with 1 route at 2 miles (12%) open with seasonal restrictions (for a total of 12% fewer open miles than in Alternative A). Additionally, 12 routes with 6.8 miles (43%) would be limited to administrative use only and 5 routes with 1.2 miles (8%) would be closed (29% fewer miles than Alternative A). In the long-term, 8 miles of existing BLM routes in or through or within 0.5 miles of YCT habitat would remain available for public access in Alternative D. With 49% of existing route miles potentially open and 51% potentially limited to administrative use only or closed to motor vehicle use, the localized, long-term effect on reducing erosion and drainage from road surfaces into stream channels and wetlands with the potential for direct and indirect impacts to water values would be moderate to major (43 CFR 8342.1(a)(d)).

Routes in, through, crossing, proximate within 0.5 miles of YCT habitat in severe/moderate water erosion rated soils: Of the 5 routes (7.1 miles) that are in, through or within 0.5 miles of YCT habitat that are in severe or moderated water erosion rated soils, 2 routes with 2.9 miles

(41% would be open to all vehicle uses and 1 route at 2 miles (28%) would be open with seasonal restrictions (for a total of 31% fewer miles open than Alternative A). Additionally, 1 route at 1.8 miles (25%) would be limited to administrative use only and 1 route at 0.4 miles (6%) would be closed to motor vehicle use. The actual footprint (area of surface disturbance) of open routes would be approximately 9.4 acres in these areas (22% fewer than Alternative A). The footprint for routes that would be closed (and eventually restored to a more natural condition) would be 0.5 acres (4% more than Alternative A). In the long-term, 4.9 out of every 7.1 miles (69%) of existing BLM routes in, through or within 0.5 miles of YCT habitat in these soil types would remain available for public access in Alternative D. With 69% of existing route miles potentially open and 31% potentially limited to administrative use only or closed, the localized, long-term effect of these route restrictions on reducing erosion and drainage from road surfaces into stream channels and wetlands with the potential for direct and indirect impacts to YCT habitat would be moderate to major (43 CFR 8342.1(a)(d)).

O.6.2.11 Wild Horses and Burros

The primary impact issue for wild horses in the Pryor Mountain area is the long-term viability of the herd. Travel management factors that can adversely impact herd viability include, roads open too early in spring and year-round; use of open routes too early in the spring creating greater resource damage as users drive around snowbanks, down trees, and muddy sections; and human presence disturbing herds during foaling season, potentially affecting foaling rates. Additionally, existing routes in the herd area are often widened or new routes are created during inclement weather or following winter thaw and tree fall.

O.6.2.11.1 Alternative A

Under the No Action Alternative, of the 16 routes that are within the Pryor Mountain TMA, 8 routes (29.3 miles) or 50% would be open to all types of motor vehicle use. No routes would be open with special restrictions and 1 route (2.4 miles) or 6% would be limited to administrative use only. Additionally, 7 routes (6.9 mile) or 44% would be closed to motor vehicle use. As such, the long-term, direct, localized effect of these route designations with regard to reducing impacts to the viability of the wild horse herd and/or minimizing the potential for harassment of the herd would be minor to moderate, due to the open availability of 50% of the routes associated with the herd area (43 CFR 8342.1(a)(d)).

O.6.2.11.2 Alternative B

Under the Alternative B, of the 16 routes that are within the Pryor Mountain TMA, 2 routes (17.6 miles) or 13% would be open to all types of motor vehicle use. This would result in 38% fewer open routes in Alternative B than would be open in Alternative A. While 3 routes (6.7 miles) or 19% would be open with special restrictions (19% more than in Alternative A), only 2 routes (3.8 miles) or 13% would be limited to administrative use only (6% more than in Alternative A) and 9 routes (10.6 miles) or 56% would be closed to motor vehicle use (13% more than in Alternative A). As such, the long-term, direct, localized effect of these route designations with regard to reducing impacts to the viability of the wild horse herd and/or minimizing the potential for harassment of the herd would be moderate, due to the open availability of 31% of the routes associated with the herd area (43 CFR 8342.1(a)(d)).

O.6.2.11.3 Alternative C

Under the Alternative C, of the 16 routes that are within the Pryor Mountain TMA, 7 routes (28.7 miles) or 44% would be open to all types of motor vehicle use. This would result in 6% fewer open routes in Alternative C than would be open in Alternative A. While 1 route (0.2 miles) or 6% would be open with special restrictions (6% more than in Alternative A), 8 routes (9.8 miles) or 50% would be limited to administrative use only (44% more than in Alternative A) and no routes would be closed to motor vehicle use (44% fewer than in Alternative A). As such, the long-term, direct, localized effect of these route designations with regard to reducing impacts to the viability of the wild horse herd and/or minimizing the potential for harassment of the herd would be minor to moderate, due to the open availability of 50% of the routes associated with the herd area (43 CFR 8342.1(a)(d)).

O.6.2.11.4 Alternative D

Under the Alternative D, of the 16 routes that are within the Pryor Mountain TMA, 3 routes (19.8 miles) or 19% would be open to all types of motor vehicle use. This would result in 31% fewer open routes in Alternative D than would be open in Alternative A. While 3 routes (6.7 miles) or 19% would be open with special restrictions (19% more than in Alternative A), 8 routes (8.9 miles) or 50% would be limited to administrative use only (44% more than in Alternative A) and 2 routes (3.3 miles) or 13% would be closed to motor vehicle use (31% fewer than in Alternative A). As such, the long-term, direct, localized effect of these route designations with regard to reducing impacts to the viability of the wild horse herd and/or minimizing the potential for harassment of the herd would be moderate, due to the open availability of 37% of the routes associated with the herd area (43 CFR 8342.1(a)(d)).

O.6.2.12 Cultural Resources

O.6.2.12.1 Alternative A

General Access: The primary issues for cultural resources regarding route designations and motorized access are the protection of cultural sites from physical damage related to motorized use; access opportunities related to scientific research; and public overuse and damage to certain cultural sites, either by inappropriate visitor behavior and/or too much motorized access to sites.

While restricting public motorized access to or near known cultural sites and/or areas may make it difficult to impossible for visitors to view and enjoy these resources, reductions in public access to these areas could decrease the potential for further or future damage to sites and loss of the scientific information that they hold. Conversely, unrestrained, increased or widespread motorized use in such areas may increase the potential for such damage. Inasmuch as the use of motor vehicles on public routes constitutes the primary means of access to public lands for visitors, administrative personnel and researchers, the supply and spatial extent of travel access networks for motor vehicles is an important.

Under the No Action Alternative, the overall network of 877 existing BLM routes (993 miles) within the eleven TMAs would continue to be managed as open/open with restrictions, limited to administrative use only (6%), or closed (10%). Although Alternative A carries forward closures and restrictions to administrative use only on 143 routes (170 miles) or 16% of the routes, the

overwhelming majority of routes (about 84%) would be open to all motorized uses (82.8%) or open with special seasonal (0.8%) or vehicular restrictions (0.1%).

Overall, in the long-term, the average route density for the TMAs would be 1.5 open routes per square mile at 1.7 miles per square mile. Direct and indirect impacts to cultural resources by motorized access based on route densities would potentially be even higher in the Mill Creek/Bundy TMA, which has the highest density of open routes at 2.5 routes per square mile and the Shepherd TMA, which has a high of 8.9 miles per square mile of open routes.

Therefore, Alternative A would continue to provide a moderate to high degree of motor vehicle access in the TMAs that, in the long-term, would contribute only a minor degree to reducing public motorized access and minimizing potential indirect damage to cultural resources, due to the continued open availability of over 8 out of every 10 existing BLM routes in the TMAs (43 CFR 8342.1(a)). Additionally, as the potential for new route development is realized with boom cycles in energy exploration and development, the availability of open public motorized access may increase to a minor degree, on a short-term, localized basis, potentially dispersing use into new areas that may possess cultural resources. Such effects would ebb and flow with energy development.

Public Access associated with Cultural Sites/Areas: Route networks that are open to all uses allow public access to and/or near both known and undocumented cultural resource sites and/or areas. Such access can indirectly impact cultural resources in ways that range from unintentional, unknowing damage from foot traffic to intentional, illegal destruction of sites and removal of artifacts. Managing the availability of public motorized access to and/or near known cultural sites and areas can, therefore, directly reduce the potential for these impacts to occur in the long-term, which would contribute to minimizing damage to cultural resources and the potential for adversely affecting natural areas (43 CFR 8342.1(a)(d)).

With regard to the 323 routes that are considered to be in, through or proximate (within 300 feet) to known cultural sites and/or areas under the No Action Alternative, only 17 routes (26 miles) or about 5% would be limited to administrative use only and 60 routes (77 miles) or 19% would be closed; 246 routes (329 miles) or about 76% would continue to be managed as open/open with restrictions. Although Alternative A carries forward closures and restrictions to administrative use only on a total of 77 routes at 103 miles, the direct, long-term effect of these restricted routes on reducing public motorized access and potentially minimizing damage to cultural resources would be minor, due to the continued availability of over 7 out of every 10 existing BLM routes currently associated with known cultural sites and/or areas (43 CFR 8342.1(a)).

Administrative and/or Research Access to Cultural Sites/Areas: Total closure of routes to or near these resources could have a detrimental effect on the ability of the scientific community to access sites and areas to conduct recordation, research, excavation, stabilization, restoration or other related activities.

With regard to the 323 routes that are considered to be in, through or proximate (within 300 feet) to known cultural sites and/or areas under the No Action Alternative, 263 routes (355 miles) or about 81% would continue to be managed as open/open with restrictions or limited to administrative use only. Although Alternative A carries forward closures on a total of 60 routes

at 77 miles, the direct, long-term effect of these restricted routes on accessing scientific research activities at known cultural sites and/or areas would be minor, due to the continued availability of over 8 out of every 10 existing BLM routes currently available for these activities.

O.6.2.12.2 Alternative B

General Access: Under Alternative B, the overall network of 877 existing BLM routes (993 miles) within the eleven TMAs would be managed as open/open with restrictions, limited to administrative use only (25%), or closed (64%). Alternative B would restrict to administrative use only and closures, 785 routes (644 miles) or 90% of the existing routes; a 73% increase from Alternative A.. Only 9.2% of existing routes would be open to all motorized uses with 0.7% open with special seasonal restrictions and 0.3% open with vehicular restrictions. This would result in 73% decrease in open routes in Alternative B from the open routes in Alternative A.

Overall, in the long-term, the average route density for the TMAs under Alternative B would be 0.2 open routes per square mile at 0.7 miles per square mile. Direct and indirect impacts to cultural resources by motorized access based on route densities would potentially higher in the Acton TMA, which, for Alternative B, would have the highest density of open routes at 0.5 routes per square mile and the Shepherd TMA, which would have the high of 7.2 miles per square mile of open routes.

Therefore, Alternative B would provide a small degree of motor vehicle access in the TMAs that, in the long-term, would contribute to reducing public motorized access and minimizing, to a major degree, the potential for indirect damage to cultural resources by the drastic reduction of open routes to just 1 out of every 10 (43 CFR 8342.1(a)). Additionally, as the potential for new route development is realized with boom cycles in energy exploration and development, the availability of open public motorized access may increase to a minor degree, on a short-term, localized basis, potentially dispersing use into new areas that may possess cultural resources. Such effects would ebb and flow with energy development.

Public Access associated with Cultural Sites/Areas: Of the 323 routes that are considered to be in, through or proximate (within 300 feet) to known cultural sites and/or areas under Alternative B, 53 routes (65 miles) or about 16% would be limited to administrative use only, an 11% increase from this designation in Alternative A, and 228 routes (193 miles) or 71% would be closed, a 52% increase from this designation in Alternative A. The result is 42 routes (174 miles) or about 13% that would be managed as open/open with restrictions, a 63% reduction from open designations in Alternative A. Because Alternative B would close and restrict to administrative use only a total of 281 routes at 258 miles, the direct, long-term effect of these restricted routes on reducing public motorized access and potentially minimizing damage to cultural resources would be major, due to the limited public availability of just over 1 out of every 10 existing BLM routes currently associated with known cultural sites and/or areas (43 CFR 8342.1(a)).

Administrative and/or Research Access to Cultural Sites/Areas: With regard to the 323 routes that are considered to be in, through or proximate (within 300 feet) to known cultural sites and/or areas under the Alternative B, 95 routes (239 miles) or about 29% would be managed as open/open with restrictions or limited to administrative use only, a 51% decrease from these designations in Alternative A. Because Alternative B would close a total of 228 routes at 193

miles, the direct, long-term effect of these closures on accessing scientific research activities at known cultural sites and/or areas would be moderate to major, due to potentially limiting availability to almost 3 out of every 10 existing BLM routes currently available for these activities.

O.6.2.12.3 Alternative C

General Access: Under Alternative C, the overall network of 877 existing BLM routes (993 miles) within the eleven TMAs would be managed as open/open with restrictions, limited to administrative use only (14%), or closed (3%). Alternative C would restrict to administrative use only and closures, 142 routes (97 miles) or 17% of the existing routes; a 0.1% overall decrease from Alternative A.. Only 83% of existing routes would be open to all motorized uses with 0.1% open with special seasonal restrictions and 0.8% open with vehicular restrictions. This would result in 0.1% increase in open routes in Alternative C from the open routes in Alternative A.

Overall, in the long-term, the average route density for the TMAs under Alternative C would be 1.5 open routes per square mile at 1.8 miles per square mile. Direct and indirect impacts to cultural resources by motorized access based on route densities would potentially higher in the Tin Can Hill TMA, which, for Alternative C, would have the highest density of open routes at 5 routes per square mile and the Shepherd TMA, which would have the high of 8.3 miles per square mile of open routes. Alternative C increases the number of open routes only by 1 route, therefore, the impacts would be essentially the same as Alternative A.

Public Access associated with Cultural Sites/Areas: Of the 323 routes that are considered to be in, through or proximate (within 300 feet) to known cultural sites and/or areas under Alternative C, 42 routes (42 miles) or about 13% would be limited to administrative use only, an 8% increase from this designation in Alternative A, and 7 routes (2 miles) or 2% would be closed, a 16% increase from this designation in Alternative A. The result is 274 routes (389 miles) or about 85% that would be managed as open/open with restrictions, a 9% increase from open designations in Alternative A. Because Alternative C would close and restrict to administrative use only a total of 49 routes at 43 miles, the direct, long-term effect of these restricted routes on reducing public motorized access and potentially minimizing damage to cultural resources would be negligible to minor, due to the public availability of over 8 out of every 10 existing BLM routes currently associated with known cultural sites and/or areas (43 CFR 8342.1(a)).

Administrative and/or Research Access to Cultural Sites/Areas: With regard to the 323 routes that are considered to be in, through or proximate (within 300 feet) to known cultural sites and/or areas under the Alternative C, 316 routes (430 miles) or about 98% would be managed as open/open with restrictions or limited to administrative use only, a 16% increase from these designations in Alternative A. Because Alternative C would close a total of 7 routes at 2 miles, the direct, long-term effect of these closures on accessing scientific research activities at known cultural sites and/or areas would be negligible, due to potentially limiting availability to almost 10 out of every 10 existing BLM routes currently available for these activities.

O.6.2.12.4 Alternative D

General Access: Under Alternative D, the overall network of 877 existing BLM routes (993 miles) within the eleven TMAs would be managed as open/open with restrictions, limited to

administrative use only (51%), or closed (9%). Alternative D would restrict to administrative use only and closures, 529 routes (379 miles) or 60% of the existing routes; a 44% increase from Alternative A.. Only 38% of existing routes would be open to all motorized uses with 1.3% open with special seasonal restrictions and 0.6% open with vehicular restrictions. This would result in 44% decrease in open routes in Alternative D from the open routes in Alternative A.

Overall, in the long-term, the average route density for the TMAs under Alternative D would be 0.7 open routes per square mile at 1.2 miles per square mile. Direct and indirect impacts to cultural resources by motorized access based on route densities would potentially higher in the Tin Can Hill TMA, which, for Alternative D, would have the highest density of open routes at 2 routes per square mile and the Shepherd TMA, which would have the high of 7.2 miles per square mile of open routes.

Therefore, Alternative D would provide a moderate degree of motor vehicle access in the TMAs that, in the long-term, would contribute to reducing public motorized access and minimizing, to a moderate degree, the potential for indirect damage to cultural resources by the reduction of open routes to just 4 out of every 10 (43 CFR 8342.1(a)). Additionally, as the potential for new route development is realized with boom cycles in energy exploration and development, the availability of open public motorized access may increase to a minor degree, on a short-term, localized basis, potentially dispersing use into new areas that may possess cultural resources. Such effects would ebb and flow with energy development.

Public Access associated with Cultural Sites/Areas: Of the 323 routes that are considered to be in, through or proximate (within 300 feet) to known cultural sites and/or areas under Alternative D, 157 routes (121 miles) or about 49% would be limited to administrative use only, an 43% increase from this designation in Alternative A, and 45 routes (54 miles) or 14% would be closed, a 5% decrease from this designation in Alternative A. The result is 121 routes (258 miles) or about 37% that would be managed as open/open with restrictions, a 39% reduction from open designations in Alternative A. Because Alternative D would close and restrict to administrative use only a total of 202 routes at 174 miles, the direct, long-term effect of these restricted routes on reducing public motorized access and potentially minimizing damage to cultural resources would be minor to moderate, due to the limited public availability of just under 4 out of every 10 existing BLM routes currently associated with known cultural sites and/or areas (43 CFR 8342.1(a)).

Administrative and/or Research Access to Cultural Sites/Areas: With regard to the 323 routes that are considered to be in, through or proximate (within 300 feet) to known cultural sites and/or areas under the Alternative D, 278 routes (379 miles) or about 86% would be managed as open/open with restrictions or limited to administrative use only, a 5% increase of these designations in Alternative A. Because Alternative D would close a total of 45 routes at 54 miles, the direct, long-term effect of these closures on accessing scientific research activities at known cultural sites and/or areas would be minor, due to potentially limiting availability to almost 8.6 out of every 10 existing BLM routes currently available for these activities.

O.6.2.13 Paleontological Resources

O.6.2.13.1 Impacts Common to All Alternatives

This section presents the potential impacts of route designations on paleontological resources. Specifically, it evaluates the potential for elements of travel management to directly impact these resources by off-route vehicle use or by providing access to areas with moderate to high potential fossil yields and thus indirectly increasing the likelihood of travelers getting out of their vehicles, walking around and finding vertebrate fossils that may then be intentionally stolen or unintentionally damaged. Generally, motorized travel on designated routes are of no concern, as fossils at the surface within the roadbeds are already impacted or removed, while fossils under the surface are typically undisturbed. Additionally, potential restrictions to public motorized access in areas with potential fossil yields are evaluated in this section, as they may support or complement BLMs strategies and management objectives aimed at protecting these resources. More directly stated, in relation to travel networks, the availability of access to and through such areas is an important factor in managing and protecting these resources in the long-term.

Analysis of possible route designation impacts to paleontological resources considers potential route networks in light of the Potential Fossil Yield Classification (PFYC) for each alternative, which is tied directly to certain geologic formations that have varying potentials for yielding fossils. Formations that have a PFYC 3a or 3b are of interest to science and specialists, while formations that have a PFYC 4 are of special interest, and PFYC 5 formations have proven value.

O.6.2.13.2 Alternative A

PFYC 5 Areas: This section evaluates motorized access in and through all PFYC 5 areas in the TMAs. Under the No Action Alternative, the overall network of 518 existing BLM routes (433 miles) would continue to be managed as open/open with restrictions, limited to administrative use only (8%), and closed (1%). The majority of routes (about 91%) would be open to all motorized uses (90%) or open with special seasonal or vehicular restrictions (1%). In the long-term, 9 out of every 10 existing BLM routes would remain available for public access in and through PFYC 5 areas. With 91% of existing routes potentially open and only 9% potentially limited to administrative use only or closed to motor vehicle use, the widespread, long-term effect of these route restrictions on reducing public motorized access and its potential for direct and indirect impacts to formations with proven value for yielding paleontological resources would be negligible (43 CFR 8342.1(a) (d)).

PFYC 4 Areas: This section evaluates motorized access in and through all PFYC 4 areas in the TMAs. Under the No Action Alternative, the overall network of 13 existing BLM routes (8 miles) would continue to be managed as open/open with restrictions, limited to administrative use only (0%), and closed (23%). The majority of routes (about 77%) would be open to all motorized uses, with no routes open with special seasonal or vehicular restrictions (0%). In the long-term, almost 8 out of every 10 existing BLM routes would remain available for public access in and through PFYC 4 areas. With 77% of existing routes potentially open and only 23% potentially closed to motor vehicle use, the widespread, long-term effect of these route restrictions on reducing public motorized access and its potential for direct and indirect impacts

to formations with special interest for yielding paleontological resources would be minor (43 CFR 8342.1(a) (d)).

PFYC 3a & 3b Areas: This section evaluates motorized access in and through all PFYC 3a and 3b areas in the TMAs. Under the No Action Alternative, the overall network of 212 existing BLM routes (230 miles) would continue to be managed as open/open with restrictions, limited to administrative use only (4%), and closed (15%). The majority of routes (about 81%) would be open to all motorized uses (80%) or open with special seasonal restrictions (1%). In the long-term, 8 out of every 10 existing BLM routes would remain available for public access in and through PFYC 3a and 3b areas. With 81% of existing routes potentially open and only 19% potentially limited to administrative use only or closed to motor vehicle use, the widespread, long-term effect of these route restrictions on reducing public motorized access and its potential for direct and indirect impacts to formations with proven value for yielding paleontological resources would be negligible to minor (43 CFR 8342.1(a) (d)).

O.6.2.13.3 Alternative B

PFYC 5 Areas: This section evaluates motorized access in and through all PFYC 5 areas in the TMAs. Under Alternative B, the overall network of 518 existing BLM routes (433 miles) would be managed as 9% open/open with restrictions (about 82% fewer than Alternative A), 28% limited to administrative use only (about 20% more than Alternative A), and 63% closed (about 62% more than Alternative A). Few routes would be open to all motorized uses (8.5%) or open with special seasonal or vehicular restrictions (0.8%). In the long-term, just under 1 out of every 10 existing BLM routes would remain available for public access in and through PFYC 5 areas. With only 9% of existing routes potentially open and 91% potentially limited to administrative use only or closed to motor vehicle use, the widespread, long-term effect of these route restrictions on reducing public motorized access and its potential for direct and indirect impacts to formations with proven value for yielding paleontological resources would be major (43 CFR 8342.1(a) (d)).

PFYC 4 Areas: This section evaluates motorized access in and through all PFYC 4 areas in the TMAs. Under Alternative B, the overall network of 13 existing BLM routes (8 miles) would be managed as 0% open/open with restrictions (about 77% fewer than Alternative A), 31% limited to administrative use only (about 31% more than Alternative A), and 69% closed (about 46% more than Alternative A). No routes would be open to all motorized uses or open with special seasonal or vehicular restrictions. In the long-term, 0 out of every 10 existing BLM routes would remain available for public access in and through PFYC 4 areas. With no existing routes potentially open and 100% potentially limited to administrative use only or closed to motor vehicle use, the widespread, long-term effect of these route restrictions on reducing public motorized access and its potential for direct and indirect impacts to formations with special interest for yielding paleontological resources would be major (43 CFR 8342.1(a) (d)).

PFYC 3a & 3b Areas: This section evaluates motorized access in and through all PFYC 3a and 3b areas in the TMAs. Under Alternative B, the overall network of 212 existing BLM routes (230 miles) would be managed as 16% open/open with restrictions (about 66% fewer than Alternative A), 23% limited to administrative use only (about 19% more than Alternative A), and 61% closed (about 47% more than Alternative A). Few routes would be open to all motorized

uses (14%) or open with special seasonal or vehicle restrictions (2%). In the long-term, 1.6 out of every 10 existing BLM routes would remain available for public access in and through PFYC 3a and 3b areas. With only 16% of existing routes potentially open and 84% potentially limited to administrative use only or closed to motor vehicle use, the widespread, long-term effect of these route restrictions on reducing public motorized access and its potential for direct and indirect impacts to formations with proven value for yielding paleontological resources would be major (43 CFR 8342.1(a) (d)).

O.6.2.13.4 Alternative C

Impacts from Route Designations to Paleontological Resources

PFYC 5 Areas: This section evaluates motorized access in and through all PFYC 5 areas in the TMAs. Under Alternative C, the overall network of 518 existing BLM routes (433 miles) would be managed as 83% open/open with restrictions (about 8% fewer than Alternative A), 14% limited to administrative use only (about 6% more than Alternative A), or 3% closed (about 2% more than Alternative A). Most routes would be open to all motorized uses (82%) and open with special vehicular restrictions (1.2%). In the long-term, just over 8 out of every 10 existing BLM routes would remain available for public access in and through PFYC 5 areas. With 83% of existing routes potentially open and only 17% potentially limited to administrative use only or closed to motor vehicle use, the widespread, long-term effect of these route restrictions on reducing public motorized access and its potential for direct and indirect impacts to formations with proven value for yielding paleontological resources would be minor (43 CFR 8342.1(a) (d)).

PFYC 4 Areas: This section evaluates motorized access in and through all PFYC 4 areas in the TMAs. Under Alternative C, the overall network of 13 existing BLM routes (8 miles) would be managed as 92% open/open with restrictions (about 15% more than Alternative A), 8% limited to administrative use only (about 8% fewer than Alternative A), and no closed routes (about 23% fewer than Alternative A). Most routes (92%) would be open to all motorized uses with no open with special seasonal or vehicular restrictions. In the long-term, over 9 out of every 10 existing BLM routes would remain available for public access in and through PFYC 4 areas. With 92% of existing routes potentially open, only 8% potentially limited to administrative use only and no routes closed to motor vehicle use, the widespread, long-term effect of these route restrictions on reducing public motorized access and its potential for direct and indirect impacts to formations with special interest for yielding paleontological resources would be negligible (43 CFR 8342.1(a) (d)).

PFYC 3a & 3b Areas: This section evaluates motorized access in and through all PFYC 3a and 3b areas in the TMAs. Under Alternative C, the overall network of 212 existing BLM routes (230 miles) would be managed as 88% open/open with restrictions (about 7% more than Alternative A), 11% limited to administrative use only (about 7% more than Alternative A), and 1% closed (about 13% fewer than Alternative A). Most routes would be open to all motorized uses (87%) or open with vehicle restrictions (1%). In the long-term, almost 9 out of every 10 existing BLM routes would remain available for public access in and through PFYC 3a and 3b areas. With 88% of existing routes potentially open and only 12% potentially limited to administrative use only or closed to motor vehicle use, the widespread, long-term effect of these route restrictions on reducing public motorized access and its potential for direct and indirect

impacts to formations with proven value for yielding paleontological resources would be negligible (43 CFR 8342.1(a) (d)).

O.6.2.13.5 Alternative D

Impacts from Route Designations to Paleontological Resources

PFYC 5 Areas: This section evaluates motorized access in and through all PFYC 5 areas in the TMAs. Under Alternative D, the overall network of 518 existing BLM routes (433 miles) would be managed as 39% open/open with restrictions (about 52% fewer than Alternative A), 52% limited to administrative use only (about 44% more than Alternative A), and 9% closed (about 8% more than Alternative A). Many routes would be open to all motorized uses (37%) or open with special seasonal or vehicular restrictions (2%). In the long-term, just under 4 out of every 10 existing BLM routes would remain available for public access in and through PFYC 5 areas. With 39% of existing routes potentially open and 61% potentially limited to administrative use only or closed to motor vehicle use, the widespread, long-term effect of these route restrictions on reducing public motorized access and its potential for direct and indirect impacts to formations with proven value for yielding paleontological resources would be moderate to major (43 CFR 8342.1(a) (d)).

PFYC 4 Areas: This section evaluates motorized access in and through all PFYC 4 areas in the TMAs. Under Alternative D, the overall network of 13 existing BLM routes (8 miles) would be managed as 8% open (about 69% fewer than Alternative A), 84% limited to administrative use only (about 85% more than Alternative A), and 8% closed (about 15% more than Alternative A). No routes would be open with special seasonal or vehicular restrictions. In the long-term, almost 1 out of every 10 existing BLM routes would remain available for public access in and through PFYC 4 areas. With 8% of existing routes potentially open and 92% potentially limited to administrative use only or closed to motor vehicle use, the widespread, long-term effect of these route restrictions on reducing public motorized access and its potential for direct and indirect impacts to formations with special interest for yielding paleontological resources would be major (43 CFR 8342.1(a) (d)).

PFYC 3a & 3b Areas: This section evaluates motorized access in and through all PFYC 3a and 3b areas in the TMAs. Under Alternative D, the overall network of 212 existing BLM routes (230 miles) would be managed as 47% open/open with restrictions (about 34% fewer than Alternative A), 45% limited to administrative use only (about 41% more than Alternative A), and 8% closed (about 7% fewer than Alternative A). Many routes would be open to all motorized uses (45%) or open with special seasonal or vehicle restrictions (2%). In the long-term, almost 5 out of every 10 existing BLM routes would remain available for public access in and through PFYC 3a and 3b areas. With 47% of existing routes potentially open and 53% potentially limited to administrative use only or closed to motor vehicle use, the widespread, long-term effect of these route restrictions on reducing public motorized access and its potential for direct and indirect impacts to formations with proven value for yielding paleontological resources would be moderate (43 CFR 8342.1(a) (d)).

O.6.2.14 Visual Resources

O.6.2.14.1 Alternative A

This section presents the potential impacts of route designations on visual resources, specifically the potential for elements of travel management to create or perpetuate visual changes or contrasts in the landscape, as evaluated against the proposed visual resource objectives (VRM classes). Additionally, potential restrictions to public motorized access in an area previously known for its sightseeing, scenic vistas, or overlooks are evaluated, as they may encumber visitors' opportunities to engage in those activities and enjoy the potential experience and benefits they offer. Managing 877 miles of existing routes in the TMAs could continue to influence the landscape to varying degrees. Travel on these routes would continue to produce intermittent dust, causing indirect, short-term, and negligible to minor visual impacts; essentially visible human-caused contrasts with the existing landscape. The visual impact of carrying forward closure of 108 miles (11%) of existing route miles in the TMAs would continue to diminish, either by direct active reclamation actions in the short-term or by indirect natural processes in the long-term. Additionally, actions such as rerouting poor route alignments, monitoring the creation of unauthorized routes and obscuring/rehabilitating those found, and active and/or passive natural reclamation of any temporary routes would enhance visual resources by reducing visual contrasts on a localized, long-term basis. Employing a designated trails and travel management system could indirectly ensure that the public would continue to have access opportunities to scenic resources over the long-term.

Regarding potential effects of route designations on the visual appearance of the landscape, under the No Action Alternative, the network's open route "footprint" (disturbed surface) is 0.17% of the total VRM Class I acreage in the TMAs, or a 1:576 ratio of route acres to acres without routes. For VRM Class II, the footprint is 0.29% or a 1:345 ratio, while VRM Class III is 0.42% or a 1:239 ratio and VRM Class IV is 0.08% or 1:1,322 ratio. This footprint would represent a continuation of a negligible to minor, long-term impact to visual resources (43 CFR 8342.1(a)), due to the relatively small and widely dispersed route "footprint".

Regarding access for the general public for sightseeing and enjoying scenic resources in the TMAs, under the No Action Alternative, the overall network of 877 existing BLM routes (993 miles) would continue to be managed as open/open with restrictions, limited to administrative use only (6%), or closed (10%). The overwhelming majority of routes (about 84%) would be open to all motorized uses (82.8%) or open with special seasonal (0.8%) or vehicular restrictions (0.1%). In the long-term, over 8 out of every 10 existing BLM routes would remain available for public access to the TMAs. Under Alternative A, 50% of the existing access within VRM Class I areas would be open to all motorized uses, while 55% in VRM Class II, 86% in VRM Class III and 100% in VRM Class IV would be open. With 84% of existing routes potentially open and only 16% potentially limited to administrative use only or closed to motor vehicle use, the long-term, direct, widespread effect of these route restrictions on reducing public access to scenic resources in general would be negligible to minor.

O.6.2.14.2 Alternative B

Managing 877 miles of existing routes in the TMAs could continue to influence the landscape to varying degrees. Closing 397 miles (40%) of existing route miles in the TMAs would increase

the amount of existing (Alternative A) closures by 29%, further diminishing the overall visual appearance of routes on the landscape, either by direct active reclamation actions in the short-term or by indirect natural processes in the long-term. Under Alternative B, the network's open route "footprint" (disturbed surface) is 0.14% of the total VRM Class I acreage in the TMAs, or a 1:706 ratio of route acres to acres without routes, a 17.6% reduction from Alternative A. For VRM Class II, the footprint is 0.17% or a 1:592 ratio (a 41.4% reduction from Alternative A), while VRM Class III is 0.19% or a 1:531 ratio (a 54.7% reduction from Alternative A) and VRM Class IV is 0. This would represent a moderate to major reduction of long-term impacts to visual resources by routes (43 CFR 8342.1(a)), due to a greatly reduced route "footprint".

Regarding access for the general public for sightseeing and enjoying scenic resources in the TMAs, under the Alternative B, the overall network of 877 existing BLM routes (993 miles) would continue to be managed as open/open with restrictions, limited to administrative use only (25%), or closed (64%). Few routes (about 10.4%) would be open to all motorized uses (9.2%) or open with special seasonal (0.7%) or vehicular restrictions (0.3%). In the long-term, just over 1 out of every 10 existing BLM routes would be available for public access to the TMAs. Under Alternative B, 25% of the existing access within VRM Class I areas would be open to all motorized uses or open with restrictions, while 12% in VRM Class II, 10% in VRM Class III and no routes in VRM Class IV would be open. With only 10.4% of existing routes potentially open and almost 90% potentially limited to administrative use only or closed to motor vehicle use, the long-term, direct, widespread effect of these route restrictions on reducing public access to scenic resources in general would be major.

O.6.2.14.3 Alternative C

Managing 877 miles of existing routes in the TMAs could continue to influence the landscape to varying degrees. Closing only 5.9 miles (0.6%) of existing route miles in the TMAs would decrease the amount of existing (Alternative A) closures by 10%, only slightly diminishing the overall visual appearance of routes on the landscape, either by direct active reclamation actions in the short-term or by indirect natural processes in the long-term. This would also represent a 10% increase in the visual contrast created by routes, as this increase would come about by re-opening currently closed routes. Under Alternative C, the network's open route "footprint" (disturbed surface) is 0.18% of the total VRM Class I acreage in the TMAs, or a 1:552 ratio of route acres to acres without routes, a 5.8% increase from Alternative A. For VRM Class II, the footprint is 0.49% or a 1:202 ratio (a 69% increase from Alternative A), while VRM Class III is 0.45% or a 1:223 ratio (a 7.1% increase from Alternative A) and VRM Class IV is 0.08% or a 1:1,321 ratio (the same as Alternative A). This would represent a minor increase of long-term impacts to visual resources by routes in VRM Classes I and III, and a moderate to major increase in VRM Class II (43 CFR 8342.1(a)), due to an increased route "footprint" inherent with more open and administrative routes designated from previously closed routes.

Regarding access for the general public for sightseeing and enjoying scenic resources in the TMAs, under the Alternative C, the overall network of 877 existing BLM routes (993 miles) would continue to be managed as open/open with restrictions, limited to administrative use only (14%), or closed (2.5%). The majority of routes (about 84%) would be open to all motorized uses (82.9%) or open with special seasonal (0.1%) or vehicular restrictions (0.8%). In the long-term, over 8 out of every 10 existing BLM routes would be available for public access to the

TMAs. Under Alternative C, 56% of the existing access within VRM Class I areas would be open to all motorized uses or open with restrictions, while 73% in VRM Class II, 85% in VRM Class III and 100% of routes in VRM Class IV would be open. With 84% of existing routes potentially open and about 16% potentially limited to administrative use only or closed to motor vehicle use, the long-term, direct, widespread effect of these route restrictions on reducing public access to scenic resources in general would be negligible.

O.6.2.14.4 Alternative D

Managing 877 miles of existing routes in the TMAs could continue to influence the landscape to varying degrees. Closing 66 miles (7%) of existing route miles in the TMAs would decrease the amount of existing (Alternative A) closures by 4%, only slightly diminishing the overall visual appearance of routes on the landscape, either by direct active reclamation actions in the short-term or by indirect natural processes in the long-term. This would also represent a 4% increase in the visual contrast created by routes, as this increase would come about by re-opening currently closed routes. Under Alternative D, the network's open route "footprint" (disturbed surface) is 0.17% of the total VRM Class I acreage in the TMAs, or a 1:601 ratio of route acres to acres without routes; a very slight change from Alternative A. For VRM Class II, the footprint is 0.18% or a 1:553 ratio (a 38% reduction from Alternative A), while VRM Class III is 0.32% or a 1:313 ratio (a 24% reduction from Alternative A) and VRM Class IV is 0 (same as Alternative A). This would represent a minor decrease of long-term impacts to visual resources by routes in VRM Classes II, III and IV, with no change in VRM Class I (43 CFR 8342.1(a)), due to an decreased open route "footprint", though fewer routes would be closed in Alternative D than in Alternative A.

Regarding access for the general public for sightseeing and enjoying scenic resources in the TMAs, under the Alternative D, the overall network of 877 existing BLM routes (993 miles) would continue to be managed as open/open with restrictions, limited to administrative use only (32%), or closed (7%). Most routes (about 62%) would be open to all motorized uses (53.4%) or open with special seasonal (1.5%) or vehicular restrictions (6.9%). In the long-term, just over 6 out of every 10 existing BLM routes would be available for public access to the TMAs. Under Alternative D, 44% of the existing access within VRM Class I areas would be open to all motorized uses or open with restrictions, while 21% in VRM Class II, 40% in VRM Class III and no routes in VRM Class IV would be open. With 62% of existing routes potentially open and 38% potentially limited to administrative use only or closed to motor vehicle use, the long-term, direct, widespread effect of these route restrictions on reducing public access to scenic resources in general would be moderate.

O.6.2.15 Wildfire and Ecology and Management

O.6.2.15.1 Alternative A

The potential for human-ignited wildfires would increase with increased human use in the BIFO. Areas accessible to motorized vehicles would likely be the most susceptible to human-ignited wildfires, but increased ignitions and acreage burned because of increased access would be difficult to quantify.

Maintaining or upgrading designated routes could make these areas more accessible to fire suppression vehicles but would lead to increased public use. Increased mileage of roads and trails would result in less continuous fuels. In such areas, fires could not spread as rapidly as in areas in which fuels were more continuous, making it more difficult to restore fire to its historical role in fire-adapted vegetation.

Under Alternative A, 326,561 acres (76%) of the BIFO would be limited to existing roads and trails, allowing the potential for human-ignited wildfires over a large portion of the BIFO and continued increase of user developed trails. Motor vehicles would be limited to designated routes on 101,027 acres (24%) of the BIFO; 260 acres (less than 1%) of the BIFO would be closed to motorized vehicle use. Under this Alternative, 885 miles of routes in the BIFO would be open to motorized use; the most under all the Alternatives.

O.6.2.15.2 Alternative B

The types of impacts experienced as a result of travel management would be similar to those described under Alternative A. However, Alternative B identifies 145,303 acres (34%) of the BIFO as limited to existing routes; motor vehicles would be limited to designated routes on 282,285 acres (66%) of the BIFO; and 1,357 acres (less than 1%) would be closed to motorized vehicle use. The acreage impacted by identified routes, although reduced in comparison to Alternative A, would still result in the potential for human-ignited wildfires over a large portion of the BIFO.

Motorized vehicle use limited to designated routes would limit the potential for human-ignited wildfires in the majority of the BIFO. Fuels would be more discontinuous with increased mileage of roads and trails in fire-adapted vegetation.

The establishment of eleven Travel Management Areas would reduce the number of miles of routes and improve route monitoring and maintenance. Reduction of routes would lessen the negative impacts to forest resources, except for the possible reduction in access for harvest and forest treatments. The increased cost of constructing and decommissioning the temporary routes needed for treatment and harvest would reduce the amount of acres treated over the life of the plan.

Upon completion of a project, roads would be reclaimed. Reclamation at the culmination of each project would provide the conditions needed for quick forest regeneration. This Alternative closes or limits the most routes and reduces access for forest treatments and harvest more than other Alternatives. The current level of planning would limit access to areas such as Tin Can Hill and Mill Creek/Bundy causing forest treatments and harvest to be more expensive. The closures in this Alternative would restrict access and eliminate all but the most expensive hand treatments in portions of some areas such as Grove Creek.

O.6.2.15.3 Alternative C

The types of impacts experienced as a result of travel management would be similar to those described under Alternative B. However, Alternative C designates 61 acres as closed to motorized vehicles; motor vehicles would be limited to designated routes on 282,285 acres (66%) of the BIFO; and 145,303 acres (34%) would be limited to existing routes. The acreage

impacted by identified routes, although reduced in comparison to Alternative A, would still result in the potential for human-ignited wildfires over a large portion of the BIFO.

The impacts to forest resources would be the same as described in Alternative A. Compaction, loss of infiltration, erosion and vegetation loss would be somewhat less than Alternative A. This Alternative would allow similar access for forest treatment and harvest as Alternative A.

O.6.2.15.4 Alternative D

The types of impacts experienced as a result of travel management would be similar to those described under Alternative B. However, Alternative D designates 375 acres (less than 1% of the BIFO) closed to motorized use, eliminating the potential for human-ignited wildfires in those areas. Motor vehicles would be limited to designated routes on 282,285 acres (66%) of the BIFO; and 145,303 acres (34%) would be limited to existing routes.

O.6.2.16 Wilderness Characteristics

O.6.2.16.1 Alterative A

This section presents the potential impacts of route designations on lands that have been evaluated and found to possess wilderness characteristics. Specifically, route designations have the potential to impact the “naturalness” component of LWC areas by providing motorized access into these areas or along their boundaries; access that always carries with it the potential for illegal, off-road use that can impact documented natural conditions.

Under the No Action Alternative, 1 route (1.9 miles) or 100% of all routes located within a LWC area, would continue to be managed as open. The potential indirect, long-term effect of this open route on the natural conditions of this area would be negligible to minor, as signing, appropriate barriers, and regular monitoring would deter illegal, off-road travel, minimizing the potential for impairment of wilderness characteristics and for adversely affecting the natural values of the LWC (43 CFR 8342.1(a)(d)).

Of the 3 routes that follow LWC boundaries in the TMAs, under the No Action Alternative, 3 routes (6.9 miles) or 100% would continue to be managed as open, while no routes would be limited to administrative use only or closed. The potential indirect, long-term effect of these open routes on the natural conditions of the LWC areas they bound would be minor, as signing, appropriate barriers, and regular monitoring would deter illegal, off-road travel, minimizing the potential for impairment of wilderness characteristics and for adversely affecting the natural values of the LWC (43 CFR 8342.1(a)(d)).

O.6.2.16.2 Alternative B

Under Alternative B, 1 route (1.9 miles) or 100% of all routes located within a LWC area (same as Alternative A), would continue to be managed as open. The impacts of this route would be the same as Alternative A.

Of the 3 routes that follow LWC boundaries in the TMAs, under Alternative B, 1 route (3.8 miles) or 33% would continue to be managed as open, while 1 route (2.2 miles) or 33% would be

limited to administrative use only and 1 route (0.9 miles) or 33% would be closed. The potential direct, long-term effect of these route designations on the natural conditions of the LWC areas they bound would be moderate to major, as public motorized use would be removed from 2/3 of the existing open boundary routes. Together with signing, appropriate barriers, and regular monitoring along the remaining route, the potential for illegal, off-road travel would be greatly reduced, minimizing the potential for impairment of wilderness characteristics and for adversely affecting the natural values of the LWC (43 CFR 8342.1(a)(d)).

O.6.2.16.3 Alternative C

Under Alternative C, 1 route (1.9 miles) or 100% of all routes located within a LWC area (same as Alternative A), would continue to be managed as open. The impacts of this route would be the same as Alternative A.

Of the 3 routes that follow LWC boundaries in the TMAs, under Alternative C, 2 routes (5.9 miles) or 67% would continue to be managed as open, while 1 route (2.2 miles) or 33% would be limited to administrative use only and no routes would be closed. The potential direct, long-term effect of these route designations on the natural conditions of the LWC areas they bound would be minor to moderate, as public motorized use would be removed from 1/3 of the existing boundary routes. Together with signing, appropriate barriers, and regular monitoring along the remaining routes, the potential for illegal, off-road travel would be reduced, minimizing the potential for impairment of wilderness characteristics and for adversely affecting the natural values of the LWC (43 CFR 8342.1(a)(d)).

O.6.2.16.4 Alternative D

Under Alternative D, 1 route (1.9 miles) or 100% of all routes located within a LWC area (same as Alternative A), would continue to be managed as open. The impacts of this route would be the same as Alternative A.

Under Alternative D, designations for routes along or bounding LWC areas would be the same as Alternative C. The impacts of these routes would be the same as Alternative C.

O.6.2.17 Lands and Realty

O.6.2.17.1 Alternative A

The primary impacts to lands and realty programs and uses from general public motorized access to public lands are vandalism of authorized facilities, trespass, interruptions in energy or water transmissions, etc. Specifically, the availability of motorized access to authorized facilities and/or private, state or other land ownerships comes into play when assessing impacts to lands and realty-related users. Planning decisions that involve changes to the available number and overall miles of roads open for public and/or administrative use and the number of acres of routes proposed for closure would affect these users to varying degrees. Inasmuch as the use of motor vehicles on public routes constitutes the primary means of access to public lands for both authorized users and other land owners, the supply and spatial extent of travel access networks for motor vehicles is an important factor in assessing potential impacts to their operations or property rights by the route designations in the Travel Management Areas (TMA).

In analyzing the potential effects of route designations on authorized uses and private and state inholdings, differences between each action alternative's set of route designations and the no action, current management route designations are analyzed and expressed primarily in terms of 'absolute percent change' versus a more familiar method of expressing 'relative percent change'. As a comparative example, in relative terms, an alternative that proposes to close 562 routes in Alternative X out of the total 877 routes that exist where only 89 routes out of 877 routes are closed under No Action represents a 631% increase in the number of routes closed in Alternative X relative to the No Action Alternative. In absolute terms, however, the 89 closed routes in the No Action Alternative represent 10% of the current total network while under Alternative X, the 562 closed routes represent 64% of the potential network, resulting in 54% more routes closed in Alternative X than in the No Action Alternative. Planners determined to use the 'absolute percent change', primarily because a) the route 'population', or total number of routes under consideration for designation is constant for all alternatives for each query and b) planners believe the results better depict the 'shifting' of designations within alternatives using the same route inventory.

Authorized facilities or uses on public lands, such as electric transmission lines, water pipelines, communication sites, etc., are typically accessed by motorized vehicle along existing routes. Total closure of routes that access these facilities could have a detrimental effect on the ability of the authorized user to access facilities for maintenance or other related activities essential to the authorized use.

With regard to the 159 routes that are associated with authorized uses under the No Action Alternative, 143 routes (259 miles) or about 90% would be open to all motorized uses or open with restrictions. Additionally, 4 routes (7 miles) or 3% of routes associated with facilities would be limited to administrative use only (which generally includes authorized users) and 12 routes (18 miles) or 8% would be closed. Although Alternative A carries forward 12 route closures, 8% of routes associated with facilities, the direct, long-term effect of these closed routes on the ability of authorized users to access facilities or use sites would be negligible, due to the continued availability of over 9 out of every 10 existing BLM routes for these activities.

Private and State land inholdings that are within larger blocks of public lands are typically accessed by motorized vehicle along existing routes. Total closure of routes to lands could have a detrimental effect on the ability of the land owners to access them.

With regard to the 149 routes that are associated with accessing private and state inholdings within larger blocks of public lands in the TMAs, under the No Action Alternative, 144 routes or about 97% would continue to be managed as open/open with restrictions or limited to administrative use only. Although Alternative A carries forward 5 route closures, over 3% of routes associated with inholdings, the direct, long-term effect of these closed routes on the ability to access private or state lands would be negligible to minor, due to the continued availability of almost 10 out of every 10 existing BLM routes for these activities.

O.6.2.17.2 Alternative B

With regard to the 159 routes that are associated with authorized uses under Alternative B, 29 routes (155 miles) or about 18% would be open to all motorized uses or open with restrictions

(72% fewer than in Alternative A). Additionally, 60 routes (78 miles) or 38% of routes associated with facilities (35% more than in Alternative A) would be limited to administrative use only (which generally includes authorized users) and 70 routes (51 miles) or 44% would be closed (37% more than in Alternative A). Because Alternative B would close 70 routes or 44% of routes associated with authorized uses, the direct, long-term effect of these closed routes on the ability of authorized users to access facilities would be moderate, in part, due to the availability of over 5 out of every 10 existing BLM routes for these activities.

Of the 149 routes that are associated with accessing private and state inholdings within the larger blocks of public lands in the TMAs, under Alternative B, 68 routes or about 46% would continue to be managed as open/open with restrictions or limited to administrative use only (51% fewer than in Alternative A). Because Alternative B would close 81 routes, or over 54% of routes associated with facilities, the direct, long-term effect of these closed routes on the ability to access private or state lands would be moderate to major, due to the availability of over 4 out of every 10 existing BLM routes for these activities.

O.6.2.17.3 Alternative C

With regard to the 159 routes that are associated with authorized uses under Alternative C, 142 routes (271 miles) or about 89% would be open to all motorized uses or open with restrictions (0.6% fewer than in Alternative A). Additionally, 16 routes (13 miles) or 10% of routes associated with facilities (8% more than in Alternative A) would be limited to administrative use only (which generally includes authorized users) and 1 route (0.7 miles) or 0.6% would be closed (7% fewer than in Alternative A). Because Alternative C would close only 1 route or 0.6% of routes associated with authorized uses, the direct, long-term effect of these closed routes on the ability of authorized users to access facilities would be negligible, in part, due to the availability of almost 10 out of every 10 existing BLM routes for these activities.

Of the 149 routes that are associated with accessing private and state inholdings within the larger blocks of public lands in the TMAs, under Alternative C, 147 routes or about 99% would continue to be managed as open/open with restrictions or limited to administrative use only (2% more than in Alternative A). Because Alternative C would close 2 routes, or 1% of routes associated with facilities, the direct, long-term effect of these closed routes on the ability to access private or state lands would be negligible, due to the availability of over 9 out of every 10 existing BLM routes for these activities.

O.6.2.17.4 Alternative D

With regard to the 159 routes that are associated with authorized uses under Alternative D, 80 routes (220 miles) or about 50% would be open to all motorized uses or open with restrictions (40% fewer than in Alternative A). Additionally, 74 routes (62 miles) or 47% of routes associated with facilities (44% more than in Alternative A) would be limited to administrative use only (which generally includes authorized users) and 5 routes (2 miles) or 0.8% would be closed (4% fewer than in Alternative A). Because Alternative D would close 5 routes or 3% of routes associated with authorized uses, the direct, long-term effect of these closed routes on the ability of authorized users to access facilities would be negligible to minor, in part, due to the availability of over 9 out of every 10 existing BLM routes for these activities.

Of the 149 routes that are associated with accessing private and state inholdings within the larger blocks of public lands in the TMAs, under Alternative D, 135 routes or about 91% would continue to be managed as open/open with restrictions or limited to administrative use only (6% fewer than in Alternative A). Because Alternative D would close 14 routes, or over 9% of routes associated with facilities, the direct, long-term effect of these closed routes on the ability to access private or state lands would be minor, due to the availability of over 9 out of every 10 existing BLM routes for these activities.

O.6.2.18 Livestock Grazing

O.6.2.18.1 Alternative A

The primary impacts to livestock grazing and rangeland management from general public motorized access to public lands are vandalism of facilities, intentional and/or unintentional harassment of livestock, inadvertent disruptions of livestock management operations (i.e., leaving gates open), and impacts to soils and vegetation. Specifically, the availability of motorized access to rangeland facilities and/or monitoring sites comes into play when assessing impacts to livestock grazing operations and rangeland management responsibilities. Planning decisions that involve changes to the available number and overall miles of roads open for public and/or administrative use and the number of acres of routes proposed for closure would affect these operations and responsibilities to varying degrees. Inasmuch as the use of motor vehicles on public routes constitutes the primary means of access to public lands for both permitted livestock operators and administrative personnel in order to perform required tasks, the supply and spatial extent of travel access networks for motor vehicles is an important factor in assessing potential impacts to livestock grazing and rangeland management by the route designations in the Travel Management Areas (TMA).

In analyzing the potential effects of route designations on rangeland-related activities, differences between each action alternative's set of route designations and the no action, current management route designations are analyzed and expressed primarily in terms of 'absolute percent change' versus a more familiar method of expressing 'relative percent change'. As a comparative example, in relative terms, an alternative that proposes to close 562 routes in Alternative X out of the total 877 routes that exist where only 89 routes out of 877 routes are closed under No Action represents a 631% increase in the number of routes closed in Alternative X relative to the No Action Alternative. In absolute terms, however, the 89 closed routes in the No Action Alternative represent 10% of the current total network while under Alternative X, the 562 closed routes represent 64% of the potential network, resulting in 54% more routes closed in Alternative X than in the No Action Alternative. Planners determined to use the 'absolute percent change', primarily because a) the route 'population', or total number of routes under consideration for designation is constant for all alternatives for each query and b) planners believe the results better depict the 'shifting' of designations within alternatives using the same route inventory.

Routes accessing rangeland facilities: Rangeland improvements or facilities for livestock grazing operations, such as fences, gates, wells, windmills, cattleguards, corrals, pipelines, ponds, springs, and tanks, are typically accessed by motorized vehicle along existing routes. Total closure of routes that access these facilities could have a detrimental effect on the ability of

the permitted commercial livestock grazing operator to access facilities for gathering, branding, providing water or other related activities essential to the operator's business.

With regard to the 580 routes that are associated with livestock grazing facilities under the No Action Alternative, 493 routes (691 miles) or about 85% would be open to all motorized uses or open with restrictions. Additionally, 37 routes (45 miles) or 6% of routes associated with facilities would be limited to administrative use only (which generally includes grazing operators) and 50 routes (68 miles) or 9% would be closed. Although Alternative A carries forward 50 route closures, 9% of routes associated with facilities, the direct, long-term effect of these closed routes on the ability of operators to access livestock grazing facilities would be negligible, due to the continued availability of over 9 out of every 10 existing BLM routes for these activities.

Routes accessing agency management/monitoring sites: Rangeland management and monitoring sites, areas or sites of seeding, predator control, vegetation treatment, fuels management, monitoring or exclosures are typically accessed by motorized vehicle along existing routes. Total closure of routes to or near these areas or sites could have a detrimental effect on the ability of the agency personnel to access them to conduct research, treatments, reclamation or other related activities.

With regard to the 259 routes that are associated with rangeland management or monitoring areas or sites under the No Action Alternative, 237 routes (446 miles) or about 92% would continue to be managed as open/open with restrictions or limited to administrative use only. Although Alternative A carries forward 22 route closures, over 8% of routes associated with facilities, the direct, long-term effect of these closed routes on the ability of operators to access livestock grazing facilities would be negligible, due to the continued availability of over 9 out of every 10 existing BLM routes for these activities.

Routes closed with reclamation*:* Routes that are proposed for closure would either be allowed to reclaim vegetative cover naturally over time or would receive some degree of mechanical reclamation following closure. In either case, the route acreage returned to a more natural condition would potentially change forage availability in pastures associated with such routes.

Under the No Action Alternative, no routes would be slated for active, mechanical reclamation. However, 81 existing BLM routes would be closed and natural reclamation would be allowed to occur. The footprint (actual area of surface disturbance) of these routes would be approximately 120 acres.

O.6.2.18.2 Alternative B

Routes accessing rangeland facilities: With regard to the 580 routes that are associated with livestock grazing facilities under Alternative B, 83 routes (338 miles) or about 14% would be open to all motorized uses or open with restrictions (71% fewer than in Alternative A). Additionally, 181 routes (214 miles) or 31% of routes associated with facilities (25% more than in Alternative A) would be limited to administrative use only (which generally includes grazing operators) and 316 routes (252 miles) or 55% would be closed (46% more than in Alternative A). Because Alternative B would close 316 routes or 55% of routes associated with facilities, the direct, long-term effect of these closed routes on the ability of operators to access livestock

grazing facilities would be major, in part, due to the availability of over 4 out of every 10 existing BLM routes for these activities.

Routes accessing agency management/monitoring sites: Of the 259 routes that are associated with rangeland management or monitoring areas or sites under Alternative B, 142 routes (385 miles) or about 55% would continue to be managed as open/open with restrictions or limited to administrative use only (36% fewer than in Alternative A). Because Alternative B would close 117 routes, or over 45% of routes associated with facilities, the direct, long-term effect of these closed routes on the ability of operators to access livestock grazing facilities would be moderate to major, due to the availability of over 5 out of every 10 existing BLM routes for these activities.

Routes closed with reclamation: Under Alternative B, no routes would be slated for active, mechanical reclamation (same as Alternative A). However, 458 existing BLM routes would be closed and natural reclamation would be allowed to occur. The footprint (actual area of surface disturbance) of these routes would be approximately 404 acres, 285 more acres than Alternative A.

O.6.2.18.3 Alternative C

Routes accessing rangeland facilities: With regard to the 580 routes that are associated with livestock grazing facilities under Alternative C, 490 routes (735 miles) or about 84% would be open to all motorized uses or open with restrictions (0.5% fewer than in Alternative A). Additionally, 76 routes (64 miles) or 13% of routes associated with facilities (7% more than in Alternative A) would be limited to administrative use only (which generally includes grazing operators) and 14 routes (4 miles) or 2% would be closed (6% fewer than in Alternative A). Because Alternative C would close 14 routes or 2% of routes associated with facilities, the direct, long-term effect of these closed routes on the ability of operators to access livestock grazing facilities would be negligible, in part, due to the availability of over 9 out of every 10 existing BLM routes for these activities.

Routes accessing agency management/monitoring sites*:* Of the 259 routes that are associated with rangeland management or monitoring areas or sites under Alternative C, 247 routes (494 miles) or over 95% would continue to be managed as open/open with restrictions or limited to administrative use only (4% more than in Alternative A). Because Alternative C would close just 12 routes, at 5% of routes associated with facilities, the direct, long-term effect of these closed routes on the ability of operators to access livestock grazing facilities would be negligible, due to the availability of over 9 out of every 10 existing BLM routes for these activities.

Routes closed with reclamation: Under Alternative C, no routes would be slated for active, mechanical reclamation (same as Alternative A). However, 18 existing BLM routes would be closed and natural reclamation would be allowed to occur. The footprint (actual area of surface disturbance) of these routes would be approximately 6 acres, 63 fewer acres than Alternative A.

O.6.2.18.4 Alternative D

Routes accessing rangeland facilities: With regard to the 580 routes that are associated with livestock grazing facilities under Alternative D, 241 routes (531 miles) or about 42% would be

open to all motorized uses or open with restrictions (43% fewer than in Alternative A). Additionally, 312 routes (237 miles) or 54% of routes associated with facilities (47% more than in Alternative A) would be limited to administrative use only (which generally includes grazing operators) and 27 routes (35 miles) or 5% would be closed (4% fewer than in Alternative A). Because Alternative D would close 27 routes or 5% of routes associated with facilities, the direct, long-term effect of these closed routes on the ability of operators to access livestock grazing facilities would be negligible, in part, due to the availability of over 9 out of every 10 existing BLM routes for these activities.

Routes accessing agency management/monitoring sites: Of the 259 routes that are associated with rangeland management or monitoring areas or sites under Alternative D, 247 routes (523 miles) or about 95% would continue to be managed as open/open with restrictions or limited to administrative use only. Because Alternative D would close 14 routes, or about 5% of routes associated with facilities, the direct, long-term effect of these closed routes on the ability of operators to access livestock grazing facilities would be negligible, due to the availability of over 9 out of every 10 existing BLM routes for these activities.

Routes closed with reclamation: Under Alternative D, no routes would be slated for active, mechanical reclamation (same as Alternative A). However, 66 existing BLM routes would be closed and natural reclamation would be allowed to occur. The footprint (actual area of surface disturbance) of these routes would be approximately 73 acres, 47 fewer acres than Alternative A.

O.6.2.19 Recreation and Visitor Services

O.6.2.19.1 Alternative A

Impacts from Route Designations to Recreation

Restricting public motorized access in an area previously known for its excellent vehicle exploring and sightseeing may make it difficult to impossible for visitors to engage in those activities and enjoy the potential experience and benefits opportunities they offer. Conversely, unrestrained and widespread motorized use in an area previously known for its excellent hiking, biking and equestrian opportunities in naturally quiet settings may have the same effects mentioned above for the motorized visitor. Inasmuch as the use of motor vehicles on public routes constitutes the primary means of access to public lands for visitors to engage in a wide variety of motorized and non-motorized recreation activities, the supply and spatial extent of travel access networks for motor vehicles is an important.

Under the No Action Alternative, the overall network of 877 existing BLM routes (993 miles) within the eleven TMAs would continue to be managed as open/open with restrictions, limited to administrative use only (6%), or closed (10%). The overwhelming majority of routes (about 84%) would be open to all motorized uses (82.8%) or open with special seasonal (0.8%) or vehicular restrictions (0.1%). In the long-term, over 8 out of every 10 existing BLM routes would remain available for access to the TMAs with an average route density of 1.5 open routes per square mile at 1.7 miles per square mile.

Therefore, Alternative A would continue to provide a moderate to high degree of motor vehicle access that would indirectly support, in the long-term, a variety of public recreation activity,

experience and benefit opportunities. The potential for motorized recreation opportunities on a variety of routes would remain even higher in the Mill Creek/Bundy TMA, which has the highest density of open routes at 2.5 routes per square mile and the Shepherd TMA, which has a high of 8.9 miles per square mile of open routes. Additionally, as the potential for new route development is realized with boom cycles in energy exploration and development, the availability of motorized access for public recreation may increase and help disperse use to a minor, short-term extent on a localized basis; such effects would ebb and flow with energy development.

Although Alternative A carries forward closures and restrictions to administrative use only on 143 routes (170 miles) or 16% of the routes, the long-term, direct, localized effect of these restricted routes on reducing or precluding visitors from realizing available recreation activity, experience and benefit opportunities is minor.

Route Types: Motorized recreation occurs in many forms, all of which depend on travel networks that contain routes that are not only open to such uses, but also route types and/or conditions that are more conducive to particular types of motorized recreation. Often the difference between an enjoyable experience and an outstanding experience is linked to the type of route. For example, if visitors are looking for a comfortable, low risk driving experience in mostly natural settings, then a Road (graded and regularly maintained; see glossary) may be the most appropriate type of route for those visitors to have an outstanding experience. However, visitors seeking a challenging, high risk driving experience in the backcountry may find their most outstanding experiences on rough, Primitive Roads or Trails (see glossary).

With regard to route types, of the 877 routes under the No Action Alternative, 50 routes (about 6%) currently classed as “roads” in the TMAs would be open to all types of motor vehicle use or open with restrictions, while 1 route (0.1%) classed as “semi-primitive roads”, 673 routes (76.8%) classed as “primitive roads” and 8 routes (0.9%) classed as ‘trails’ would be open/open with restrictions. Conversely, 1 route (about 0.1%) currently classed as “roads” in the TMAs would be limited to administrative use only or closed, while 14 routes (1.6%) classed as “semi-primitive roads”, 127 routes (14.5%) classed as “primitive roads” and 1 route (0.1%) classed as ‘trails’ would be administrative use only or closed. Visitors seeking more rugged and challenging vehicle exploring experiences would find that the widespread, plentiful supply of “primitive roads” and “trails” under Alternative A would directly support the long-term continuation of their activities to a major degree.

Specific Recreation Activities: While many types of recreation activity opportunities exist on the public lands managed by the Billings Field Office (including hunting, boating, sightseeing, hiking, camping, mountain biking, etc.), several specific activities typically demonstrate greater popularity with the public as reflected in their higher visitation numbers year to year. As has been mentioned above regarding general recreation, motorized access via public travel networks is an important component for visitors’ ability to realize the recreation activity, experience and benefit opportunities afforded on public lands. This would be a critical component for the most popular recreation activities taking place in the TMAs. During the route evaluation process, resource specialists familiar with existing uses and users of the route network in the TMAs documented the primary recreation activities that are typically associated with each route. The following analysis is based on those data.

Under the No Action Alternative, of the 808 routes within the TMAs that are associated with hunting as a primary route use, 686 routes (735 miles) or about 85% would continue to be managed as open/open with restrictions, while 38 routes (38 miles) or about 5% would be limited to administrative use only and 84 routes (80 miles) or 10% would be closed. Although Alternative A carries forward closures and restrictions to administrative use only on a total of 122 routes at 118 miles, the direct, long-term effect of these restricted routes on accessing hunting opportunities would be minor, due to the continued availability of over 8 out of every 10 existing BLM routes currently associated with this activity.

Under the No Action Alternative, of the 293 routes within the TMAs that are associated with archery hunting as a primary route use, 277 routes (252 miles) or about 95% would continue to be managed as open/open with restrictions, while 1 route (2.4 miles) or about 0.3% would be limited to administrative use only and 15 routes (9.6 miles) or 5% would be closed. Although Alternative A carries forward closures and restrictions to administrative use only on a total of 16 routes at 12 miles, the direct, long-term effect of these restricted routes on accessing archery hunting opportunities would be negligible to minor, due to the continued availability of over 9 out of every 10 existing BLM routes currently associated with this activity.

Under the No Action Alternative, of the 252 routes within the TMAs that are associated with vehicle exploring as a primary route use, 228 routes (400 miles) or 90.5% would continue to be managed as open/open with restrictions, while 3 routes (2.6 miles) or about 1.2% would be limited to administrative use only and 21 routes (19.4 miles) or 8.3% would be closed. Although Alternative A carries forward closures and restrictions to administrative use only on a total of 24 routes at 22 miles, the direct, long-term effect of these restricted routes on accessing vehicle exploring opportunities would be negligible to minor, due to the continued availability of over 9 out of every 10 existing BLM routes currently associated with this activity.

Under the No Action Alternative, of the 14 routes within the TMAs that are associated with viewing wild horses, 9 routes (35.8 miles) or about 64% would continue to be managed as open/open with restrictions, while 1 route (2.4 miles) or about 7% would be limited to administrative use only and 4 routes (4.4 miles) or 29% would be closed. Although Alternative A carries forward closures and restrictions to administrative use only on a total of 5 routes at 6.8 miles, the direct, long-term effect of these restricted routes on accessing viewing wild horses opportunities would be minor to moderate, due to the continued availability of over 6 out of every 10 existing BLM routes currently associated with this activity.

Under the No Action Alternative, of the 233 routes within the TMAs that are associated with viewing wildlife, 200 routes (231 miles) or about 85% would continue to be managed as open/open with restrictions, while 27 routes (30.5 miles) or about 12% would be limited to administrative use only and 6 routes (5.6 miles) or 3% would be closed. Although Alternative A carries forward closures and restrictions to administrative use only on a total of 33 routes at 36 miles, the direct, long-term effect of these restricted routes on accessing viewing wildlife opportunities would be minor, due to the continued availability of over 8 out of every 10 existing BLM routes currently associated with this activity.

Recreation Management Areas: As Special Recreation Management Areas (SRMA) are identified in the RMP, each carries with it a set of management objectives targeting specific

activities, experiences and benefits that the BLM would strive to achieve by managing for certain recreation settings that are needed to support the management objectives. Similarly, with Extensive Recreation Management Areas (ERMA), the planning team identifies specific recreation objectives and actions to achieve those objectives, though no particular experience or benefit opportunities are specified. One aspect of managing the settings in SRMAs and more generic activities in ERMAs is routes. More specifically, in relation to travel networks, the availability of access to and through SRMAs and ERMAs is an important factor to the visitor experience.

Under the No Action Alternative, the Acton SRMA would not be allocated. However, the route designations that follow would be for the non-SRMA, custodial recreation management in the same geographic area that would become the Acton SRMA in Alternatives B, C and D. Of the 10 routes associated with this area, 7 routes (7.2 miles) or 70% would continue to be managed as open with restrictions, while no routes would be limited to administrative use only and 3 routes (1.5 miles) or 30% would be closed. Although Alternative A carries forward closures and restrictions to administrative use only on a total of 3 routes at 1.5 miles, the direct, long-term effect of these restricted routes on accessing the general recreation opportunities of this area would be minor, due to the continued availability of 7 out of every 10 existing BLM routes currently associated with this area.

Under the No Action Alternative, the Shepherd SRMA would not be allocated. However, the route designations that follow would be for the non-SRMA, custodial recreation management in the same geographic area that would become the Shepherd SRMA in Alternatives B, C and D. Of the 14 routes associated with this area, 2 routes (53 miles) or 14% would continue to be managed as open or open with restrictions, while 12 routes (13 miles) or 86% would be limited to administrative use only and no routes would be closed. Alternative A carries forward restrictions to administrative use only on a total of 12 routes at 13 miles, as such the continued direct, long-term effect of these restricted routes on accessing the general recreation opportunities of this area would be major, due to the limited availability for the public of just over 1 out of every 10 existing BLM routes currently associated with this area.

Under the No Action Alternative, the Yellowstone River SRMA would not be allocated. However, the route designations that follow would be for the non-SRMA, custodial recreation management in the same geographic area that would become the Yellowstone River SRMA in Alternatives B, C and D. Of the 24 routes associated with this area, 23 routes (15.5 miles) or 96% would continue to be managed as open, while 1 route (0.4 miles) or 4% would be limited to administrative use only and no routes would be closed. Although Alternative A carries forward restrictions to administrative use only on a total of 1 route at 0.4 miles, the direct, long-term effect of these restricted routes on accessing the general recreation opportunities of this area would be negligible, due to the continued availability of over 9 out of every 10 existing BLM routes currently associated with this area.

Under the No Action Alternative, the Pryors ERMA would not be allocated. However, the route designations that follow would be for the non-ERMA, custodial recreation management in the same geographic area that would become the Pryors ERMA in Alternatives B, C and D. Of the 145 routes associated with this area, 60 routes (117miles) or 41% would continue to be managed as open, while 1 route (2.4 miles) or 0.7% would be limited to administrative use only and 84

routes (104 miles) or 58% routes would be closed. Alternative A carries forward closures and restrictions to administrative use only on a total of 85 routes at 106 miles, as such the direct, long-term effect of these restricted routes on accessing the general recreation opportunities of this area would be moderate, due to the limited availability for the public of just over 4 out of every 10 existing BLM routes currently associated with this area.

Under the No Action Alternative, the Mill Creek/Bundy ERMA would not be allocated. However, the route designations that follow would be for the non-SRMA, custodial recreation management in the same geographic area that would become the Mill Creek/Bundy ERMA in Alternatives B, C and D. Of the 210 routes associated with this area, 196 routes (126 miles) or 93% would continue to be managed as open, while 14 route (15 miles) or 6.7% would be limited to administrative use only and no routes would be closed. Although Alternative A carries forward restrictions to administrative use only on a total of 14 route at 15 miles, the direct, long-term effect of these restricted routes on accessing the general recreation opportunities of this area would be negligible, due to the continued availability of over 9 out of every 10 existing BLM routes currently associated with this area

Under the No Action Alternative, the Horsethief ERMA would not be allocated. However, the route designations that follow would be for the non-ERMA, custodial recreation management in the same geographic area that would become the Horsethief ERMA in Alternatives B, C and D. Of the 45 routes associated with this area, 38 routes (33miles) or 85% would continue to be managed as open, while 5 route (3 miles) or 11% would be limited to administrative use only and 2 routes (2.8 miles) or 4% routes would be closed. Alternative A carries forward closures and restrictions to administrative use only on a total of 7 routes at 6 miles, as such the direct, long-term effect of these restricted routes on accessing the general recreation opportunities of this area would be minor, due to the limited availability for the public of just over 8 out of every 10 existing BLM routes currently associated with this area.

O.6.2.19.2 Alternative B

Impacts from Route Designations to Recreation

Under the Alternative B, the overall network of 877 existing BLM routes (993 miles) within the eleven TMAs would continue to be managed as open/open with restrictions, limited to administrative use only (25%), or closed (64%). Of the existing routes, very few (about 10%) would be open to all motorized uses (9.2%) or open with special seasonal (0.7%) or vehicular restrictions (0.3%). This would result in 73% fewer open routes in Alternative B than would be open in Alternative A. In the long-term, about 1 out of every 10 existing BLM routes would remain available for access to the TMAs with the average route density reduced by 88% for the long-term to 0.2 open routes per square mile and reduced by 58% to 0.7 miles of open routes per square mile. Therefore, Alternative B would provide a minor degree of motor vehicle access that would indirectly support, in the long-term, a variety of public recreation activity, experience and benefit opportunities.

The potential for motorized recreation opportunities on a variety of routes would be reduced dramatically in the Mill Creek/Bundy TMA by 93% for the long-term to 0.2 open routes per square mile and reduced only slightly in the Shepherd TMA by 19% to 7.2 miles of open routes per square mile.

Alternative B carries forward closures and restrictions to administrative use only on 785 routes (644 miles) or 90% of the routes, which is a 73% increase from these designations in Alternative A. The long-term, direct, localized effect of these restricted routes on reducing or precluding visitors from realizing available recreation activity, experience and benefit opportunities is major.

Route Types: With regard to route types, of the 877 routes under the Alternative B, 29 routes (about 2% fewer than Alternative A) currently classed as "roads" in the TMAs would be open to all types of motor vehicle use or open with restrictions, while 1 route (same as Alternative A) classed as "semi-primitive roads", 56 routes (70% fewer than Alternative A) classed as "primitive roads" and 2 routes (0.7% fewer than Alternative A) classed as 'trails' would be open/open with restrictions. Conversely, 22 routes (about 2.4% more than Alternative A) currently classed as "roads" in the TMAs would be limited to administrative use only or closed, while 14 routes (same as Alternative A) classed as "semi-primitive roads", 742 routes (70% more than Alternative A) classed as "primitive roads" and 7 routes (0.7% more than Alternative A) classed as 'trails' would be administrative use only or closed. Visitors seeking more rugged and challenging vehicle exploring experiences would find that the drastically reduced supply of "primitive roads" and "trails" under Alternative B would directly support the long-term continuation of their activities only to a minor degree.

Specific Recreation Activities: Under the Alternative B, of the 808 routes within the TMAs that are associated with hunting as a primary route use, 88 routes (286 miles) or about 11% would continue to be managed as open/open with restrictions, while 209 routes (238 miles) or about 26% would be limited to administrative use only and 511 routes (333 miles) or 63% would be closed. This would result in 74% fewer open routes in Alternative B available for hunting than would be open in Alternative A. Alternative B would designate closures and restrictions to administrative use only on a total of 720 routes at 567 miles. The direct, long-term effect of these restricted routes on accessing hunting opportunities would be major, due to the drastically reduced availability to just over 1 out of every 10 existing BLM routes currently associated with this activity.

Under the Alternative B, of the 293 routes within the TMAs that are associated with archery hunting as a primary route use, 29 routes (78 miles) or about 10% would continue to be managed as open/open with restrictions, while 66 routes (69 miles) or about 23% would be limited to administrative use only and 198 routes (117 miles) or 68% would be closed. This would result in 85% fewer open routes in Alternative B available for archery hunting than would be open in Alternative A. Alternative B would designate closures and restrictions to administrative use only on a total of 264 routes at 186 miles. The direct, long-term effect of these restricted routes on accessing archery hunting opportunities would be major, due to drastically reducing availability to 1 out of every 10 existing BLM routes currently associated with this activity.

Under the Alternative B, of the 252 routes within the TMAs that are associated with vehicle exploring as a primary route use, 64 routes (258 miles) or 25% would continue to be managed as open/open with restrictions, while 65 routes (82 miles) or about 26% would be limited to administrative use only and 123 routes (82 miles) or 49% would be closed. This would result in 65% fewer open routes in Alternative B available for vehicle exploring than would be open in Alternative A. Alternative B would designate closures and restrictions to administrative use only

on a total of 188 routes at 164 miles. The direct, long-term effect of these restricted routes on accessing vehicle exploring opportunities would be major, due to drastically reducing availability to just over 2 out of every 10 existing BLM routes currently associated with this activity.

Under the Alternative B, of the 14 routes within the TMAs that are associated with viewing wild horses, 6 routes (31 miles) or about 43% would continue to be managed as open/open with restrictions, while 2 routes (3.3 miles) or about 14% would be limited to administrative use only and 6 routes (8 miles) or 43% would be closed. This would result in 21% fewer open routes in Alternative B available for viewing wild horses than would be open in Alternative A.

Alternative B would designate closures and restrictions to administrative use only on a total of 8 routes at 11 miles. The direct, long-term effect of these restricted routes on accessing viewing wild horses opportunities would be moderate, due to reducing availability to just over 4 out of every 10 existing BLM routes currently associated with this activity.

Under the Alternative B, of the 233 routes within the TMAs that are associated with viewing wildlife, 32 routes (108 miles) or about 14% would continue to be managed as open/open with restrictions, while 81 routes (94 miles) or about 35% would be limited to administrative use only and 120 routes (65 miles) or 52% would be closed. This would result in 72% fewer open routes in Alternative B available for viewing wildlife than would be open in Alternative A. Alternative B would designate closures and restrictions to administrative use only on a total of 201 routes at 159 miles. The direct, long-term effect of these restricted routes on accessing viewing wildlife opportunities would be major, due to drastically reducing availability to just over 1 out of every 10 existing BLM routes currently associated with this activity.

Recreation Management Areas: Under the Alternative B, the Acton SRMA would be allocated. Of the 10 routes associated with this area, 3 routes (5.1 miles) or 30% would continue to be managed as open with restrictions, while no routes would be limited to administrative use only and 7 routes (3.5 miles) or 70% would be closed. This would result in 40% fewer open routes in Alternative B available for accessing the targeted recreation opportunities in the SRMA than would be open in Alternative A. Although Alternative B would close a total of 7 routes at 3.5 miles, the direct, long-term effect of these restricted routes on accessing the targeted recreation opportunities of the SRMA would be moderate to major, due to reducing access to just 3 out of every 10 existing BLM routes currently associated with this area.

Under the Alternative B, the Shepherd SRMA would be allocated. Of the 14 routes associated with this area, 2 routes (53 miles) or 14% would continue to be managed as open or open with restrictions, while 8 routes (11 miles) or 57% would be limited to administrative use only and 4 routes (3 miles) or 29% would be closed. This would result in no change from Alternative A in the number or mileage of open routes in Alternative B available for accessing targeted recreation opportunities in the SRMA. Alternative B would designate closures and restrictions to administrative use only a total of 12 routes at 13 miles. The continued direct, long-term effect of these restricted routes on accessing the targeted recreation opportunities of the SRMA would be major (like Alternative A), due to the limiting public access to just over 1 out of every 10 existing BLM routes currently associated with this area.

Under the Alternative B, the Yellowstone River SRMA would be allocated. Of the 24 routes associated with this area, 5 routes (5 miles) or 21% would continue to be managed as open, while 6 route (5 miles) or 25% would be limited to administrative use only and 13 routes (6 miles) or 54% would be closed. This would result in 75% fewer open routes in Alternative B available for accessing targeted recreation opportunities in the SRMA than would be open in Alternative A. Alternative B would designate closures and restrictions to administrative use only on a total of 19 route at 11 miles. The direct, long-term effect of these restricted routes on accessing the general recreation opportunities of the SRMA would be moderate to major, due to drastically reducing accessibility to just over 2 out of every 10 existing BLM routes currently associated with this area.

Under the Alternative B, the Pryors ERMA would be allocated. Of the 145 routes associated with this area, 23 routes (78 miles) or 16% would continue to be managed as open, while 25 routes (26 miles) or 17% would be limited to administrative use only and 97 routes (119 miles) or 67% routes would be closed. This would result in 26% fewer open routes in Alternative B available for accessing general recreation opportunities in the ERMA than would be open in Alternative A. Alternative B would designate closures and restrictions to administrative use only on a total of 122 routes at 146 miles. The direct, long-term effect of these restricted routes on accessing the general recreation opportunities of the ERMA would be moderate to major, due to drastically reducing accessibility to 1.6 out of every 10 existing BLM routes currently associated with this area.

Under the Alternative B, the Mill Creek/Bundy ERMA would be allocated. Of the 210 routes associated with this area, 13 routes (20 miles) or 6.2% would continue to be managed as open, while 56 routes (54 miles) or 27% would be limited to administrative use only and 141 routes (68 miles) or 67% would be closed. This would result in 87% fewer open routes in Alternative B available for accessing general recreation opportunities in the ERMA than would be open in Alternative A. Alternative B would designate closures and restrictions to administrative use only on a total of 197 routes at 112 miles. The direct, long-term effect of these restricted routes on accessing the general recreation opportunities of the ERMA would be major, due to drastically reducing access to less than 1 out of every 10 existing BLM routes currently associated with this area

Under the Alternative B, the Horsethief ERMA would not be allocated. Of the 45 routes associated with this area, 6 routes (12 miles) or 13% would continue to be managed as open, while 15 route (14 miles) or 33% would be limited to administrative use only and 24 routes (12.7 miles) or 53% routes would be closed. This would result in 71% fewer open routes in Alternative B available for accessing general recreation opportunities in the ERMA than would be open in Alternative A. Alternative B would designate closures and restrictions to administrative use only on a total of 39 routes at 27 miles. The direct, long-term effect of these restricted routes on accessing the general recreation opportunities of the ERMA would be major, due to drastically reducing access to 1 out of every 10 existing BLM routes currently associated with this area.

O.6.2.19.3 Alternative C

Impacts from Route Designations to Recreation

Under the Alternative C, the overall network of 877 existing BLM routes (993 miles) within the eleven TMAs would continue to be managed as open/open with restrictions, limited to administrative use only (14%), or closed (2.5%). The overwhelming majority of routes (about 84%) would be open to all motorized uses (82.9%) or open with special seasonal (0.1%) or vehicular restrictions (0.8%). This would result in 0.1% more open routes in Alternative C than would be open in Alternative A. In the long-term, over 8 out of every 10 existing BLM routes would remain available for access to the TMAs with the average route density of open routes per square mile remaining the same as Alternative A at 1.5 and the miles of open routes per square mile increased by 8.8% to 1.8. Therefore, Alternative C would provide a major degree of motor vehicle access (slightly more that under current management) that would indirectly support, in the long-term, a variety of public recreation activity, experience and benefit opportunities.

The potential for motorized recreation opportunities on a variety of routes would be reduced somewhat in the Mill Creek/Bundy TMA by 27% for the long-term to 1.9 open routes per square mile and reduced only slightly in the Shepherd TMA by 7% to 8.3 miles of open routes per square mile. Alternative C carries forward closures and restrictions to administrative use only on 142 routes (97 miles) or 16% of the routes, which is a 0.1% decrease from these designations in Alternative A. The long-term, direct, localized effect of these restricted routes on reducing or precluding visitors from realizing available recreation activity, experience and benefit opportunities is negligible to minor.

Route Types: With regard to route types, of the 877 routes under the Alternative C, 50 routes (same as Alternative A) currently classed as “roads” in the TMAs would be open to all types of motor vehicle use or open with restrictions, while 12 routes (1.3% fewer than Alternative A) classed as “semi-primitive roads”, 664 routes (1% fewer than Alternative A) classed as “primitive roads” and 7 routes (0.1% fewer than Alternative A) classed as ‘trails’ would be open/open with restrictions. Conversely, 1 route (same as Alternative A) currently classed as “roads” in the TMAs would be limited to administrative use only or closed, while 3 routes (1.2% fewer than Alternative A) classed as “semi-primitive roads”, 136 routes (1% more than Alternative A) classed as “primitive roads” and 2 routes (0.1% more than Alternative A) classed as ‘trails’ would be administrative use only or closed. Visitors seeking more rugged and challenging vehicle exploring experiences would find that the widespread, plentiful supply of “primitive roads” and “trails” under Alternative C would directly support the long-term continuation of their activities to a major degree.

Specific Recreation Activities: Under the Alternative C, of the 808 routes within the TMAs that are associated with hunting as a primary route use, 684 routes (769 miles) or about 85% would continue to be managed as open/open with restrictions, while 106 routes (80 miles) or about 13% would be limited to administrative use only and 18 routes (5 miles) or 2% would be closed. This would result in 0.2% fewer open routes in Alternative C available for hunting than would be open in Alternative A. Alternative C would designate closures and restrictions to administrative use only on a total of 124 routes at 84 miles. The direct, long-term effect of these restricted routes on accessing hunting opportunities would be negligible to minor, due to the remaining availability of over 8 out of every 10 existing BLM routes currently associated with this activity.

Under the Alternative C, of the 293 routes within the TMAs that are associated with archery hunting as a primary route use, 225 routes (234 miles) or about 77% would continue to be managed as open/open with restrictions, while 56 routes (28 miles) or about 19% would be limited to administrative use only and 12 routes (3 miles) or 4% would be closed. This would result in 18% fewer open routes in Alternative C available for archery hunting than would be open in Alternative A. Alternative C would designate closures and restrictions to administrative use only on a total of 68 routes at 31 miles. The direct, long-term effect of these restricted routes on accessing archery hunting opportunities would be minor, due to the availability of over 7 out of every 10 existing BLM routes currently associated with this activity.

Under the Alternative C, of the 252 routes within the TMAs that are associated with vehicle exploring as a primary route use, 211 routes (401 miles) or 84% would continue to be managed as open/open with restrictions, while 33 routes (19 miles) or about 13% would be limited to administrative use only and 8 routes (2 miles) or 3% would be closed. This would result in 7% fewer open routes in Alternative C available for vehicle exploring than would be open in Alternative A. Alternative C would designate closures and restrictions to administrative use only on a total of 41 routes at 21 miles. The direct, long-term effect of these restricted routes on accessing vehicle exploring opportunities would be negligible to minor, due to the availability of just over 8 out of every 10 existing BLM routes currently associated with this activity.

Under the Alternative C, of the 14 routes within the TMAs that are associated with viewing wild horses, 8 routes (35 miles) or about 57% would continue to be managed as open/open with restrictions, while 6 routes (8 miles) or about 43% would be limited to administrative use only and no routes would be closed. This would result in 7% fewer open routes in Alternative C available for viewing wild horses than would be open in Alternative A. Alternative C would designate restrictions to administrative use only on a total of 6 routes at 8 miles. The direct, long-term effect of these restricted routes on accessing viewing wild horses opportunities would be minor to moderate, due to the availability of almost 6 out of every 10 existing BLM routes currently associated with this activity.

Under the Alternative C, of the 233 routes within the TMAs that are associated with viewing wildlife, 190 routes (233 miles) or about 82% would continue to be managed as open/open with restrictions, while 34 routes (32 miles) or about 15% would be limited to administrative use only and 9 routes (2 miles) or 4% would be closed. This would result in 4% fewer open routes in Alternative C available for viewing wildlife than would be open in Alternative A. Alternative C would designate closures and restrictions to administrative use only on a total of 43 routes at 34 miles. The direct, long-term effect of these restricted routes on accessing viewing wildlife opportunities would be negligible to minor, due to the availability of just over 8 out of every 10 existing BLM routes currently associated with this activity.

Recreation Management Areas: Under the Alternative c, the Acton SRMA would be allocated. Of the 10 routes associated with this area, 10 routes (8.6 miles) or 100% would continue to be managed as open, while no routes would be limited to administrative use only or closed. This would result in 30% more open routes in Alternative C available for accessing the targeted recreation opportunities in the SRMA than would be open in Alternative A. With no restrictions or closures, the direct, long-term effect of all open routes on accessing the targeted recreation

opportunities of the SRMA would be moderate, due to increasing access to 10 out of every 10 existing BLM routes currently associated with this area.

Under the Alternative C, the Shepherd SRMA would be allocated. Of the 14 routes associated with this area, 11 routes (62 miles) or 79% would continue to be managed as open or open with restrictions, while 3 routes (4 miles) or 21% would be limited to administrative use only and no routes would be closed. This would result in 64% more open routes in Alternative C available for accessing the targeted recreation opportunities in the SRMA than would be open in Alternative A. Although Alternative C would restrict to administrative use only a total of 3 routes at 4 miles, the direct, long-term effect of these restricted routes on accessing the targeted recreation opportunities of the SRMA would be negligible to minor, due to the availability for public use of just under 8 out of every 10 existing BLM routes currently associated with this area.

Under the Alternative C, the Yellowstone River SRMA would be allocated. Of the 24 routes associated with this area, all route designations and estimated impacts would be the same as Alternative A. Under the Alternative C, the Pryors ERMA would be allocated. Of the 145 routes associated with this area, 115 routes (192 miles) or 79% would continue to be managed as open, while 27 routes (30 miles) or 19% would be limited to administrative use only and 3 routes (1.3 miles) or 2% routes would be closed. This would result in 38% more open routes in Alternative C available for accessing general recreation opportunities in the ERMA than would be open in Alternative A. Alternative C would designate closures and restrictions to administrative use only on a total of 30 routes at 32 miles. The direct, long-term effect of these restricted routes on accessing the general recreation opportunities of the ERMA would be negligible to minor, due to the availability for public use of almost 8 out of every 10 existing BLM routes currently associated with this area.

Under the Alternative C, the Mill Creek/Bundy ERMA would be allocated. Of the 210 routes associated with this area, 144 routes (108 miles) or 69% would continue to be managed as open, while 54 routes (31 miles) or 26% would be limited to administrative use only and 12 routes (3 miles) or 6% would be closed. This would result in 25% fewer open routes in Alternative C available for accessing general recreation opportunities in the ERMA than would be open in Alternative A. Alternative C would designate closures and restrictions to administrative use only on a total of 66 routes at 34 miles. The direct, long-term effect of these restricted routes on accessing the general recreation opportunities of the ERMA would be minor, due to the availability for public use of almost 7 out of every 10 existing BLM routes currently associated with this area.

Under the Alternative C, the Horsethief ERMA would not be allocated. Of the 45 routes associated with this area, 42 routes (37 miles) or 93% would continue to be managed as open, while 2 route (1 mile) or 4% would be limited to administrative use only and 1 routes (0.1 miles) or 2% routes would be closed. This would result in 9% more open routes in Alternative C available for accessing general recreation opportunities in the ERMA than would be open in Alternative A. Alternative C would designate closures and restrictions to administrative use only on a total of 3 routes at 1.1 miles. The direct, long-term effect of these restricted routes on accessing the general recreation opportunities of the ERMA would be negligible, due to the availability for public use of over 9 out of every 10 existing BLM routes currently associated with this area.

O.6.2.19.4 Alternative D

Under the Alternative D, the overall network of 877 existing BLM routes (993 miles) within the eleven TMAs would continue to be managed as open/open with restrictions, limited to administrative use only (51%), or closed (9%). Of the existing routes, less than half (about 40%) would be open to all motorized uses (37.9%) or open with special seasonal (1.3%) or vehicular restrictions (0.6%). This would result in 44% fewer open routes in Alternative D than would be open in Alternative A. In the long-term, about 4 out of every 10 existing BLM routes would remain available for access to the TMAs with the average route density reduced by 53% for the long-term to 0.7 open routes per square mile and reduced by 25% to 1.2 miles of open routes per square mile. Therefore, Alternative D would provide a moderate degree of motor vehicle access that would indirectly support, in the long-term, a variety of public recreation activity, experience and benefit opportunities.

The potential for motorized recreation opportunities on a variety of routes would be reduced dramatically in the Mill Creek/Bundy TMA by 69% for the long-term to 0.8 open routes per square mile and reduced only slightly in the Shepherd TMA by 19% to 7.2 miles of open routes per square mile.

Alternative D carries forward closures and restrictions to administrative use only on 529 routes (379 miles) or 60% of the routes, which is a 44% increase from these designations in Alternative A. The long-term, direct, localized effect of these restricted routes on reducing or precluding visitors from realizing available recreation activity, experience and benefit opportunities is moderate.

Route Types: With regard to route types, of the 877 routes under the Alternative D, 40 routes (about 1.1% fewer than Alternative A) currently classed as “roads” in the TMAs would be open to all types of motor vehicle use or open with restrictions, while 4 routes (0.3% more than Alternative A) classed as “semi-primitive roads”, 298 routes (about 43% fewer than Alternative A) classed as “primitive roads” and 4 routes (0.5% fewer than Alternative A) classed as ‘trails’ would be open/open with restrictions. Conversely, 11 routes (about 1.1% more than Alternative A) currently classed as “roads” in the TMAs would be limited to administrative use only or closed, while 11 routes (0.4% fewer than Alternative A) classed as “semi-primitive roads”, 502 routes (43% more than Alternative A) classed as “primitive roads” and 5 routes (0.4% more than Alternative A) classed as ‘trails’ would be administrative use only or closed. Visitors seeking more rugged and challenging vehicle exploring experiences would find that the supply of “primitive roads” and “trails” under Alternative D would directly support the long-term continuation of their activities only to a moderate degree.

Specific Recreation Activities: Under the Alternative D, of the 808 routes within the TMAs that are associated with hunting as a primary route use, 326 routes (534 miles) or about 40% would continue to be managed as open/open with restrictions, while 423 routes (292 miles) or about 52% would be limited to administrative use only and 59 routes (27 miles) or 7% would be closed. This would result in 45% fewer open routes in Alternative D available for hunting than would be open in Alternative A. Alternative D would designate closures and restrictions to administrative use only on a total of 482 routes at 319 miles. The direct, long-term effect of these

restricted routes on accessing hunting opportunities would be moderate, due to reducing availability to just 4 out of every 10 existing BLM routes currently associated with this activity.

Under the Alternative D, of the 293 routes within the TMAs that are associated with archery hunting as a primary route use, 109 routes (172 miles) or about 37% would continue to be managed as open/open with restrictions, while 156 routes (82 miles) or about 53% would be limited to administrative use only and 28 routes (11 miles) or 10% would be closed. This would result in 57% fewer open routes in Alternative D available for archery hunting than would be open in Alternative A. Alternative D would designate closures and restrictions to administrative use only on a total of 184 routes at 92 miles. The direct, long-term effect of these restricted routes on accessing archery hunting opportunities would be moderate, due to reducing availability to almost 4 out of every 10 existing BLM routes currently associated with this activity.

Under the Alternative D, of the 252 routes within the TMAs that are associated with vehicle exploring as a primary route use, 160 routes (374 miles) or 64% would continue to be managed as open/open with restrictions, while 75 routes (41 miles) or about 30% would be limited to administrative use only and 17 routes (6 miles) or 7% would be closed. This would result in 27% fewer open routes in Alternative D available for vehicle exploring than would be open in Alternative A. Alternative D would designate closures and restrictions to administrative use only on a total of 92 routes at 48 miles. The direct, long-term effect of these restricted routes on accessing vehicle exploring opportunities would be minor to moderate, due to reducing availability to just over 6 out of every 10 existing BLM routes currently associated with this activity.

Under the Alternative D, of the 14 routes within the TMAs that are associated with viewing wild horses, 7 routes (33 miles) or about 50% would continue to be managed as open/open with restrictions, while 5 routes (6 miles) or about 36% would be limited to administrative use only and 2 routes (3 miles) or 14% would be closed. This would result in 14% fewer open routes in Alternative D available for viewing wild horses than would be open in Alternative A. Alternative D would designate closures and restrictions to administrative use only on a total of 7 routes at 9 miles. The direct, long-term effect of these restricted routes on accessing viewing wild horses opportunities would be moderate, due to reducing availability to 5 out of every 10 existing BLM routes currently associated with this activity.

Under the Alternative D, of the 233 routes within the TMAs that are associated with viewing wildlife, 94 routes (179 miles) or about 40% would continue to be managed as open/open with restrictions, while 120 routes (79 miles) or about 52% would be limited to administrative use only and 19 routes (9 miles) or 8% would be closed. This would result in 46% fewer open routes in Alternative D available for viewing wildlife than would be open in Alternative A. Alternative D would designate closures and restrictions to administrative use only on a total of 139 routes at 88 miles. The direct, long-term effect of these restricted routes on accessing viewing wildlife opportunities would be major, due to drastically reducing availability to just over 4 out of every 10 existing BLM routes currently associated with this activity.

Recreation Management Areas: Under the Alternative D, the Acton SRMA would be allocated. Of the 10 routes associated with this area, 6 routes (7 miles) or 60% would continue to be

managed as open with restrictions, while 3 routes (1.1 miles) or 30% would be limited to administrative use only and 1 routes (0.8 miles) or 10% would be closed. This would result in 10% fewer open routes in Alternative D available for accessing the targeted recreation opportunities in the SRMA than would be open in Alternative A. Although Alternative D would restrict to administrative use only or close a total of 4 routes at 1.9 miles, the direct, long-term effect of these restricted routes on accessing the targeted recreation opportunities of the SRMA would be minor to moderate, due to reducing access to 6 out of every 10 existing BLM routes currently associated with this area.

Under the Alternative D, the Shepherd SRMA would be allocated. Of the 14 routes associated with this area, 2 routes (53 miles) or 14% would continue to be managed as open or open with restrictions (the same as Alternative A), while 9 routes (11 miles) or 64% would be limited to administrative use only and 3 routes (1.8 miles) or 21% would be closed. This would result in no change from Alternative A in the number or mileage of open routes in Alternative D available for accessing targeted recreation opportunities in the SRMA. Alternative D would designate closures and restrictions to administrative use only a total of 12 routes at 13 miles. The continued direct, long-term effect of these restricted routes on accessing the targeted recreation opportunities of the SRMA would be major (like Alternative A), due to the limiting public access to just over 1 out of every 10 existing BLM routes currently associated with this area.

Under the Alternative D, the Yellowstone River SRMA would be allocated. Of the 24 routes associated with this area, 12 routes (11.5 miles) or 50% would continue to be managed as open, while 9 route (3.6 miles) or 38% would be limited to administrative use only and 3 routes (0.8 miles) or 13% would be closed. This would result in 46% fewer open routes in Alternative D available for accessing targeted recreation opportunities in the SRMA than would be open in Alternative A. Alternative D would designate closures and restrictions to administrative use only on a total of 12 routes at 4.4 miles. The direct, long-term effect of these restricted routes on accessing the general recreation opportunities of the SRMA would be moderate to major, due to drastically reducing accessibility to 5 out of every 10 existing BLM routes currently associated with this area.

Under the Alternative D, the Pryors ERMA would be allocated. Of the 145 routes associated with this area, 68 routes (128 miles) or 47% would continue to be managed as open, while 60 routes (59.4 miles) or 41% would be limited to administrative use only and 17 routes (36 miles) or 12% routes would be closed. This would result in 5.6% more open routes in Alternative D available for accessing general recreation opportunities in the ERMA than would be open in Alternative A. Alternative D would designate closures and restrictions to administrative use only on a total of 77 routes at 96 miles. The direct, long-term effect of these restricted routes on accessing the general recreation opportunities of the ERMA would be minor to moderate, due to limiting accessibility to slightly less than 5 out of every 10 existing BLM routes currently associated with this area.

Under the Alternative D, the Mill Creek/Bundy ERMA would be allocated. Of the 210 routes associated with this area, 61 routes (68 miles) or 29% would continue to be managed as open, while 129 routes (68 miles) or 61% would be limited to administrative use only and 20 routes (6 miles) or 10% would be closed. This would result in 64% fewer open routes in Alternative D available for accessing general recreation opportunities in the ERMA than would be open in

Alternative A. Alternative D would designate closures and restrictions to administrative use only on a total of 149 routes at 73 miles. The direct, long-term effect of these restricted routes on accessing the general recreation opportunities of the ERMA would be major, due to drastically reducing access to less than 3 out of every 10 existing BLM routes currently associated with this area.

Under the Alternative D, the Horsethief ERMA would not be allocated. Of the 45 routes associated with this area, 17 routes (22.5 miles) or 38% would continue to be managed as open, while 25 route (14 miles) or 56% would be limited to administrative use only and 3 routes (1.9 miles) or 7% routes would be closed. This would result in 47% fewer open routes in Alternative D available for accessing general recreation opportunities in the ERMA than would be open in Alternative A. Alternative D would designate closures and restrictions to administrative use only on a total of 28 routes at 16 miles. The direct, long-term effect of these restricted routes on accessing the general recreation opportunities of the ERMA would be moderate, due to drastically reducing access to less than 4 out of every 10 existing BLM routes currently associated with this area.

O.6.2.20 Special Designations - ACECs

O.6.2.20.1 Alternative A

This section presents the potential impacts of route designations on Areas of Critical Environmental Concern (ACECs), as proposed; specifically the potential for elements of travel management to create or perpetuate impacts to resource values documented as relevant and important within these areas. Potential restrictions to public motorized access in areas known for their important biological, cultural or paleontological resources are evaluated, as they may support or complement BLMs strategies and management objectives aimed at protecting these resources. More directly, in relation to travel networks, the availability of access to and through ACECs is an important factor to the managing and protecting these resources in the long-term.

All ACECs: Regarding motorized access in, through, or proximate to (within 0.6 miles) all ACECs in the TMAs, under the No Action Alternative, the overall network of 94 existing BLM routes (114 miles) would continue to be managed as open/open with restrictions, limited to administrative use only (18%), or closed (14%). The majority of routes (about 68%) would be open to all motorized uses, with no special seasonal or vehicular restrictions. In the long-term, almost 7 out of every 10 existing BLM routes would remain available for public access in, through, or proximate to the ACECs. With 68% of existing routes potentially open and only 32% potentially limited to administrative use only or closed to motor vehicle use, the widespread, long-term effect of these route restrictions on reducing public motorized access and its potential for direct and indirect impacts to relevant and important resource values in the ACECs would be minor to moderate (43 CFR 8342.1(a)(d)).

Of the overall network of 28 portal routes that access the ACECs in the TMAs under the No Action Alternative, 22 existing BLM routes (about 79% of all portal routes) would continue to be managed as open to all motorized uses, with no special seasonal or vehicular restrictions. Of the remaining routes, 2 routes would be limited to administrative use only (7%), 4 routes (14%) would be limited to administrative use only with public non-motorized use allowed, and no

routes would be closed. In the long-term, almost 8 out of every 10 existing portal routes would remain available for public access to the ACECs. With 79% of existing routes potentially open and only 21% potentially limited to administrative use only, the widespread, long-term effect of these route designations on reducing public motorized access to ACECs and its potential for direct and indirect impacts to relevant and important resource values in the ACECs would be minor (43 CFR 8342.1(a)(d)).

Cultural ACECs: This section evaluates motorized access in, through or proximate to (within 0.6 miles) all cultural ACECs in the TMAs with cultural resources documented as relevant and important. Under the No Action Alternative, the overall network of 47 existing BLM routes (47 miles) would continue to be managed as open/open with restrictions, limited to administrative use only (34%), or closed (6%). The majority of routes (about 60%) would be open to all motorized uses, with no special seasonal or vehicular restrictions. In the long-term, 6 out of every 10 existing BLM routes would remain available for public access in, through, or proximate to the cultural ACECs. With 6% of existing routes potentially open and only 40% potentially limited to administrative use only or closed to motor vehicle use, the widespread, long-term effect of these route restrictions on reducing public motorized access and its potential for direct and indirect impacts to relevant and important resource values in the cultural ACECs would be moderate (43 CFR 8342.1(a)(d)).

Of the overall network of 15 portal routes that access the ACECs in the TMAs with relevant and important cultural values under the No Action Alternative, 9 existing BLM routes (about 60% of all portal routes) would continue to be managed as open to all motorized uses, with no special seasonal or vehicular restrictions. Of the remaining routes, 2 routes would be limited to administrative use only (13%), 4 routes (27%) would be limited to administrative use only with public non-motorized use allowed, and no routes would be closed. In the long-term, 6 out of every 10 existing portal routes would remain available for public access to the cultural ACECs. With 60% of existing routes potentially open and only 40% potentially limited to administrative use only, the widespread, long-term effect of these route designations on reducing public motorized access to ACECs and its potential for direct and indirect impacts to relevant and important resource values in the ACECs would be moderate (43 CFR 8342.1(a)(d)).

O.6.2.20.2 Alternative B

Impacts from Route Designations to Areas of Critical Environmental Concern (ACEC)

All ACECs: Regarding motorized access in, through, or proximate (within 0.6 miles) to all ACECs in the TMAs, under Alternative B, the overall network of 135 existing BLM routes (158 miles) would be managed as 12% open/open with seasonal restrictions (about 56% fewer than Alternative A), 17% limited to administrative use only (1% fewer than Alternative A), and 71% closed (about 57% more than Alternative A). In the long-term, just over 1 out of every 10 existing BLM routes would be available for public access in, through, or proximate to the ACECs. With only 12% of existing routes potentially open and only 88% potentially limited to administrative use only or closed to motor vehicle use, the widespread, long-term effect of these route restrictions on reducing public motorized access and its potential for direct and indirect impacts to relevant and important resource values in the ACECs would be major (43 CFR 8342.1(a)(d)).

Of the overall network of 65 portal routes that access the ACECs in the TMAs under Alternative B, 10 existing BLM routes (about 15% of all portal routes) would be open (about 63% fewer than Alternative A). Only 11% would be open to all motorized uses (about 68% fewer than Alternative A), and 5% would be open with special seasonal restrictions (about 5% more than Alternative A). Of the remaining routes, 11 routes (17%) would be limited to administrative use only (about 10% more than Alternative A), no routes would be limited to administrative use only with public non-motorized use allowed (about 14% fewer than Alternative A), and 44 routes (68%) would be closed (68% more than Alternative A). In the long-term, 1.5 out of every 10 existing portal routes would be available for public access to the ACECs. With 15% of existing routes potentially open and 85% potentially limited to administrative use only or closed, the widespread, long-term effect of these route designations on reducing public motorized access to ACECs and its potential for direct and indirect impacts to relevant and important resource values in the ACECs would be major (43 CFR 8342.1(a)(d)).

Cultural ACECs: This section evaluates motorized access in, through or proximate to (within 0.6 miles) all cultural ACECs in the TMAs with cultural resources documented as relevant and important. Under the Alternative B, the overall network of 50 existing BLM routes (50 miles) would be managed for 0 routes open to all motorized uses (60% fewer than Alternative A), 8% open with vehicle restrictions (about 8% more than Alternative A), 12% limited to administrative use only (8% more than Alternative A), 0 routes limited to administrative use only with public non-motorized use allowed (about 30% fewer than Alternative A), and 80% closed (about 74% more than Alternative A). In the long-term, just under 1 out of every 10 existing BLM routes would be available (with vehicle restrictions) for public access in, through, or proximate to the cultural ACECs. With not quite 1% of existing routes potentially open and only 92% potentially limited to administrative use only or closed to motor vehicle use, the widespread, long-term effect of these route restrictions on reducing public motorized access and its potential for direct and indirect impacts to relevant and important resource values in the cultural ACECs would be major (43 CFR 8342.1(a)(d)).

Of the overall network of 19 portal routes that access the cultural ACECs in the TMAs under Alternative B, 2 existing BLM routes (about 11% of all portal routes) would be open (about 50% fewer than Alternative A). Of the remaining routes, 2 routes (11%) would be limited to administrative use only (about 3% fewer than Alternative A), no routes would be limited to administrative use only with public non-motorized use allowed (about 27% fewer than Alternative A), and 15 routes (78%) would be closed (79% more than Alternative A). In the long-term, just over 1 out of every 10 existing portal routes would be available for public access to the cultural ACECs. With 11% of existing routes potentially open and 89% potentially limited to administrative use only or closed, the widespread, long-term effect of these route designations on reducing public motorized access to cultural ACECs and its potential for direct and indirect impacts to relevant and important resource values in the cultural ACECs would be major (43 CFR 8342.1(a)(d)).

O.6.2.20.3 Alternative C

Impacts from Route Designations to Areas of Critical Environmental Concern (ACEC)

All ACECs: Regarding motorized access in, through, or proximate (within 0.6 miles) to all ACECs in the TMAs, under Alternative C, the overall network of 205 existing BLM routes (259

miles) would be managed as 79% open/open with seasonal restrictions (about 11% more than Alternative A), 19% limited to administrative use only (0.9% more than Alternative A), and 2% closed (about 12% fewer than Alternative A). In the long-term, about 8 out of every 10 existing BLM routes would be available for public access in, through, or proximate to the ACECs. With 79% of existing routes potentially open and only 21% potentially limited to administrative use only or closed to motor vehicle use, the widespread, long-term effect of these route restrictions on reducing public motorized access and its potential for direct and indirect impacts to relevant and important resource values in the ACECs would be minor (43 CFR 8342.1(a)(d)).

Of the overall network of 86 portal routes that access the ACECs in the TMAs under Alternative C, 70 existing BLM routes (about 81% of all portal routes) would be open (about 3% fewer than Alternative A). Just over 81% would be open to all motorized uses (about 1.7% more than Alternative A), and 1.2% would be open with special seasonal restrictions (about 1.2% more than Alternative A). Of the remaining routes, 15 routes (17%) would be limited to administrative use only (about 10% more than Alternative A), no routes would be limited to administrative use only with public non-motorized use allowed (about 14% fewer than Alternative A), and 1 routes (1.2%) would be closed (1.2% more than Alternative A). In the long-term, 8 out of every 10 existing portal routes would be available for public access to the ACECs. With 81% of existing routes potentially open and 19% potentially limited to administrative use only or closed, the widespread, long-term effect of these route designations on reducing public motorized access to ACECs and its potential for direct and indirect impacts to relevant and important resource values in the ACECs would be minor (43 CFR 8342.1(a)(d)).

Cultural ACECs: This section evaluates motorized access in, through or proximate to (within 0.6 miles) all cultural ACECs in the TMAs with cultural resources documented as relevant and important. Under the Alternative C, the overall network of 91 existing BLM routes (84 miles) would be managed for 88% open to all motorized uses (28% more than Alternative A), 12% limited to administrative use only (8% more than Alternative A), 0 routes limited to administrative use only with public non-motorized use allowed (about 30% fewer than Alternative A), and no routes closed (about 6% fewer than Alternative A). In the long-term, just under 9 out of every 10 existing BLM routes would be available for public access in, through, or proximate to the cultural ACECs. With 88% of existing routes potentially open and only 12% potentially limited to administrative use only to motor vehicle use, the widespread, long-term effect of these route restrictions on reducing public motorized access and its potential for direct and indirect impacts to relevant and important resource values in the cultural ACECs would be minor (43 CFR 8342.1(a)(d)).

Of the overall network of 29 portal routes that access the cultural ACECs in the TMAs under Alternative C, 25 existing BLM routes (about 86% of all portal routes) would be open (about 26% more than Alternative A). Of the remaining routes, 4 routes (14%) would be limited to administrative use only (about 0.5% more than Alternative A), no routes would be limited to administrative use only with public non-motorized use allowed (about 27% fewer than Alternative A), and no routes would be closed (no change from Alternative A). In the long-term, over 8 out of every 10 existing portal routes would be available for public access to the cultural ACECs. With 86% of existing routes potentially open and 14% potentially limited to administrative use only or closed, the widespread, long-term effect of these route designations on reducing public motorized access to cultural ACECs and its potential for direct and indirect

impacts to relevant and important resource values in the cultural ACECs would be minor (43 CFR 8342.1(a)(d)).

O.6.2.20.4 Alternative D

Impacts from Route Designations to Areas of Critical Environmental Concern (ACEC)

All ACECs: Regarding motorized access in, through, or proximate (within 0.6 miles) to all ACECs in the TMAs, under Alternative D, the overall network of 188 existing BLM routes (232 miles) would be managed as 32% open/open with seasonal restrictions (about 36% fewer than Alternative A), 54% limited to administrative use only (36% more than Alternative A), and 13% closed (about 1% fewer than Alternative A). In the long-term, just over 3 out of every 10 existing BLM routes would be available for public access in, through, or proximate to the ACECs. With only 32% of existing routes potentially open and only 68% potentially limited to administrative use only or closed to motor vehicle use, the widespread, long-term effect of these route restrictions on reducing public motorized access and its potential for direct and indirect impacts to relevant and important resource values in the ACECs would be moderate to major (43 CFR 8342.1(a)(d)).

Of the overall network of 81 portal routes that access the ACECs in the TMAs under Alternative D, 35 existing BLM routes (about 43% of all portal routes) would be open (about 35% fewer than Alternative A). Only 38% would be open to all motorized uses (about 40% fewer than Alternative A), 1% would be open with vehicle restrictions (about 1% more than Alternative A), and 4% would be open with special seasonal restrictions (about 4% more than Alternative A). Of the remaining routes, 39 routes (48%) would be limited to administrative use only (about 41% more than Alternative A), no routes would be limited to administrative use only with public non-motorized use allowed (about 14% fewer than Alternative A), and 7 routes (9%) would be closed (9% more than Alternative A). In the long-term, 4 out of every 10 existing portal routes would be available for public access to the ACECs. With 43% of existing routes potentially open and 57% potentially limited to administrative use only or closed, the widespread, long-term effect of these route designations on reducing public motorized access to ACECs and its potential for direct and indirect impacts to relevant and important resource values in the ACECs would be moderate to major (43 CFR 8342.1(a)(d)).

Cultural ACECs: This section evaluates motorized access in, through or proximate to (within 0.6 miles) all cultural ACECs in the TMAs with cultural resources documented as relevant and important. Under the Alternative D, the overall network of 90 existing BLM routes (83 miles) would be managed for 31% open to all motorized uses (29% fewer than Alternative A), and no routes open with seasonal or vehicle restrictions (same as Alternative A), 54% limited to administrative use only (50% more than Alternative A), 0 routes limited to administrative use only with public non-motorized use allowed (about 30% fewer than Alternative A), and 14% closed (about 8% more than Alternative A). In the long-term, just over 3 out of every 10 existing BLM routes would be available for public access in, through, or proximate to the cultural ACECs. With just over 31% of existing routes potentially open and only 69% potentially limited to administrative use only or closed to motor vehicle use, the widespread, long-term effect of these route restrictions on reducing public motorized access and its potential for direct and indirect impacts to relevant and important resource values in the cultural ACECs would be moderate to major (43 CFR 8342.1(a)(d)).

Of the overall network of 27 portal routes that access the cultural ACECs in the TMAs under Alternative D, 11 existing BLM routes (about 41% of all portal routes) would be open (about 19% fewer than Alternative A). Of the remaining routes, 15 routes (56%) would be limited to administrative use only (about 42% more than Alternative A), no routes would be limited to administrative use only with public non-motorized use allowed (about 27% fewer than Alternative A), and 1 route (4%) would be closed (4% more than Alternative A). In the long-term, just over 4 out of every 10 existing portal routes would be available for public access to the cultural ACECs. With 41% of existing routes potentially open and 59% potentially limited to administrative use only or closed, the widespread, long-term effect of these route designations on reducing public motorized access to cultural ACECs and its potential for direct and indirect impacts to relevant and important resource values in the cultural ACECs would be moderate to major (43 CFR 8342.1(a)(d)).

O.6.2.21 Wild and Scenic Rivers

O.6.2.21.1 Alternative A

This section presents the potential impacts of route designations on lands that have been evaluated and found to eligible for designation as Wild and Scenic Rivers. Specifically, route designations have the potential to impact identified outstandingly remarkable values associated with the eligible river segments by providing motorized access to or proximate to these areas; access that carries with it the potential for illegal, off-road use that can impact those values. Of the 6 routes accessing WSR-eligible segments, under the No Action Alternative, 4 routes (4 miles) or 67% would continue to be managed as open, while no routes would be limited to administrative use only and 2 routes (0.8 miles) or 33% routes would be closed. The potential indirect, long-term effect of the open routes on outstandingly remarkable values of the WSR-eligible areas would be minor, as signing, appropriate barriers, and regular monitoring would deter illegal, off-road travel, minimizing the potential for damaging or adversely affecting those natural values (43 CFR 8342.1(a)(d)).

Of the 7 routes that follow WSR-eligible boundaries in the TMAs, under the No Action Alternative, 4 routes (2.3 miles) or 57% would continue to be managed as open, while no routes would be limited to administrative use only and 3 routes (0.6 miles) or 43% routes would be closed. The potential indirect, long-term effect of these open routes on outstandingly remarkable values of the WSR-eligible areas they bound would be minor, as signing, appropriate barriers, and regular monitoring would deter illegal, off-road travel, minimizing the potential for damaging or adversely affecting those natural values (43 CFR 8342.1(a)(d)).

O.6.2.21.2 Alternative B

Under Alternative B, route designations would be the same as Alternative A. The impacts of these route designations would be the same as Alternative A.

Of the 7 routes that follow WSR-eligible boundaries in the TMAs, under Alternative B, 3 routes (1.8 miles) or 43% would continue to be managed as open, while 1 route (0.5 miles) or 14% would be limited to administrative use only and 3 routes (0.6 miles) or 43% routes would be closed. The potential indirect, long-term effect of the Alternative B route designations on

outstandingly remarkable values of the WSR-eligible areas they bound would be minor, as open routes would only be reduced by 14%. However, signing, appropriate barriers, and regular monitoring would help to deter illegal, off-road travel, minimizing the potential for damaging or adversely affecting those natural values (43 CFR 8342.1(a)(d)).

O.6.2.21.3 Alternative C

Under Alternative C, of the 6 routes accessing WSR-eligible segments, 6 routes (4.8 miles) or 100% would be managed as open, while no routes would be limited to administrative use only or closed. The potential effect of the open routes on outstandingly remarkable values of the WSR-eligible areas would be a 33% increase in open routes accessing these areas, which would be a minor to moderate, indirect, long-term impact. However, signing, appropriate barriers, and regular monitoring would, to a minor to moderate degree, help deter illegal, off-road travel, minimizing the potential for damaging or adversely affecting those natural values (43 CFR 8342.1(a)(d)).

Of the 7 routes that follow WSR-eligible boundaries in the TMAs, under Alternative C, 7 routes (2.9 miles) or 100% would continue to be managed as open, while routes would be limited to administrative use only or closed. The potential indirect, long-term moderate effect of the Alternative C route designations on outstandingly remarkable values of the WSR-eligible areas they bound would be a 43% increase in open routes accessing these areas. However, signing, appropriate barriers, and regular monitoring would, to a minor to moderate degree, help to deter illegal, off-road travel, minimizing the potential for damaging or adversely affecting those natural values (43 CFR 8342.1(a)(d)).

O.6.2.21.4 Alternative D

Under Alternative D, route designations for routes accessing WSR-eligible segments would be the same as Alternative A and B for open routes; however, 1 route (0.2 miles) or 16.7% would be limited to administrative use only rather than closed. The impacts of these route designations would be essentially the same as Alternative A and B.

Under Alternative D, route designations for routes that follow WSR-eligible boundaries in the TMAs would be the same as Alternative A for open routes; however, 2 routes (0.4 miles) or 29% would be limited to administrative use only rather than closed. The impacts of these route designations would be essentially the same as Alternative A.

O.6.3 Cumulative Impacts from Travel and Transportation

The cumulative impact analysis area for the comprehensive travel and transportation system is the BiFO-wide Planning Area and immediately adjacent areas of state and local road networks. Cumulative impacts on transportation systems for both non-motorized and motorized access would result from projects that increase travel and traffic and subsequent transportation improvements and maintenance. Projects that could increase traffic would result from designating and marketing routes as well as developing and transporting mineral and energy resources on public lands and management of transportation routes on adjacent lands. Cumulative impacts on trails and travel management would also primarily occur from actions that facilitate, restrict, or preclude both non-motorized and motorized access.

Management actions that restrict use would limit the degree of travel opportunities and the ability to access certain portions of the planning area for the public. However, in most cases, while motorized access on certain routes would be restricted to the public, administrative use for authorized uses would continue to be be allowed as well as non-motorized access would also continue on those routes. The continued maintenance of federal and state highways would provide arterial connections to BLM system roads. County-maintained routes that connect federal and state highways to BLM system routes would maintain and improve access to the decision area's resources. Past, present, and reasonably foreseeable future nonfederal actions have affected and would continue to affect travel management within the planning area. These actions, which include urban development patterns, the continuing growth of both non-motorized and motorized vehicle-based recreation, planned road and highway projects, trail development projects and population growth, are expected to increase demand and construction of transportation routes within and near the BiFO planning area.

Actions that would limit or restrict transportation project design (e.g., VRM designations, land use closures, NSO stipulations) would result in impacts on transportation and access. The actions and activities considered in this analysis, including land use restrictions for the preservation of sensitive resources, would not result in the overall inability of BLM to provide public access.

Under all alternatives, reasonably foreseeable development (oil and gas), resource use assumptions, such as wind energy potential, and recreation demand, in addition to land use authorizations and projects, could increase the need to improve or maintain the transportation system. Roads and pipelines constructed for these programs could expand the existing transportation system network and facilitate motorized access in areas currently not available.

Alternatives A and C could have the greatest incremental impact on the improvements and maintenance of the transportation system and for general access needs because they propose the most potential development and propose fewer restrictions or constraints on limiting the travel network. The degree of impact would be highest under Alternative A because of fewer land use restrictions for the protection of sensitive resources would be considered, there are less route designations and motorized routes would be limited to existing roads and trails, except in those areas where travel designations have occurred. Conversely, the implementation of increased restrictions specifically to motorized vehicular use, identified to protect sensitive resources under Alternative B, would result in the greatest level of impact on motorized transportation and access of the Alternatives, but provides more protection to fragile or sensitive resources. Alternative C, overall, would have fewest restrictions on motorized travel and access and potentially the greatest impacts to fragile resources, as compared to Alternative B and D, while having the same amount of designated non-motorized trails. However, Alternative C would have more restrictions to motorized travel than under Alternative A, as more route specific travel designations would be proposed. Alternative D has slightly less restrictions proposed, than under Alternative B and provides management flexibility and adaptability, based on resource conditions and indicators, while having the same non-motorized trail system.

O.6.4 Irreversible and Irretrievable Commitment of Resources

Section 1502.16 of CEQ regulations requires that the discussion of environmental consequences include a description of "…any irreversible or irretrievable commitment of resources which

would be involved in the proposal should it be implemented." An irreversible commitment of resources refers to decisions affecting the use of resources (generally nonrenewable resources) that limit the ability for future generations to use that resource. For example, extraction and processing of sand and gravel, as part of an aggregate mining operation is considered an irreversible commitment of salable minerals. This action is irreversible because once the minerals are extracted and processed; they cannot be renewed in the ground within a reasonable timeframe, and are therefore unavailable for use by future generations. An irretrievable commitment of resources refers to decisions resulting in the loss of production or use of a resource. For example, a decision not to treat juniper encroachment into adjacent sagebrush habitat results in the irretrievable loss of forage production from the grassland community. This action is not irreversible, because a treatment applied to the encroaching juniper could restore the forage production of the sagebrush habitat.

All of the alternatives contain a range of management actions that may lead to future irreversible and irretrievable commitments of those resources, once a decision is made. Decisions made in the selected plan serve to guide future actions and subsequent site-specific decisions. Following the signing of the ROD for the Billings/Pompeys Pillar RMP revision, implementation plans will be developed and implemented by the BLM. Implementation decisions require appropriate project specific planning and NEPA analysis, and constitute BLM's final approval authorizing on-the-ground activities to proceed. Assuming subsequent implementation decisions authorize activity- or project-specific plans, irreversible and irretrievable commitment of resources would occur. For most resources, the RMP will provide objectives for management and guidance for future implementation level decisions to minimize the potential for irreversible and irretrievable commitments of resources.

No irreversible or irretrievable commitment of resources are anticipated for air quality, visual resources, lands and realty, renewable energy, ROW and corridors, recreation, special designations, and socioeconomic resources. The Proposed RMP would result in surface-disturbing activities, including dispersed recreation, recreational OHV use, fire and fuels management, mineral and energy development, livestock grazing, and infrastructure development that could result in loss of irreversible or irretrievable resources. These surface-disturbing activities may permanently alter soil, water, and vegetation, visual resources, relevant and important values, ACECs, transportation and travel uses, tentative classifications of WSR segments, and potentially damage cultural and paleontological resources.

Habitats in nonfunctional condition may sustain sufficient degradation that they may no longer be capable of being restored to original site potential. If this change results in significant soil loss through channel down-cutting or incisement, or if riparian-wetland obligate plant species are replaced by facultative or upland species, these could represent irretrievable and irreversible impacts that cannot be corrected even through costly rehabilitation efforts.

O.6.5 Unavoidable Adverse Impacts

The NEPA §102(2)C requires disclosure of any adverse environmental effects that cannot be avoided should the proposed plan be implemented. Unavoidable adverse impacts are those that remain following the implementation of mitigation measures or impacts for which there are no mitigation measures. Some unavoidable adverse impacts would occur as a result of

implementing the Billings/Pompeys Pillar RMP and travel related implementation level actions. Others are a result of public use of BLM land within the planning area. This section describes the potential unavoidable adverse impacts that may occur from these implementation level decisions.

Implementing the Proposed RMP would cause some unavoidable adverse impacts. Surface-disturbing activities could cause unavoidable adverse impacts. Although these impacts are mitigated to the extent possible, unavoidable damage is inevitable. Conversion of vegetation resources to other uses, such as transportation and mineral and energy development, reduces the quantity of vegetation resources. Energy and mineral resource extraction on public lands potentially creates air quality, water quality, visual intrusions, soil erosion, and soil compaction problems. Portions of the resource area with more intense recreational use experience scarring, increased soil erosion, and loss of vegetation. Although these impacts are unavoidable, they are usually concentrated in previously disturbed areas, which reduce the spread of impacts to more remote or less frequented areas.

Travel on or off roads and trails could cause soil compaction and loss of protective vegetation cover, thereby increasing soil erosion and fugitive dust emissions. Increased soil erosion can adversely impact riparian wetland areas through increased soil sedimentation. Weeds introduced by these and other management activities could cause a reduction in canopy coverage and leave soils subject to increased erosion as well.

Any facility developments, including but not limited to recreation sites, livestock water and other range improvements, and utility and road facilities, that are not properly restored even after mitigation measures are applied, could result in increased soil erosion. Inadvertent damage to, or loss of, cultural and paleontological resources from increased recreational use, OHV use, surface-disturbing activities, or natural deterioration is unavoidable. Although mitigation measures could be implemented for scientific data recovery (leaving portions of cultural resource sites undisturbed for future exploration), the area of excavation would be destroyed and future research would not be possible. The number of cultural sites or paleontological localities anticipated to be inadvertently damaged is unknown, but it is anticipated to be very low given the management decisions in the Proposed RMP.

Conflicts between user types, such as motorized recreationists and recreationists who seek more primitive types of recreation and motorized users who share recreation areas, are unavoidable adverse impacts. As recreation demand increases and becomes more varied, recreational use disperses to other areas of the lands managed by the BiFO, which could create conflicts with existing uses of those areas.

Increasing recreation use can cause conflicts with other resource uses, such as livestock grazing or forest and woodland products harvest. Recreation use and experiences could conflict with the results of livestock grazing, mineral extraction and timber harvest.

Under the DRMP/DEIS, for those alternatives in which mineral development is expected to be higher, recreational use and/or enjoyment of travel routes, could be displaced from those areas, which would increase the extent and frequency of conflict between these incompatible user groups. Numerous land use restrictions, imposed throughout the BiFO to protect sensitive resources and other important values, by their nature, impact the ability of operators, individuals,

and groups who use the public lands to do so freely without limitations. Although attempts are made to minimize these impacts by limiting the level of protection necessary to accomplish management objectives and by providing alternative use areas for impacted activities, some adverse impacts to such users are simply unavoidable.

O.7 Implementation-Level Travel/Transportation Plans

Following issuance of the ROD, implementation and management of the defined travel management network (a system of areas, roads/routes available for public use, and the specific limitations placed on use) will be used to develop future Travel Management Plans for each TPA. These Travel Management Plans (implementation plans) will be developed within 3-5 years of issuance of the ROD and will coordinate the implementation decisions over the life of the plan.

The components of the TPA implementation-level plans include (but not limited to):

a) Maps that display the geographic units (TPAs) and display roads and trails for all travel modes, including road and trail types and designations.

b) Definitions and additional limitations for specific roads and trails (defined in 43 CFR 8340.0-5(g)).

c) A set of guidelines for management, monitoring and maintenance of the travel system

d) A set of indicators to guide future plan maintenance, modifications or revisions related to the travel management network.

e) A list of easements and rights-of-way (to be issued to the BLM or others) to maintain the existing road and trail network providing public land access.

f) A schedule for periodic reviews of travel management networks to ensure that current resource and travel management objectives are being met (see 43 CFR 8342.3).

g) Decisions will be based on additional site specific NEPA analysis.

The Travel Management Plans will tier to and/or include the specific management actions common to the TPAs, as well any management actions specific to a specific TPA.

O.8 Preliminary Route Network – Existing routes without formal evaluations.

Many of the geographic locales omitted from travel planning/route designations were isolated parcels and/or parcels with no current public access. However, in areas where resource or other use-conflicts arise or impacts to resources would arise from travel modes, travel planning and would be initiated, and would follow a similar planning process defined above. Travel management, for both motorized and mechanized modes would continue to be limited to existing roads and trails. Decisions would be documented by the staff with rationale and incorporated in

the Travel Management system as interim decisions until formal decisions could be developed through a planning process.

O.9 Preliminary Route Network – outside of TMAs

Travel management, for both motorized and mechanized modes, outside of the TMAs would continue to be limited to existing roads and trails. Management actions identified through the ROD would be identified and implemented. Many of the geographic locales omitted from travel planning/route designations were isolated parcels and/or parcels with no current public access. However, in areas where resource or other use-conflicts arise or impacts to resources occur from travel modes, travel planning would be initiated, and would follow a similar planning process for the TMAs (defined above).

O.10 Plan Maintenance and Changes to Route Designations

The Proposed RMP includes criteria to be considered when conducting plan maintenance, amendments, or revisions related to area designations or the approved road and trail system within "TPA" areas. Future conditions may require the designation or construction of new routes or closure of existing routes to better address resources and resource use conflicts. Actual route designations within the Limited category can be modified without completing a plan amendment, although compliance with the National Environmental Policy Act (of 1969) (NEPA) is still required.

The BiFO is aware that the current inventory of roads and trails being used for the route designation process is not 100 percent correct or complete. The BiFO anticipates that in spite of intensive quality control and review, there will be errors. Some undesirable unintended consequences may result from the final configuration of the Travel Route Designations. Adjustments may be needed to make the travel designation compatible with adjacent landowners. For example, edge matching has occurred with adjacent BLM and United States Forest Service (USFS) jurisdictions, but continued review and coordination will be required as changes resulting from continued travel planning occur in the future. Routes currently not in the inventory may need to be added and designated as part of the implementation process. An adaptive management process that will allow adjustments to the final decision and will maintain the validity and integrity of the analyses and public disclosure presented in the Final EIS is outlined below. This process includes pre-defining actions for the disposition of routes discovered after the decision date, adding new routes, correcting errors, and adjusting the route designations that lead to undesirable, unintended consequences.

Plan maintenance can be accomplished through program and project analysis as well as additional land use planning (e.g., activity-level planning). BLM will collaborate with affected and interested parties in evaluating the designated route network for suitability for active travel and transportation management and envisioning potential changes in the existing system or adding new trails that would help meet current and future demands. In conducting such evaluations, the following factors would be considered:

- The travel management plan should be flexible to allow designating existing routes that were not identified in the baseline data.
- The travel management plan should be flexible about the location of new routes needed to provide access for new activities, to new areas, or to reduce resource and/or user conflicts.
- Route designations would be coordinated and made consistent with criteria and resource decisions identified in the Proposed RMP.
- Where and when appropriate, plan, develop, and designate (in cooperation with user groups and cooperating agencies) new routes and trails that enhance and expand recreational opportunities and encourage responsible use.
- Routes suitable for various categories of use (e.g., motorcycles, all-terrain vehicles [ATVs], dune buggies, 4-wheel drive touring vehicles, horse, foot, bike, etc.) and opportunities for joint trail use as well as even exclusive use by individual types of users .
- Needs for parking, trailheads, informational and directional signs, mapping and profiling, and development of brochures or other materials for public dissemination.
- Opportunities to tie into existing or planned route networks.
- Public land roads or trails determined to cause considerable adverse effects or to constitute a nuisance or threat to public safety would be considered for relocation or closure and rehabilitation after appropriate coordination with applicable agencies and partners.
- Those areas managed as closed will not be available for new motorized designation.
- Measures needed to meet the objectives stated in the Proposed RMP (e.g., cultural resources, soil resources, special status species, and recreation).

Regulations (at 43 Code of Federal Regulations (CFR) 8342.2 and elsewhere) require BLM to monitor the effects of OHV use. Changes made to the Travel and Transportation Plan would be based on the information obtained through monitoring. Site-specific NEPA documentation is required for changing the route designations in this Travel Plan, but not an RMP Plan Amendment

O.11 Implementation Process

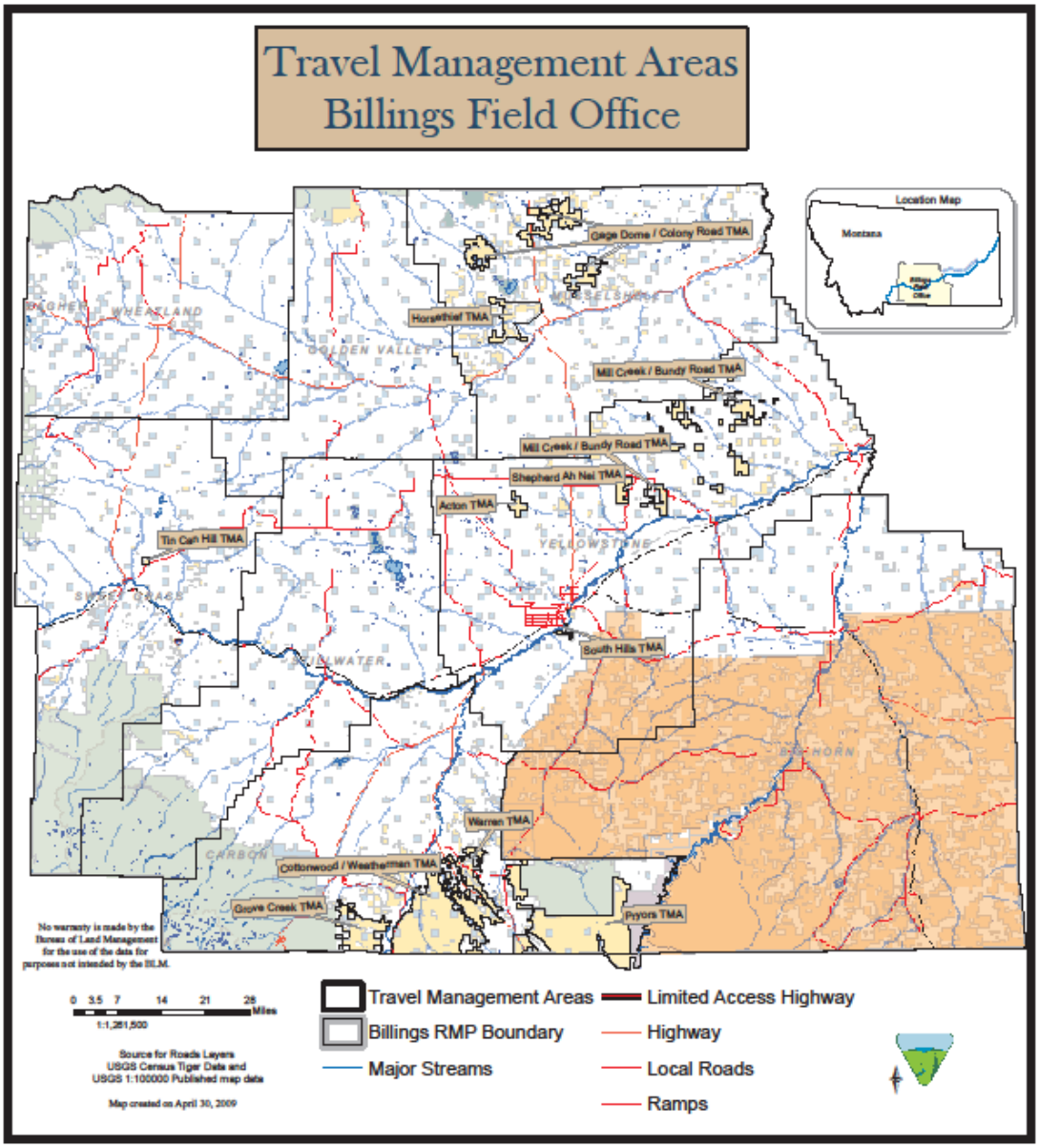
Implementation decisions are actions that BLM takes to implement land use plans and generally constitute BLM's final approval for allowing on-the-ground actions to proceed. These types of decisions, which are based on site-specific planning and NEPA analyses, are subject to the administrative remedies set forth in the regulations that apply to each BLM resource

management program. Implementation decisions are not subject to protest under the planning regulations; rather, they are subject to various administrative remedies. Where implementation decisions are made as part of the land use planning process, they are still subject to the appeals process or other administrative review as prescribed by specific resource program regulations after BLM resolves the protests to land use plan decisions and makes a decision to adopt or amend the Proposed RMP. Travel planning and the implementation process include the following:

- The monitoring of the transportation system and modifying as appropriate
- A map of roads and trails for all travel modes
- Notations of any limitation for specific roads and trails
- Criteria to select or reject roads and trails in the final travel management network, add new roads or trails, and specify limitations
- Guidelines for management, monitoring, and maintenance of the transportation system
- Needed easements and rights-of-ways (to be issued to BLM or others) to maintain the existing road and trail network providing public land access.

The Proposed RMP completes the initial route designation component of the Travel Management Plan and implementation process. These routes would be the initial basis for signing and enforcement. The BiFO will prioritize additional implementation actions, resources, and geographic areas based on RMP goals and objectives and the guidelines noted above.

Travel Management Area Map – Overview



Figures
Travel Management Planning

Figure 4.1a: Summary of Route/Miles by TMA

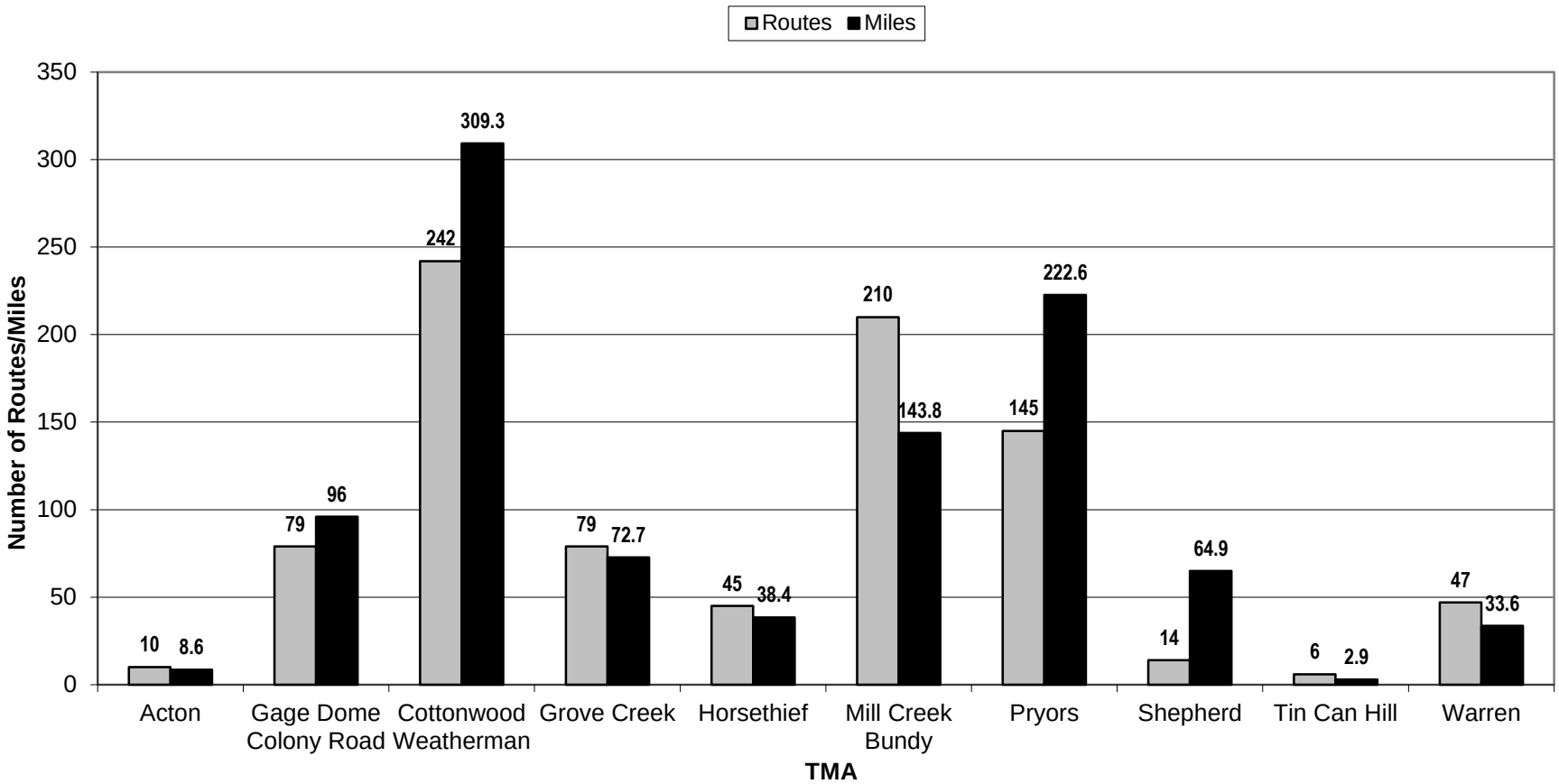


Figure 4.1.1a: Alternative A Route Designations for All TMAs

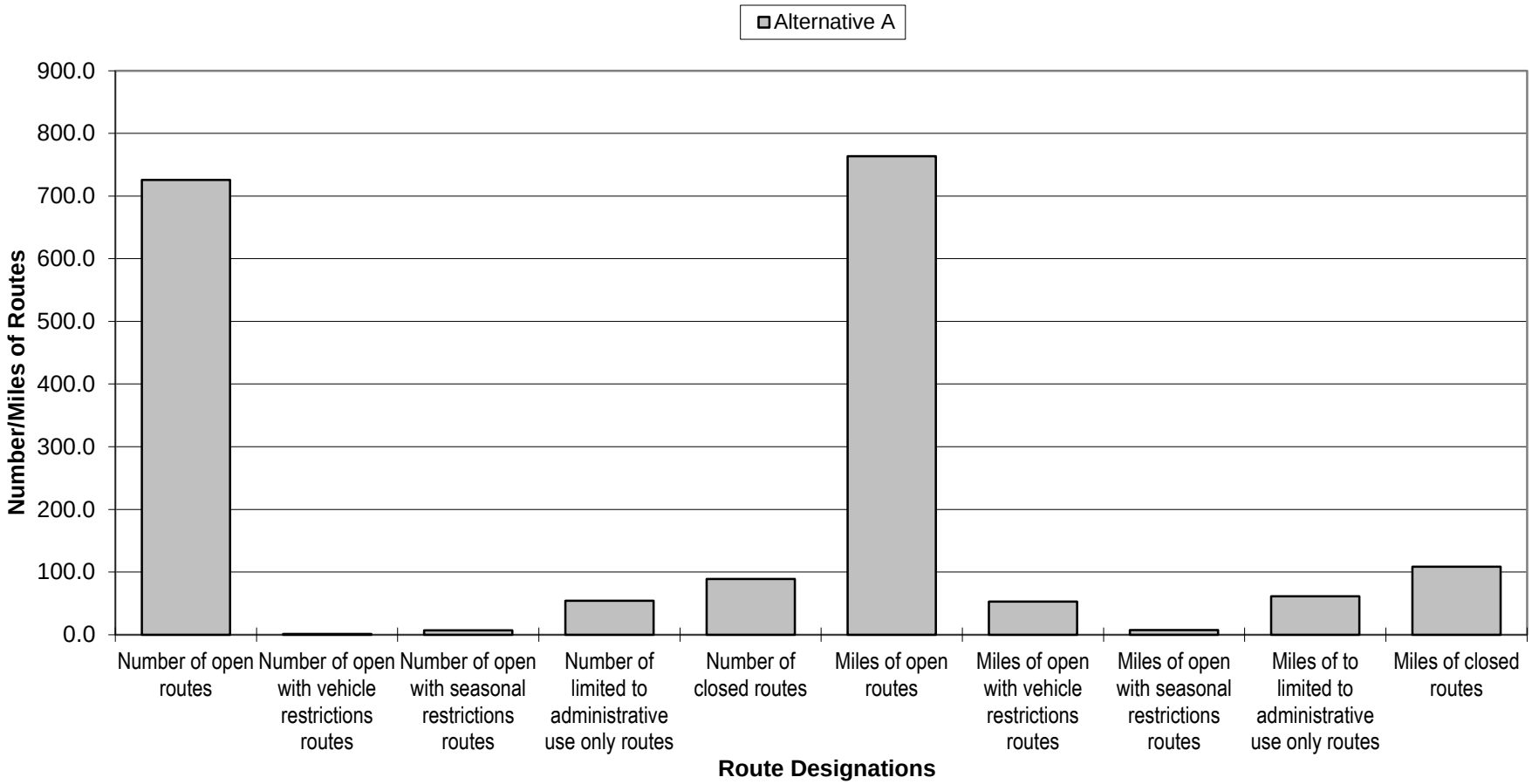


Figure 4.1.1b: Alternative A 'Open' Route Densities by TMA

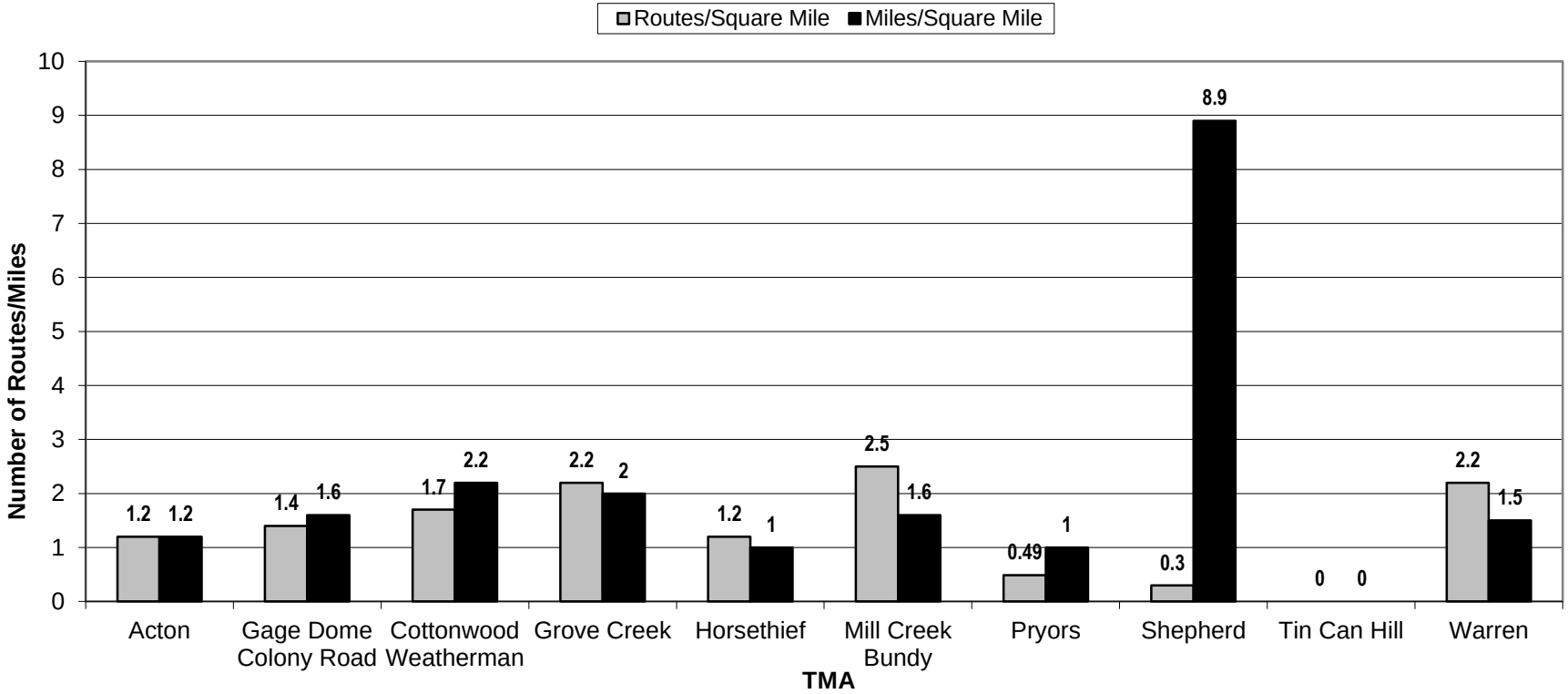


Figure 4.1.2a: Alternative B Route Designations for All TMAs (Compared to Alt. A)

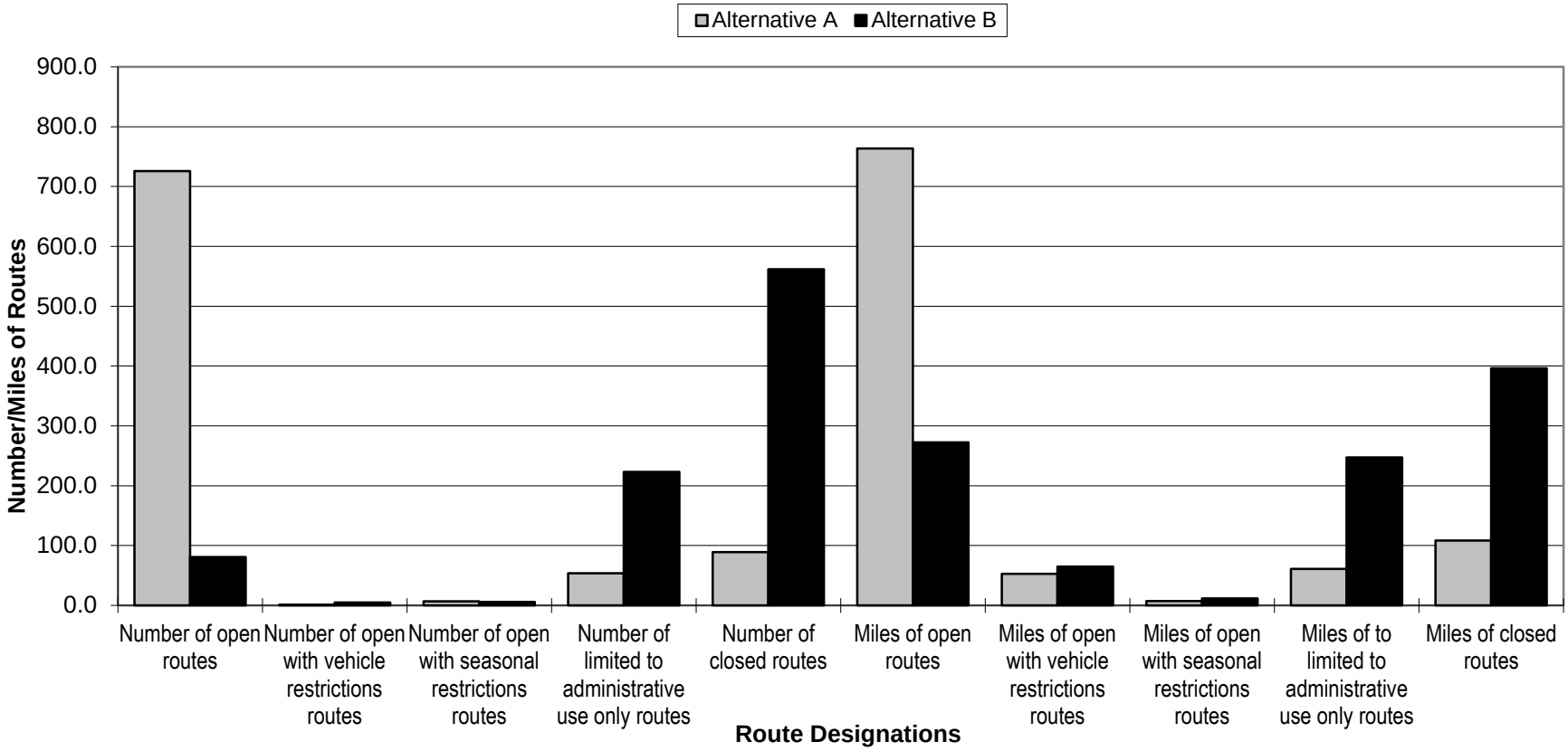


Figure 4.1.2b: Alternative B 'Open' Route Densities by TMA (compared to Alt. A)

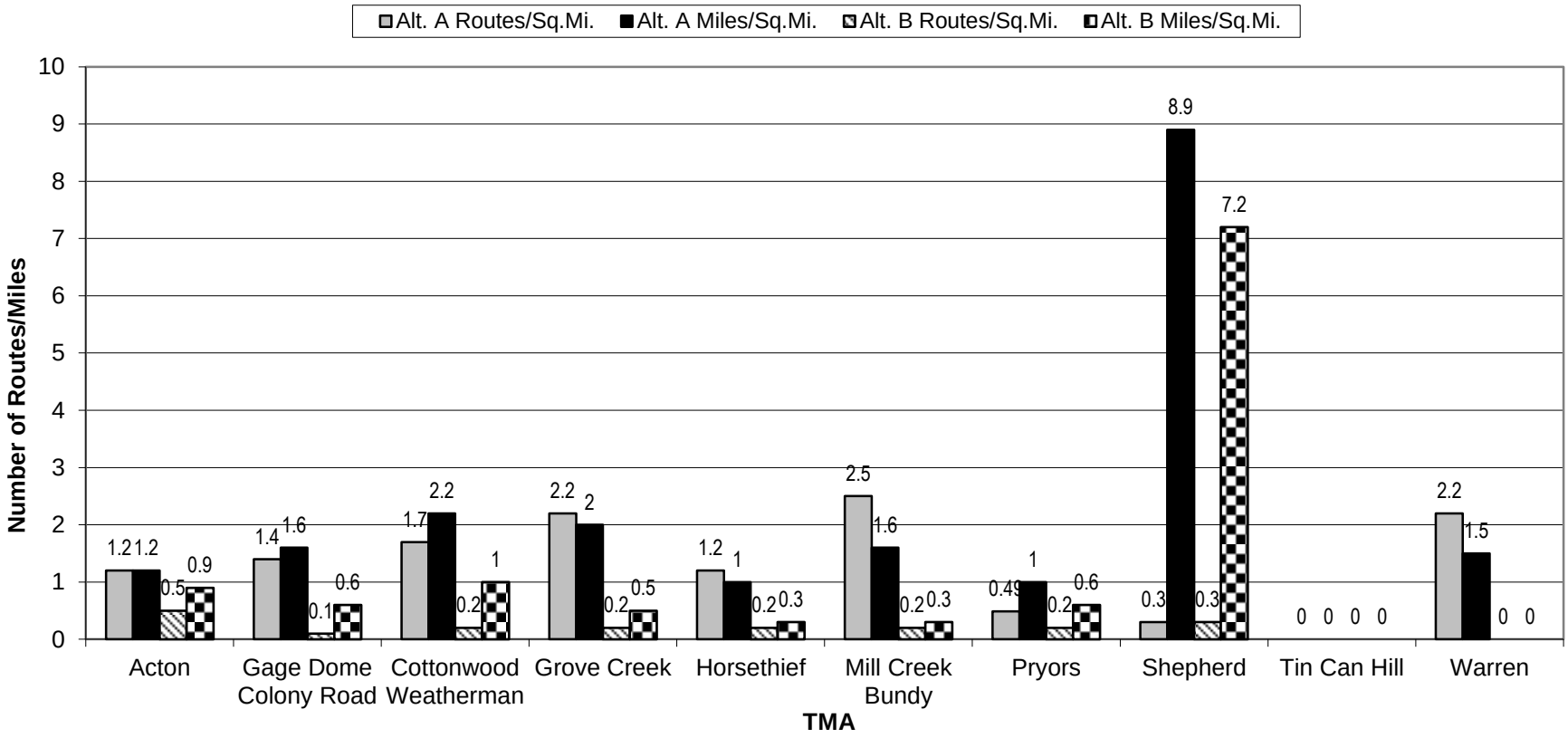


Figure 4.1.3a: Alternative C Route Designations for All TMAs (Compared to Alt. A)

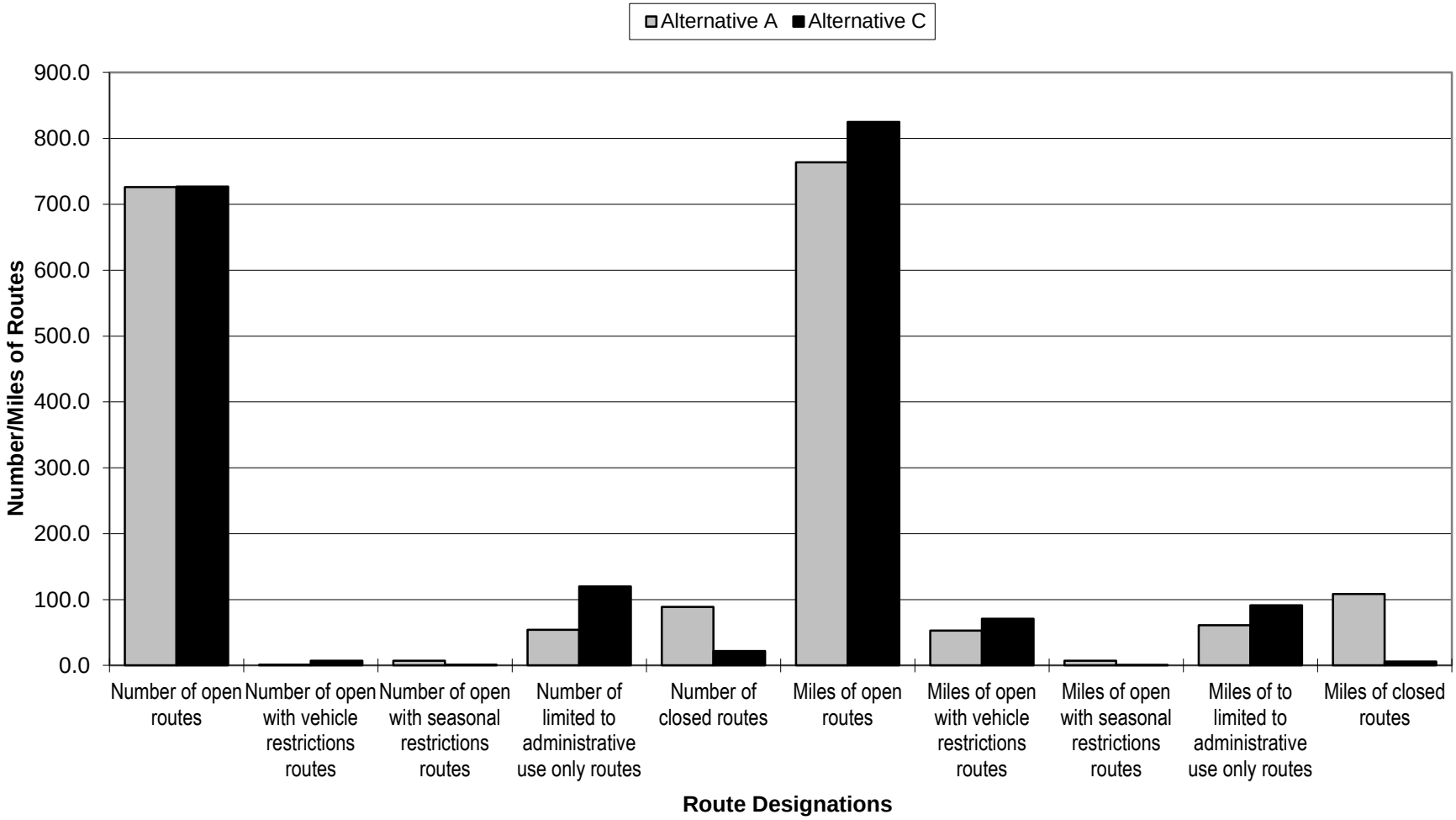


Figure 4.1.3b: Alternative C 'Open' Route Densities by TMA (compared to Alt. A)

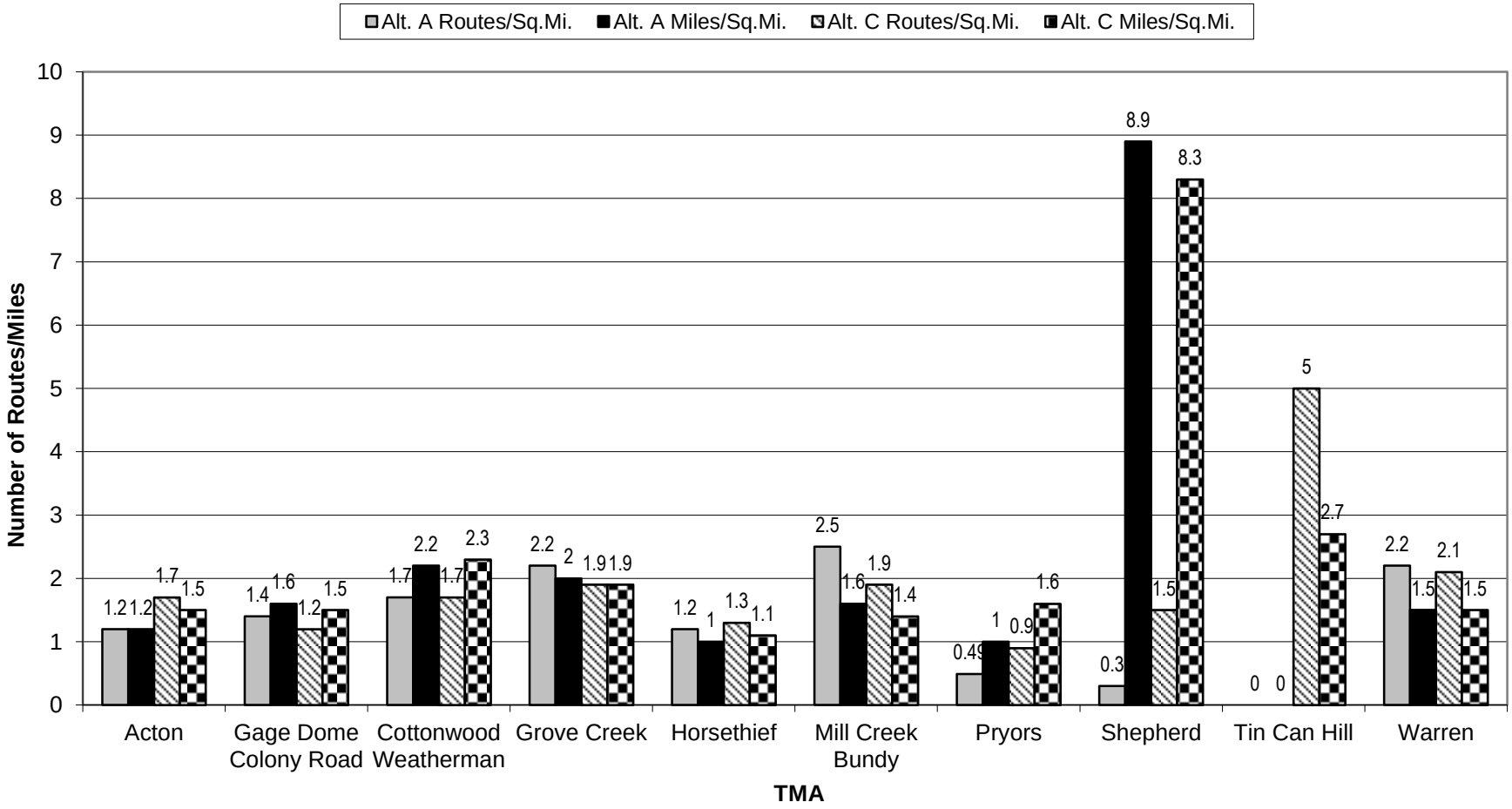


Figure 4.1.4a: Alternative D Route Designations for All TMAs (Compared to Alt. A)

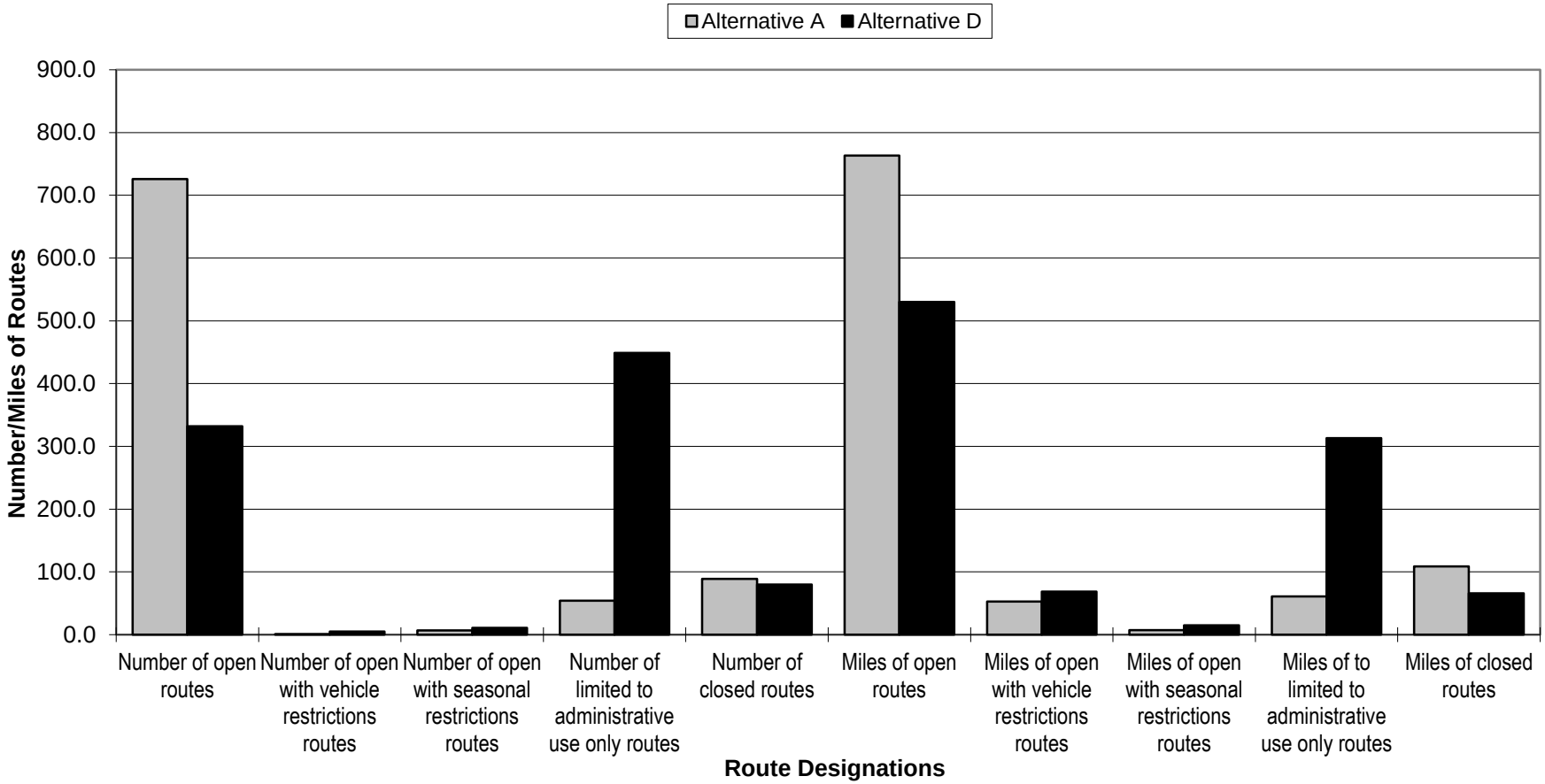
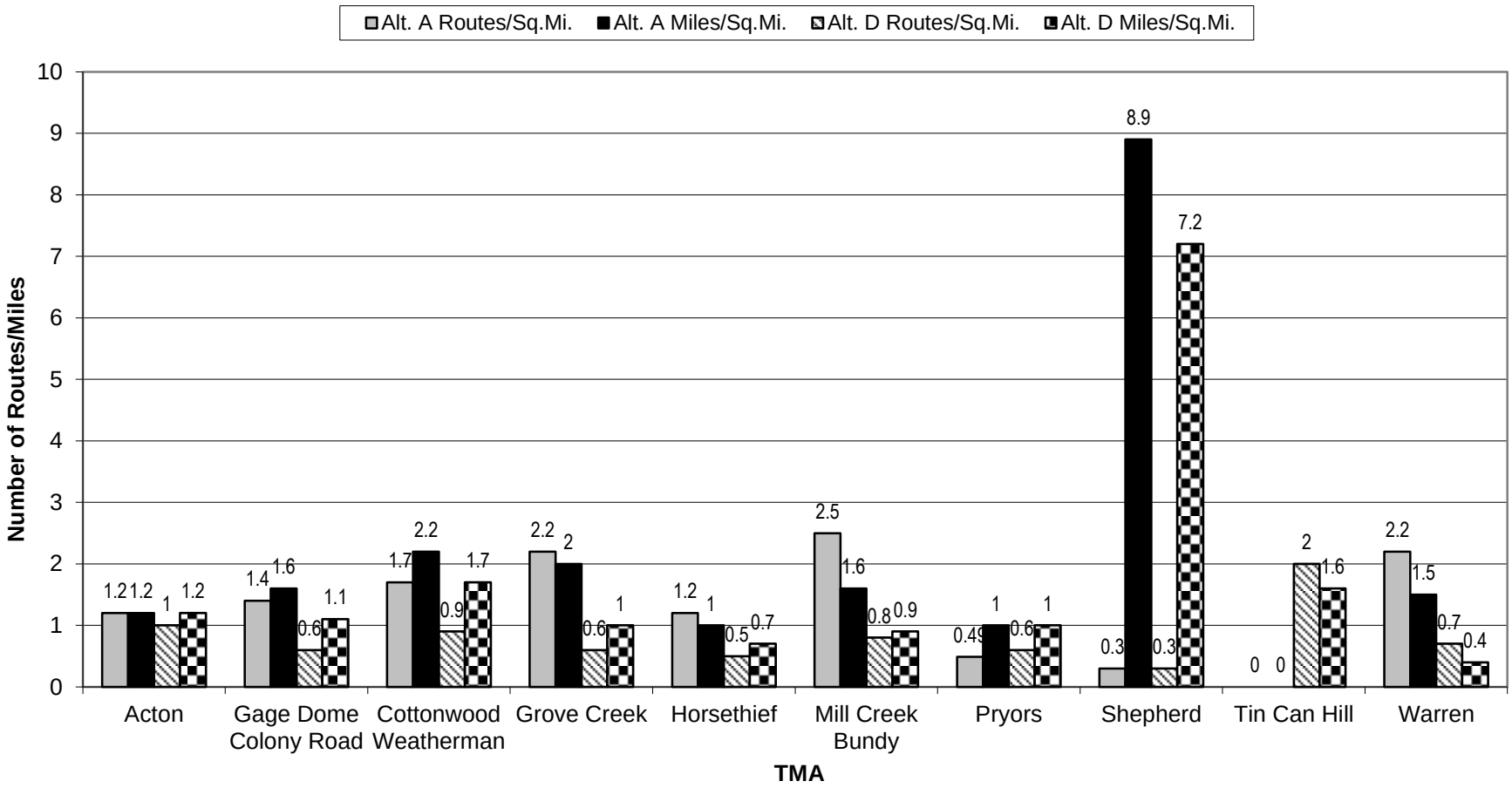


Figure 4.1.4b: Alternative D 'Open' Route Densities by TMA (compared to Alt. A)



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Appendix P:
Visual Resource Management Program

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P. Visual Resource Management Program

P.1 Background

The Bureau of Land Management (BLM) is entrusted with the care of 264 million acres of public lands containing many outstanding scenic landscapes. By law, BLM is responsible for managing these public lands for multiple uses. But BLM is also responsible for ensuring that the scenic values of these public lands are considered before allowing uses that may have negative visual impacts. BLM accomplishes this through its Visual Resource Management (VRM) system, a system which involves inventorying scenic values and establishing management objectives for those values through the resource management planning process, and then evaluating proposed activities to determine whether they conform to the management objectives. BLM has established VRM coordinators in each state and provides training in VRM so that this system is implemented effectively and consistently throughout the Bureau. The Bureau's VRM system helps to ensure that the actions taken on the public lands today will benefit the landscape and adjacent communities in the future.

Responsibility

Over the past several years, the Western States have experienced rapid growth and development, and the public lands have been increasingly used for outdoor recreation and tourism. Many rural communities are reliant on tourism to sustain their economies. As a result, the management of the scenic values of public lands has become a much more important aspect of natural resource management to BLM.

BLM's responsibility to manage the scenic resources of the public lands is established by law:

- **The Federal Land Policy and Management Act of 1976 (FLPMA)** states, "...public lands will be managed in a manner which will protect the quality of the scenic (visual) values of these lands."
- **The National Environmental Policy Act of 1969 (NEPA)** requires that measures be taken to "...assure for all Americans...aesthetically pleasing surroundings...."

This responsibility is reinforced by BLM's mission statement:

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

BLM's policy is that it has a basic stewardship responsibility to identify and protect visual values on all BLM lands. This policy is described in BLM Manual Section 8400 - Visual Resource Management. BLM has reemphasized this policy in various other internal directives as well, including Information Bulletin No. 98-135 and Instruction Memorandum No. 98-164.

In order to meet its responsibility to maintain the scenic values of the public lands, BLM has developed a VRM system that addresses the following:

- Different levels of scenic values require different levels of management. For example, management of an area with high scenic value might be focused on preserving the existing character of the landscape, and management of an area with little scenic value might allow for major modifications to the landscape. Determining how an area should be managed first requires an assessment of the area's scenic values.
- Assessing scenic values and determining visual impacts can be a somewhat subjective process. Objectivity and consistency can be greatly increased by using the basic design elements of form, line, color, and texture, which have often been used to describe and evaluate landscapes, to also describe proposed projects. Projects that repeat these design elements are usually in harmony with their surroundings; those that don't create contrast. By adjusting project designs so the elements are repeated, visual impacts can be minimized.

BLM's VRM system provides a way to identify and evaluate scenic values to determine the appropriate levels of management. It also provides a way to analyze potential visual impacts and apply visual design techniques to ensure that surface-disturbing activities are in harmony with their surroundings.

Basically, BLM's VRM system consists of two stages:

- Inventory (Visual Resource Inventory)
- Analysis (Visual Resource Contrast Rating)

P.2 Inventory

The inventory stage involves identifying the visual resources of an area and assigning them to inventory classes using BLM's visual resource inventory process. The process involves rating the visual appeal of a tract of land, measuring public concern for scenic quality, and determining whether the tract of land is visible from travel routes or observation points. The process is described in detail in BLM Handbook H-8410-1, Visual Resource Inventory. The results of the visual resource inventory become an important component of BLM's Resource Management Plan (RMP) for the area. The RMP establishes how the public lands will be used and allocated for different purposes, and it is developed through public participation and collaboration. Visual values are considered throughout the RMP process, and the area's visual resources are then assigned to management classes with established objectives:

- **Class I Objective:** To preserve the existing character of the landscape. The level of change to the characteristic landscape should be very low and must not attract attention
- **Class II Objective:** To retain the existing character of the landscape. The level of change to the characteristic landscape should be low

- **Class III Objective:** To partially retain the existing character of the landscape. The level of change to the characteristic landscape should be moderate.
- **Class IV Objective:** To provide for management activities which require major modification of the existing character of the landscape. The level of change to the characteristic landscape can be high.

P.3 Analysis

The analysis stage involves determining whether the potential visual impacts from proposed surface-disturbing activities or developments will meet the management objectives established for the area, or whether design adjustments will be required. A visual contrast rating process is used for this analysis, which involves comparing the project features with the major features in the existing landscape using the basic design elements of form, line, color, and texture. This process is described in BLM Handbook H-8431-1, Visual Resource Contrast Rating. The analysis can then be used as a guide for resolving visual impacts. Once every attempt is made to reduce visual impacts, BLM managers can decide whether to accept or deny project proposals. Managers also have the option of attaching additional mitigation stipulations to bring the proposal into compliance

P.4 Design Techniques

There are numerous design techniques that can be used to reduce the visual impacts from surface-disturbing projects. The techniques described here should be used in conjunction with BLM's visual resource contrast rating process wherein both the existing landscape and the proposed development or activity are analyzed for their basic elements of form, line, color, and texture (FLCT).

This discussion of design techniques is broken down into two categories:

- **Design fundamentals** are general design principles that can be used for all forms of activity or development, regardless of the resource value being addressed. Applying these three fundamentals will help solve most visual design problems:
  - Proper siting or location
  - Reducing unnecessary disturbance
  - Repeating the elements of form, line, color, and texture
- **Design strategies** are more specific activities that can be applied to address visual design problems. Not all of these strategies will be applicable to every proposed project or activity:
  - Color selection
  - Earthwork

- Vegetative manipulation
- Structures
- Reclamation/restoration
- Linear alignment design considerations

The fundamentals and strategies are all interrelated, and when used together, can help resolve visual impacts from proposed activities or developments.

The techniques presented here are only a portion of the many design techniques available to help reduce the visual impacts resulting from surface-disturbing activities or projects. Further research into planning and design references and/or consultation with professional designers and engineers will help to further reduce the visual impacts of any development.

Appendix Q:
Pryor Mountain Wild Horse Range

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1975 Memorandum between Montana and Wyoming - Administration of the Pryor Mountain Wild Horse Range

APPENDIX 3.5: MEMO ON ADMINISTRATION ON THE PMWHR BETWEEN WYOMING AND MONTANA

OPTIONAL FORM NO. 10
MAY 1962 EDITION
GSA FPMR (41 CFR) 101-11.6

UNITED STATES GOVERNMENT

Memorandum

TO : District Manager, Billings District, Montana
District Manager, Worland District, Wyoming

DATE: MAR 18 1975

FROM : State Director, Montana
State Director, Wyoming

SUBJECT: Administration of the Pryor Mountain Wild Horse Range

This memo supersedes the memo of January 9, 1969, on the same subject. A new memo is deemed necessary for the dual purpose of 1) Shifting jurisdiction of additional national resource lands from the Worland District to the Billings District, and 2) Broadening and clarifying the nature of the responsibilities shifted.

On September 9, 1968, the Secretary of the Interior established the Pryor Mountain Wild Horse Range by so designating a block of approximately 29,700 acres of national resource lands in the State of Montana and 2,300 acres in the State of Wyoming. On September 9, 1969, the Assistant Secretary of the Interior designated an additional 1680 acres in the State of Wyoming as a part of the Pryor Mountain Wild Horse Range. Copies of the Federal Register publications for the two designations are attached.

Since that time, it has been determined and mutually agreed by the State Directors of Wyoming and Montana that an additional 2,360 acres of national resource land in Wyoming and 560 acres of national resource land in Montana be made a part of the Wild Horse Range to facilitate management pursuant to authority contained in Public Law 92-195. A description of this latter 2,360 acres is attached. In total, this will result in approximately 6,340 acres of national resource lands in Wyoming that will be a part of the Pryor Mountain Wild Horse Range.

Subject to valid existing rights, the lands involved in the Pryor Mountain Wild Horse Range are to be primarily administered for the protection and management of wild horses, wildlife, watershed, recreation, archaeological and scenic values.

The administration of the range requires close coordination with several State and Federal agencies and with representatives from a number of interest groups. Proper management of the resources makes it necessary for BLM personnel to spend considerable time on the site and to maintain close surveillance on resource conditions. The conditions and requirements of managing this special purpose area have dictated that one office of the Bureau be the focal point for administration.

Since a fraction of the total area is located in the State of Wyoming, and since the critical wildlife habitat is essential to species originating in Montana and the effect of watershed management accrues principally downstream in the State of Montana, it is only logical that the range in total should be administered by the Montana office of the Bureau.

Buy U.S. Savings Bonds Regularly on the Payroll Savings Plan
5010-108

A-50

The logic of total administration by the Montana office has been further demonstrated by the successful management of the range by the Billings office.

In view of the foregoing, it is reaffirmed that the Billings District Office will administer resource management in both the Montana and the Wyoming portions of the Pryor Mountain Wild Horse Range, including but not limited to grazing, wildlife, soil and watershed conservation, recreation, lands, minerals, forestry, fire, cadastral survey, access, etc. No action responsibilities beyond those functions of application or offer and maintenance of official records is intended by Wyoming offices.

As an example, all applications or offers filed pursuant to the public land and mineral leasing laws for national resource land in Wyoming within the range will be filed in Cheyenne and referred to the District Manager, Billings, Montana, for report and recommendations including any special stipulations necessary to further the objectives of the range.

For the purpose of coordination and record keeping, the State Director of Wyoming will be advised of all transactions involving lands in Wyoming in order that land office plats, statistical reports and improvement records may be kept current. Since the State of Wyoming is concerned with the enforcement of livestock sanitary measures, game management, recreation and its share of revenues from the public lands located within the borders of the state, all such matters including news releases and public information programs affecting Wyoming will be coordinated with the Worland District and State Director of Wyoming.

The contents of this memorandum are subject to periodic review and may be modified by mutual consent of the State Directors.

State Director
Wyoming

State Director
Montana

Attachments: Federal Register publications 9/12/68 and 9/13/69
Description of additional 2,360 Wyoming acres.

A-51

September 12, 1968 Federal Register Notice – Establishment of Pryor Mountain Wild Horse Range

FEDERAL REGISTER, VOL. 33, NO. 178—THURSDAY, SEPTEMBER 12, 1968

MONTANA AND WYOMING

Establishment of Pryor Mountain Wild Horse Range

1. Pursuant to the Classification and Multiple Use Act of September 19, 1964 (74 Stat. 986, 43 U.S.C. 1411), R.S. 2478 (43 U.S.C. 1201), the Act of October 15, 1966 (80 Stat. 913; 16 U.S.C. 460t), and the provisions of 43 CFR Subpart 1727, I hereby designate the public lands in the following described area as the Pryor Mountain Wild Horse Range and establish the rules for management of said Range.

MONTANA PRINCIPAL MERIDIAN

CARBON COUNTY, MONT.

T. 8 S., R. 28 E.,
Sec. 19, E½E½;
Sec. 20, all;
Sec. 21, W½, W½E½;
Sec. 28, W½;
Sec. 29, all;
Sec. 30, E½E½;
Sec. 31 E½E½;
Sec. 32 all;
Sec. 33 W½, W½SE¼.

T. 9 S., R. 27 E.,
Sec. 1, all;
Sec. 2, all;
Sec. 11, all;
Sec. 12, all;
Sec. 13, all;
Sec. 14, all;
Sec. 23, NE¼, E½SE¼;
Sec. 24, all;
Sec. 25, W½, NE¼, N½SE¼, SE¼SE¼.
T. 9 S., R. 28 E.,
Sec. 4, W½, W½E½, E½SE¼, SE¼NE¼;
Secs. 5–36, all lying west of the Bighorn River.
T. 9 S., R. 29 E.,
Sec. 18, all lying west of the Bighorn River.
T 10 S., R. 27 E.,
Sec. 1, lots 1 and 2.

SIXTH PRINCIPAL MERIDIAN

BIGHORN COUNTY, WYO.

T. 58 N., R. 95 W.,
Sec. 19, lot 1;
Sec. 20, N½;
Sec. 21, N½, SE¼, northeast diagonal ½ of SW¼;
Sec. 22, all;
Sec. 23, W½W½, E½NW¼, NE¼SW¼, N½SE¼;
Sec. 26, NW¼NW¼;
Sec. 27, N½;
Sec. 28, NE¼NE¼.

The area described aggregates approximately 32,000 acres.

The Pryor Mountain Wild Horse Range is a Class III natural environment area under the Bureau of Outdoor Recreation system of classification.

2. Subject to valid existing rights the area will be primarily administered for the protection and management of wild horses, wildlife, watershed, recreation, archeological, and scenic values.

3. The Pryor Mountain Wild Horse Range shall be in all respects subordinate to the Bighorn Canyon National Recreation Area established by the Act of October 15, 1966 (80 Stat. 913; 16 U.S.C. 460t), so far as it affects lands comprising any part of the Bighorn Canyon National Recreation Area. Wild horses within the area shall be managed by the Bureau of Land Management, in a manner that is compatible with the purposes for which the Bighorn Canyon National Recreation Area was established.

4. The Bureau of Land Management, for the public lands within the Range, and in cooperation with the National Park Service for the lands within the National Recreation Area, will develop and keep current a management plan for the Range which will provide for the management of the wild horses and their habitat within a balanced program which considers all public values and without impairment of the productivity of the land.

5. For purposes of management of the wild horses within the Range, the boundaries thereof shall conform to natural barriers and feasible fencing routes within the area described in paragraph 1 of this order. The lands are more particularly identified and delineated on plats or maps filed in the respective Land Offices. Lands which lie outside the meandering boundaries will be subject to existing domestic livestock grazing under the Taylor Grazing Act.

STEWART L. UDALL,
Secretary of the Interior.

SEPTEMBER 9, 1968.

[F.R. Doc. 68-11056; Filed, Sept. 11, 1968; 8:49 a.m.]

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Appendix R:
Wild and Scenic Rivers

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SUMMARY OF ELIGIBILITY, SUITABILITY, AND TENTATIVE CLASSIFICATION DETERMINATIONS FOR RIVERS IN THE BILLINGS FIELD OFFICE

Billings Field Office
5001 Southgate Drive
Billings, Montana

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Executive Summary

As part of the land use planning process for the Billings Resource Management Plan (RMP), a US Department of the Interior, Bureau of Land Management (BLM) interdisciplinary team and a contract team of Ecosystem Inc. staff analyzed all river and stream segments in the Billings Field Office administrative area (Planning Area) that were found to be eligible for inclusion in the National Wild and Scenic Rivers System (NWSRS). This included screening all Planning Area rivers to identify those with BLM surface ownership. These initial screening and identification efforts resulted in a list of rivers or river segments for further consideration in the inventory and study process.

Introduction

Section 5(d)(1) of the Wild and Scenic River (WSR) Act directs Federal agencies to consider potential wild and scenic rivers in their land and water planning processes ("..In all planning for the use and development of water and related land resources, consideration shall be given by all Federal agencies involved to potential national wild, scenic and recreational river areas"). To fulfill this requirement, whenever the BLM undertakes a land use planning effort (e.g., an RMP), it analyzes river and stream segments that might be eligible for inclusion in the NWSRS. The BLM, Billings Field Office, is revising its older land use plan. The revised RMP will provide a single, comprehensive land use plan that will guide management of public land administered by the Billings Field Office.

This report is a record of the wild and scenic river study that is being conducted concurrently with the Billings Field Office RMP revision. This report documents BLM's examination of Billings Field Office river segments as they relate to eligibility, suitability, and classification criteria in the WSR Act.

This report incorporates the Eligibility phase work performed under contract by Ecosystem Management Inc. with BLM staff input and support and uses that data for analysis by BLM staff for the completion of the Suitability phase. The two separate reports, the 2009 Wild and Scenic River Eligibility Report and this Suitability report, comprise the complete Wild and Scenic River evaluations process for the Billings Field Office.

What is a Wild and Scenic River?

Congress enacted the WSR Act to provide a national policy for preserving and protecting selected rivers and river segments in their free-flowing condition for the benefit and enjoyment of present and future generations. The WSR Act provides criteria that must be considered during the analysis. No rivers in the Planning Area are currently managed under the WSR Act.

Steps in the Wild and Scenic Rivers Study Process

The wild and scenic river study process is comprised of two main components: the inventory phase and the study phase. The inventory phase includes identifying eligible river and stream segments, assigning tentative classification (Wild, Scenic, or Recreational), and describing

protective management for the eligible segments. The study phase includes determining the suitability of eligible segments for inclusion in the NWSRS and describing interim management measures. The inventory is conducted during the data-gathering stage of RMP revision, and the study phase is done during formulation of the Draft RMP and Proposed RMP.

The inventory and evaluation process used by BLM to identify and evaluate river segments for potential inclusion into the National Wild and Scenic Rivers system is guided by the provisions of the Wild and Scenic Rivers Act and BLM planning guidance. Section 5(d) (1) of the Act directs federal agencies to consider potential wild and scenic rivers in the land and water planning processes. To fulfill this requirement, the BLM inventories and evaluates rivers when it develops comprehensive resource management plans for public lands in a specified area. A Notice of Intent to prepare the RMPs for the BiFO and Pompeys Pillar National Monument was published in the Federal Register on May 15, 2008. This notice served as the beginning of BLM's formal scoping process.

The notice was followed by a news release announcing scoping. In addition, over 1,200 scoping packages were mailed to potential stakeholders, agencies, organizations and tribes. A website for the Billings and Pompeys Pillar National Monument RMP was launched that provides the public access to planning documents, calendars, information on the planning process, as well as a photo gallery of the planning area. The website will continue to be updated throughout the planning process. Another news release was issued and postcards distributed to the mailing list in July 2008 announcing the dates, locations and times of seven public scoping open house meetings across the planning area. All of these outreach tools conveyed information about the planning process, preliminary planning issues, special designations and an overview of the planning area. The BLM hosted scoping open houses providing the public with opportunities to become involved, learn about the planning process, meet the RMP team members, provide scoping comments, and input on the plan.

In April 2009, BLM released the Final Wild and Scenic River Eligibility Report, Billings Field Office, Montana. Seven river segments were identified as eligible for further study in the land use plan. Additional information describing the inventory and evaluation process can be found in the report, which is also attached in Appendix R.

Eligibility Determination Considerations

The first part of BLM's wild and scenic river review process is to identify rivers that are eligible for NWSRS designation by Congress. To be eligible, a body of water must be a free-flowing river and must possess at least one outstandingly remarkable river-related value.

Is It a Free-Flowing River?

To be considered a free-flowing river, it must be a flowing body of water, or estuary, or section, portion, or tributary thereof, including rivers, streams, creeks, runs, kills, rills, and small lakes. A river can be any size or length, and does not have to be floatable or boat-able. For purposes of eligibility determination, the volume of flow is sufficient if it is enough to maintain any outstandingly remarkable river-related values identified. The body of water must be existing or

flowing in a natural condition without major modification of the waterway such as channelization, impoundment, diversion, straightening, and rip-rapping. However, some minor modifications can be allowed such as low dams, diversion works, and minor structures. The river can lie between impoundments or major dams.

Does It Have at Least One Outstandingly Remarkable Value?

The body of water must have at least one outstandingly remarkable river-related value, i.e., scenic, recreational, geologic, fish and wildlife, historic, cultural, or other similar values, such as biological, botanical, ecological, hydrological, and paleontological. In order to be assessed as "outstandingly remarkable," a river-related value must be a unique, rare, or exemplary feature that is significant at a regional or national level. A list of criteria used to help make this determination is included later in this appendix.

Tentative Classification Considerations

To protect wild and scenic values prior to Congressional designation, eligible river segments are tentatively classified and management measures instituted as necessary to ensure appropriate protection of the values supporting the eligibility and classification determinations.

Section 2(b) of the WSR Act specifies three classification categories: wild, scenic, and recreational. Classification is based on the type and degree of human developments associated with the river and adjacent lands as they exist at the time of the evaluation. Classifications cannot overlap.

- Wild rivers are free of impoundments and are generally inaccessible except by trail, with watersheds or shorelines essentially primitive and waters unpolluted.
- Scenic rivers are generally free of impoundments, with shorelines or watersheds still largely primitive and shorelines largely undeveloped but accessible in places by roads.
- Recreational rivers are readily accessible by road or railroad, may have some development along their shorelines, and may have small diversions and dams.

Eligibility Determinations for Rivers in the Billings Field Office

Review of Rivers Considered

All water bodies in Billings Field Office were evaluated for possible eligibility. Sources used to identify water bodies included the Nationwide Rivers Inventory (NRI) (National Park Service, 1982, 1986, 1988); any named stream found on a 1:100,000 map; the American Rivers Outstanding Rivers List: Montana (American Rivers, Inc., 1988).

Additional information was gathered from other federal and state agencies from scoping letters, existing documents, and applicable rivers lists on the internet. A Notice of Intent to prepare the RMP for the Billings and Pompeys Pillar National Monument was published in the Federal Register on May 15, 2008. This notice served as the beginning of BLM's formal scoping

process. The notice was followed by a news release announcing scoping. Over 1,200 scoping packages were mailed to stakeholders, agencies, organizations and tribes. News release and postcards were distributed in July 2008 announcing the dates, locations and times of seven public scoping open house meetings across the planning area. All of these outreach tools conveyed information about the planning process, preliminary planning issues, special designations and an overview of the planning area, including requests for information for special designations, including Areas of Critical Environmental Concern (ACECs) and Wild and Scenic River information and nominations.

A total of 129 written submissions and e-mails were received by September 19, 2008. Only one scoping comment was received on wild and scenic rivers. The commenter requested that no rivers be designated.

The Draft Wild and Scenic Eligibility Report was prepared and submitted for review to the RMP cooperating agencies. Comments were received from Montana Fish, Wildlife and Parks (MFWP), the Yellowstone Conservation District and the Eastern Montana Resource Advisory Council (RAC).

MTFWP concurred with BLM's findings regarding fish values. They also suggested that the entire Yellowstone River segment through the planning area met the criteria for outstandingly remarkable recreational values. BLM has no authority to determine eligibility of river segments that adjoin private, state, or other federally administered lands.

The Yellowstone Conservation District requested clarification on whether eligibility findings affect other lands. BLM clarified that the agency only considers values on segments adjacent to BLM-administered lands.

The Eastern Montana Resource Advisory Council (RAC) appointed several members to serve as liaisons to the planning process. The RAC liaison input with regard to the Bear Canyon Creek segment involved additional research and site visits. Through this process, it was determined that the Bear Canyon Creek segment length would be 1.6 miles (instead of ¼ mile in the preliminary findings) to include the furthest extent of the intermittent cottonwood riparian zone.

In addition, the following other sources were used to identify potentially eligible rivers:

- Montana Department of Fish, Wildlife and Parks databases;
- Forest Management Plans and Wild and Scenic Rivers Eligibility Assessments from the Custer and Gallatin National Forests.

From these sources and information, the BiFO developed an inventory list for consideration. The identification of river and stream segments evaluated for potential eligibility included 14 individual river segments within the BiFO decision area. Refer to Billings Field Office Rivers and Streams Analyzed for Eligibility – Appendix D for a list of the results from the identification effort (http://www.blm.gov/mt/st/en/fo/billings_field_office/rmp/docs.html).

Region of Consideration

To be considered outstandingly remarkable, wild and scenic river values must be outstanding in a regional context. Each identified free-flowing river was considered in the context of which of the above regional types it flows within.

Summary of Determinations

The segments above were plotted on BLM 1:100,000 Surface Management Maps and measured. Based on the eight Outstandingly Remarkable Values (ORV) categories, a list of potential values was developed for each segment. For each value of each segment, information was developed then compared with similar values outside the general region and evaluated against the ORV criteria**.** The BLM resource specialists conducted this review for each of their areas of expertise using their knowledge, available inventory information and publications. A team review for all segments was conducted on three separate occasions to assure the information was accurate and met the criteria of the study. Seven of the 14 segments evaluated were determined eligible because they contained one or more ORVs. A complete list of all segments and the resource values that were evaluated is found in Appendix R under "Final Eligibility Report (April, 2009). This appendix displays all the resource values that were evaluated, whether they did or did not meet the ORV criteria and the rationale for the determination.

Documentation of Eligibility: Criteria for Determining Outstandingly Remarkable Values

1. **Scenic.** The landscape elements of landform, vegetation, water, color, and related factors must result in notable or exemplary river-related visual features and/or attractions within the geographic region. The BLM Visual Resource Inventory Handbook, H-8410-1, may be used in assessing visual quality and in evaluating the extent of development upon scenic values. The rating area must be scenic quality "A" as defined in the Handbook. However, scenic quality "A" does not, by itself, constitute an outstandingly remarkable value. When analyzing scenic values, additional factors such as seasonal variations in vegetation, scale of cultural modifications, and length of time negative intrusions are viewed may be considered. Scenery and visual attractions may be highly diverse over the majority of the river segment length and not common to other rivers in the geographic region.

2. **Recreational.** Recreational opportunities are or have the potential to be unusual enough to attract visitors to the geographic region. Visitors are willing to travel long distances to use the river resources for recreational purposes. River-related recreation opportunities could include, but not be limited to: sightseeing, wildlife observation, camping, photography, hiking, fishing, hunting, and boating. Interpretive opportunities may be exceptional and attract or have the potential to attract visitors from outside the geographic area. The river may provide or have the potential to provide settings for national or regional commercial usage or competitive events. In addition, the river may be eligible if it is determined to provide a critically important regional recreation opportunity or be a significant component of a regional recreation opportunity spectrum setting.

3. **Geologic**. The river or the area within the river corridor contains an example(s) of a geologic feature, process, or phenomenon that is rare, unusual, or unique to the geographic region. The feature(s) may be in an unusually active stage of development, represent a textbook example, and/or represent a unique or rare combination of geologic features (erosional, volcanic, glacial, and other geologic structures).

4. **Fish**. Fish values may be judged on the relative merits of either fish populations or habitat, or a combination of these river-related conditions.

   a) Populations. The river is nationally or regionally one of the top producers of resident, indigenous, and/or anadromous fish species. Of particular significance may be the presence of wild or unique stocks, or populations of State, federally listed, or candidate threatened and endangered species.
   b) Habitat. The river provides exceptionally high-quality habitat for fish species indigenous to the region. Of particular significance is habitat for state, federally listed, or candidate threatened and endangered species.

5. **Wildlife.** Wildlife values may be judged on the relative merits of either river-related wildlife populations or habitat, or a combination of these conditions.

   a) Populations. The river or area within the river corridor contains nationally or regionally important populations of resident or indigenous wildlife species dependent on the river environment. Of particular significance may be species considered to be unique or populations of state, federally listed, or candidate threatened and endangered species.
   b) Habitat. The river or area within the river corridor provides exceptionally high-quality habitat for wildlife of national or regional significance, or may provide unique habitat or a critical link in habitat conditions for state, federally listed, or candidate threatened and endangered species. Contiguous habitat conditions are such that the biological needs of the species are met.

6. **Cultural**. The river or area within the river corridor contains a site(s) where there is evidence of river-related occupation or use by Native Americans. Sites must be rare, have unusual characteristics, or exceptional human interest value(s). Sites may have national or regional importance for interpreting prehistory, may represent an area where a culture or cultural period was first identified and described, may have been used concurrently by two or more cultural groups, or may have been used by cultural groups for rare or sacred purposes.

7. **Historic.** The river or area within the river corridor contains a site(s) or feature(s) associated with a significant river-related event, an important person, or a cultural activity of the past that was rare or unusual in the region. A historic site(s) and/or feature(s) in most cases is 50 years old or older. Sites or features listed in, or eligible for inclusion in, the National Register of Historic Places, may be of particular significance.

8. **Other Similar Values**. While no specific evaluation guidelines have been developed for this category, additional values deemed relevant to the eligibility of the river segment include, but are not limited to, hydrologic, ecologic/biologic diversity, paleontological, botanic, and scientific study opportunities. They should be considered in a manner consistent with the foregoing guidance.

Eligibility Findings

The resource specialists identified seven river segments (Figure 1) (for the entire list, see the Final Eligibility Report, section 3.1) that contain one or more ORVs and are determined eligible for study. These were the following:

- Bad Canyon Creek
- Bear Canyon Creek
- Crooked Creek – Above Fish Barrier
- Crooked Creek – Below Fish Barrier
- Gyp Spring
- Piney Creek
- Yellowstone River – Pompeys Pillar

The following provides a brief description of each of the eligible segments that were evaluated for study. For more detailed overview and description of outstandingly remarkable values associated with each of the following seven segments, refer to the **Billings Field Office Rivers and Streams Analyzed for Eligibility** (http://www.blm.gov/mt/st/en/fo/billings_field_office/rmp/docs.html).

Figure 1: Maps of River Segments

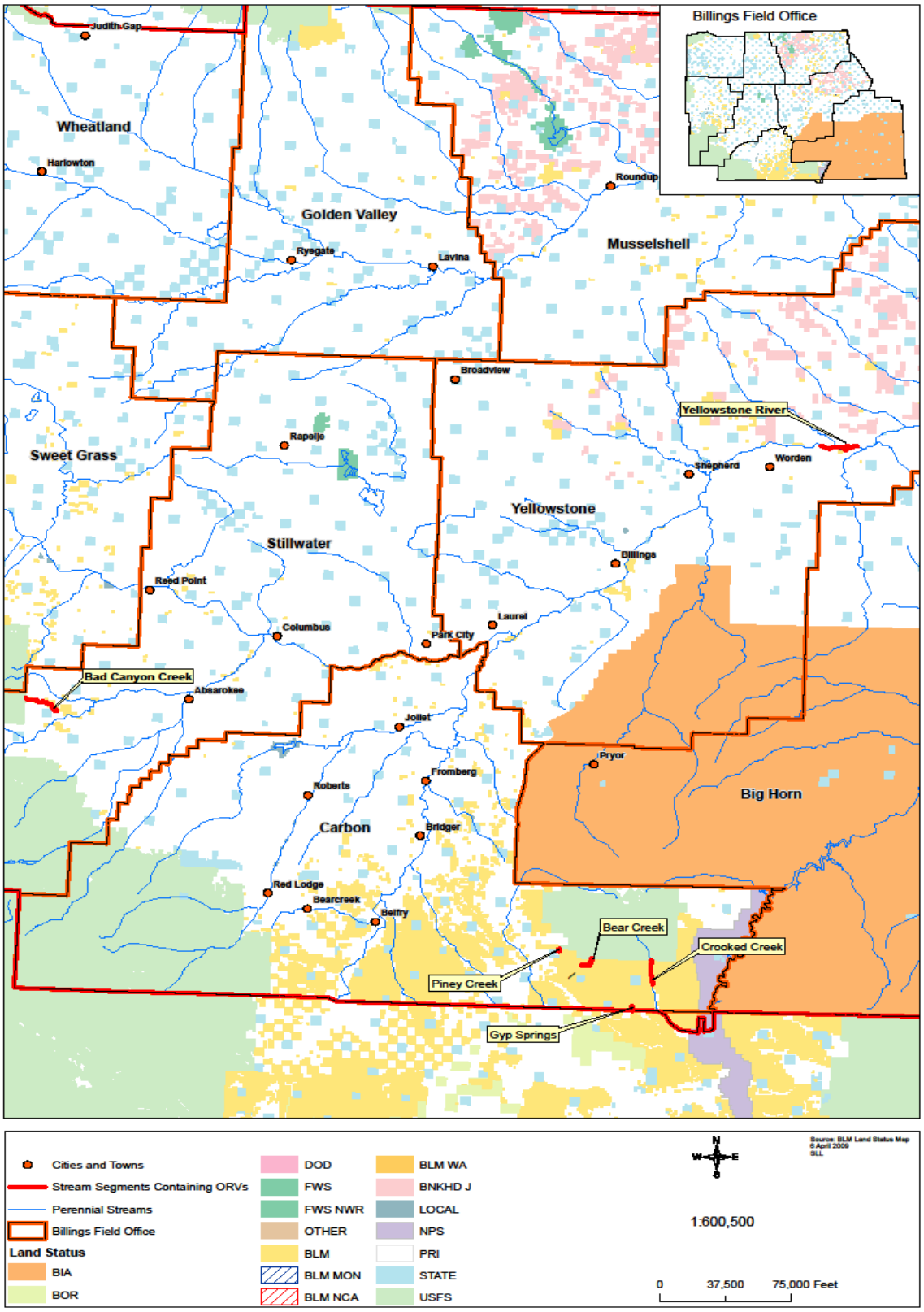


Figure 2: Bad Canyon

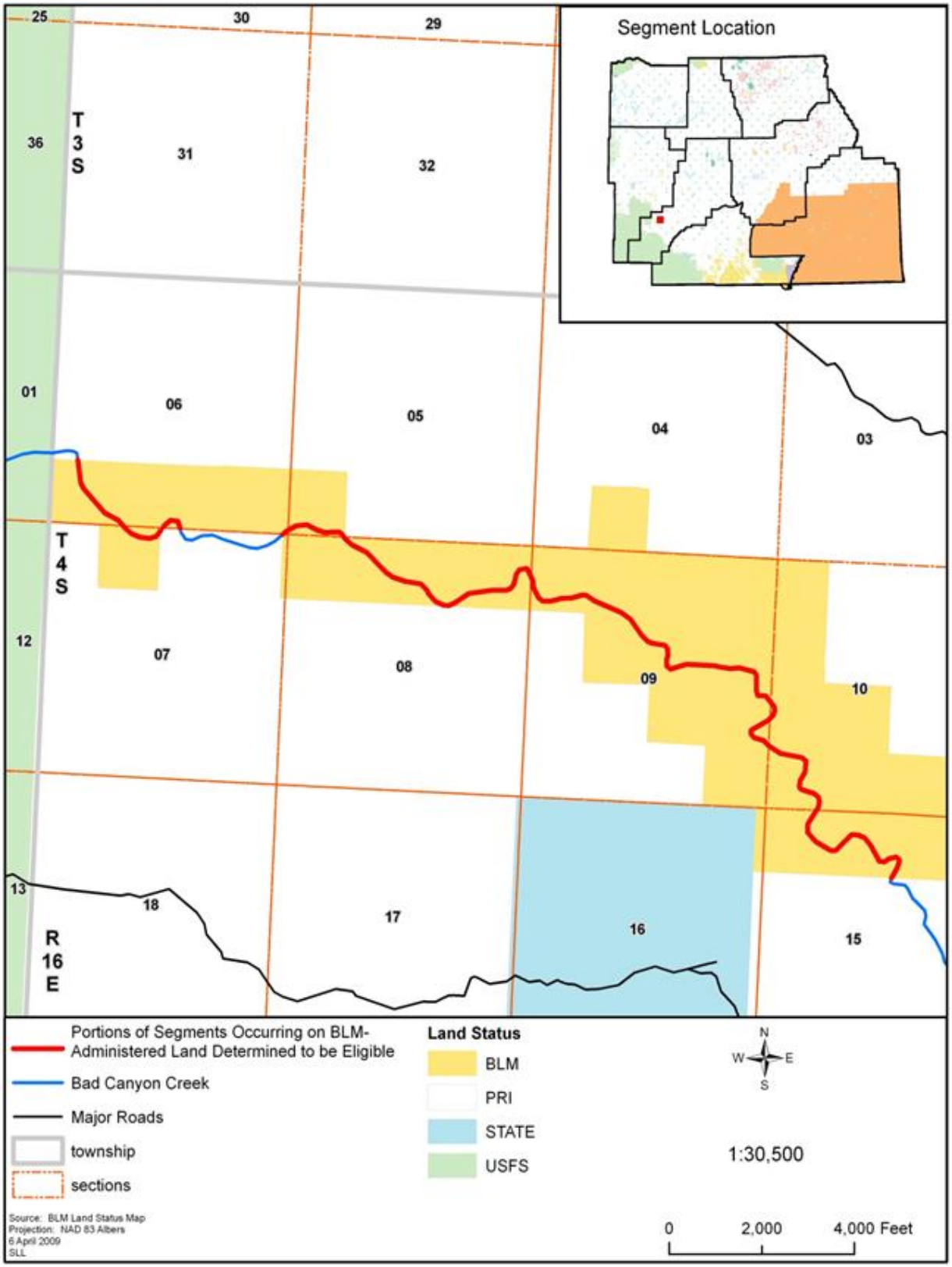


Figure 3: Bear Canyon

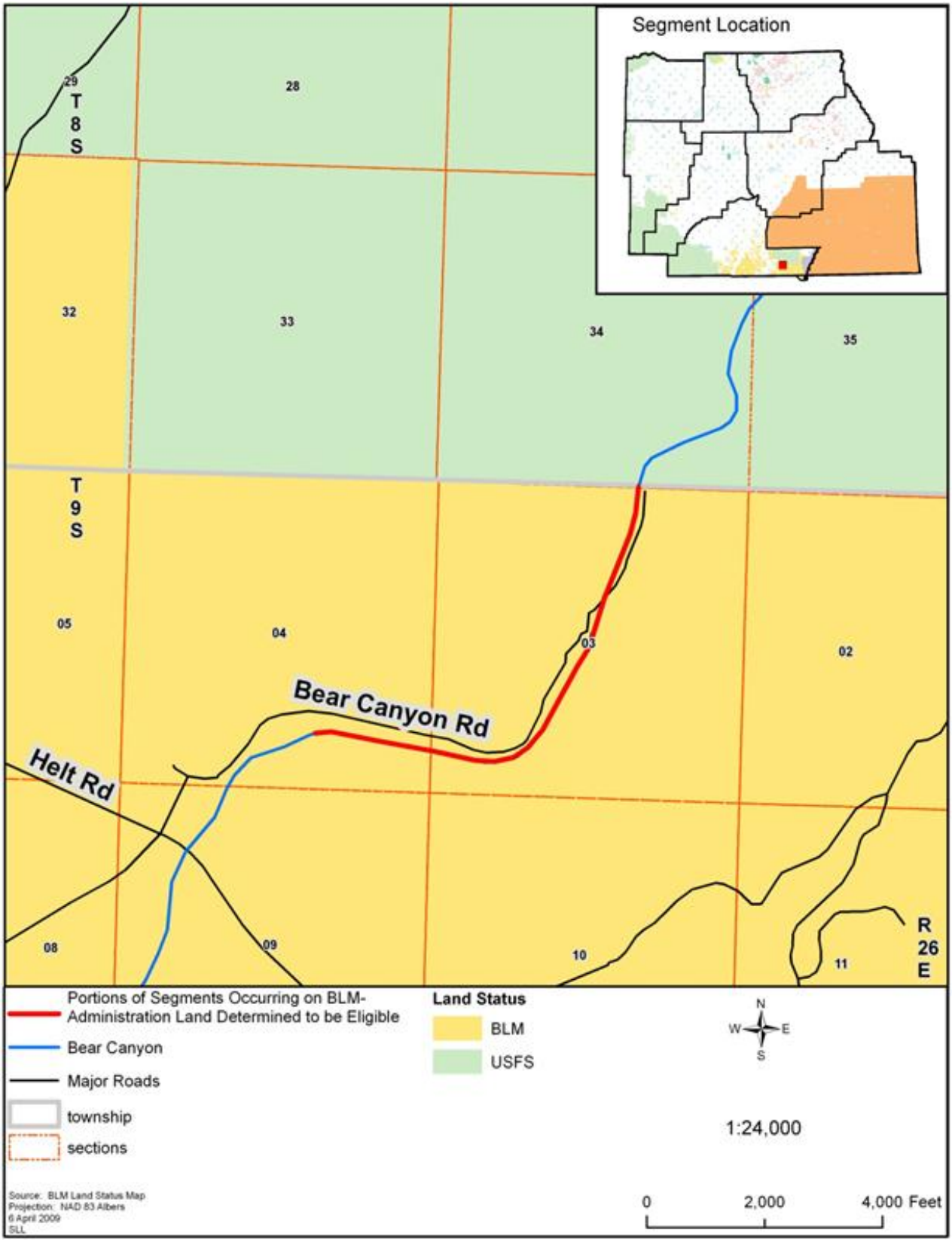


Figure 4: Crooked Creek – Above Fish Barrier

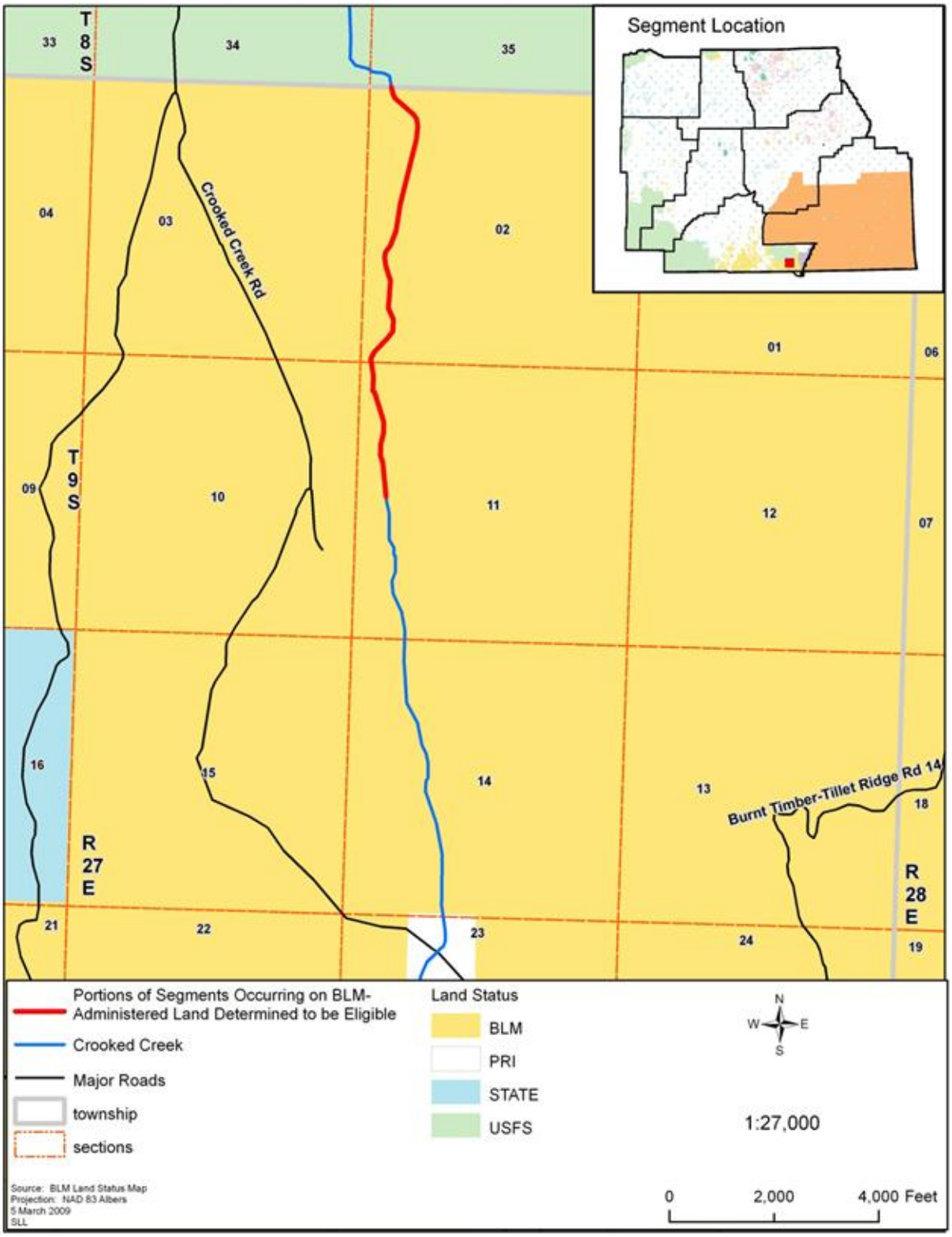


Figure 5: Crooked Creek – Below Fish Barrier

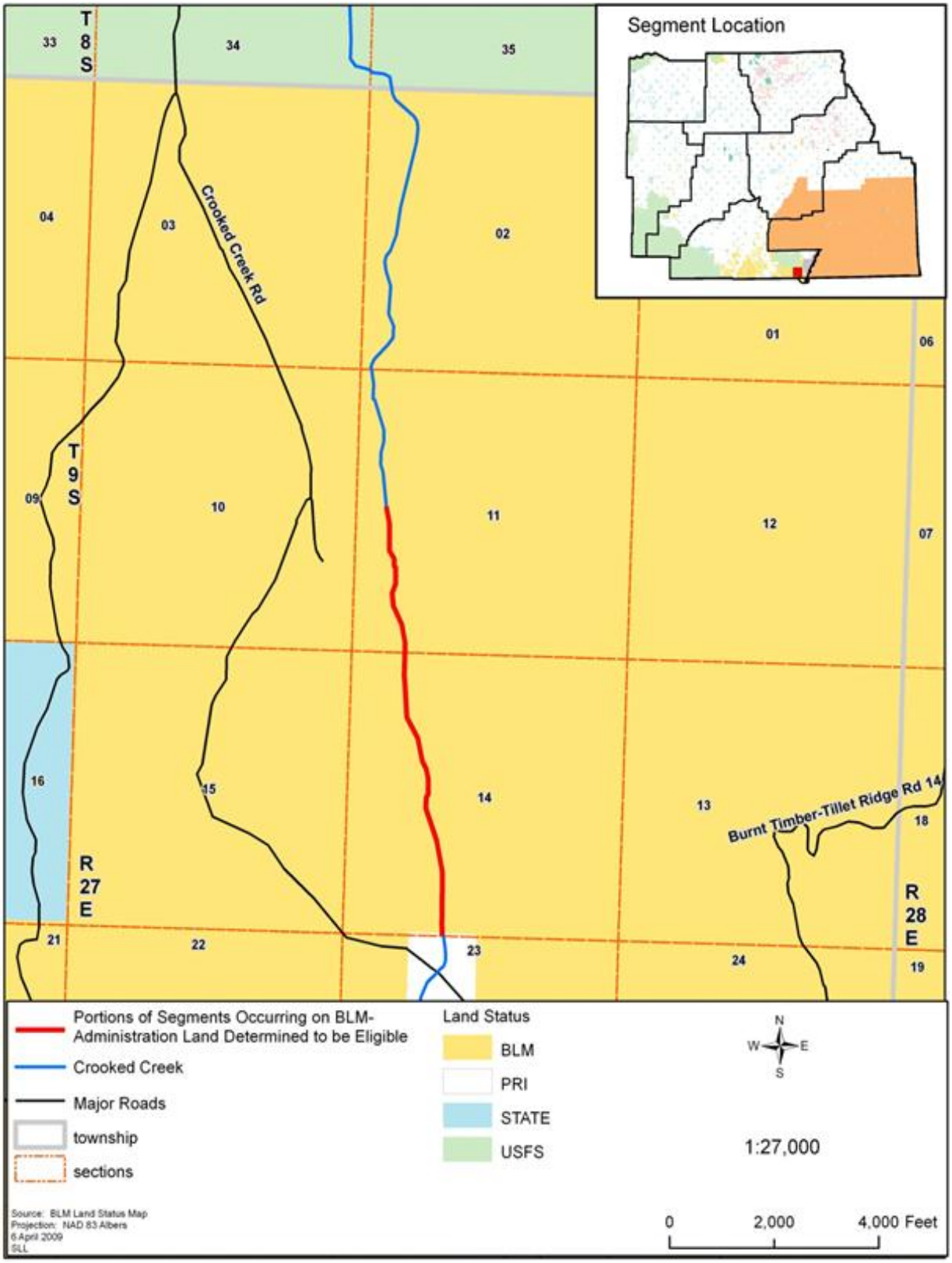


Figure 6: Gyp Springs

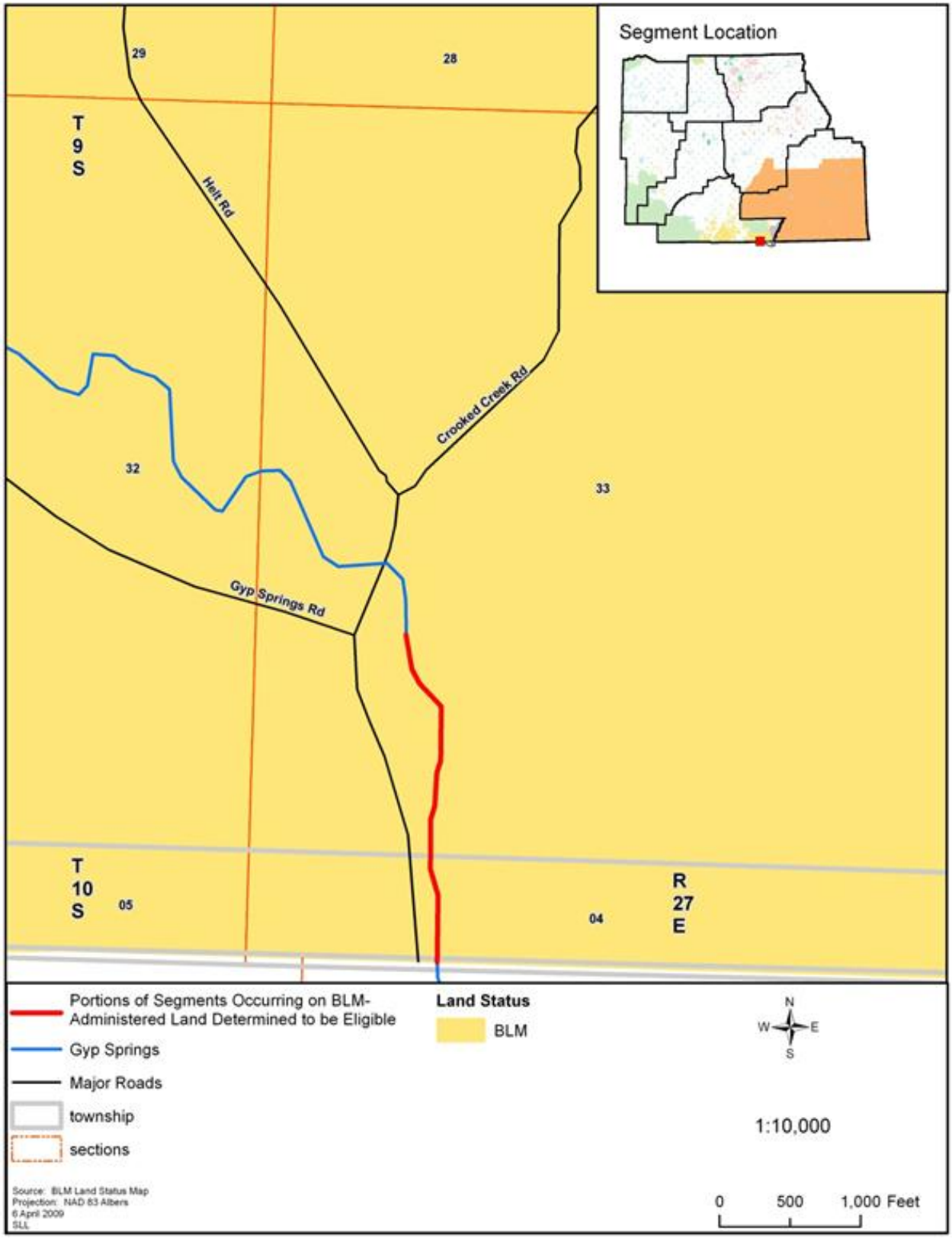


Figure 7: Piney Creek

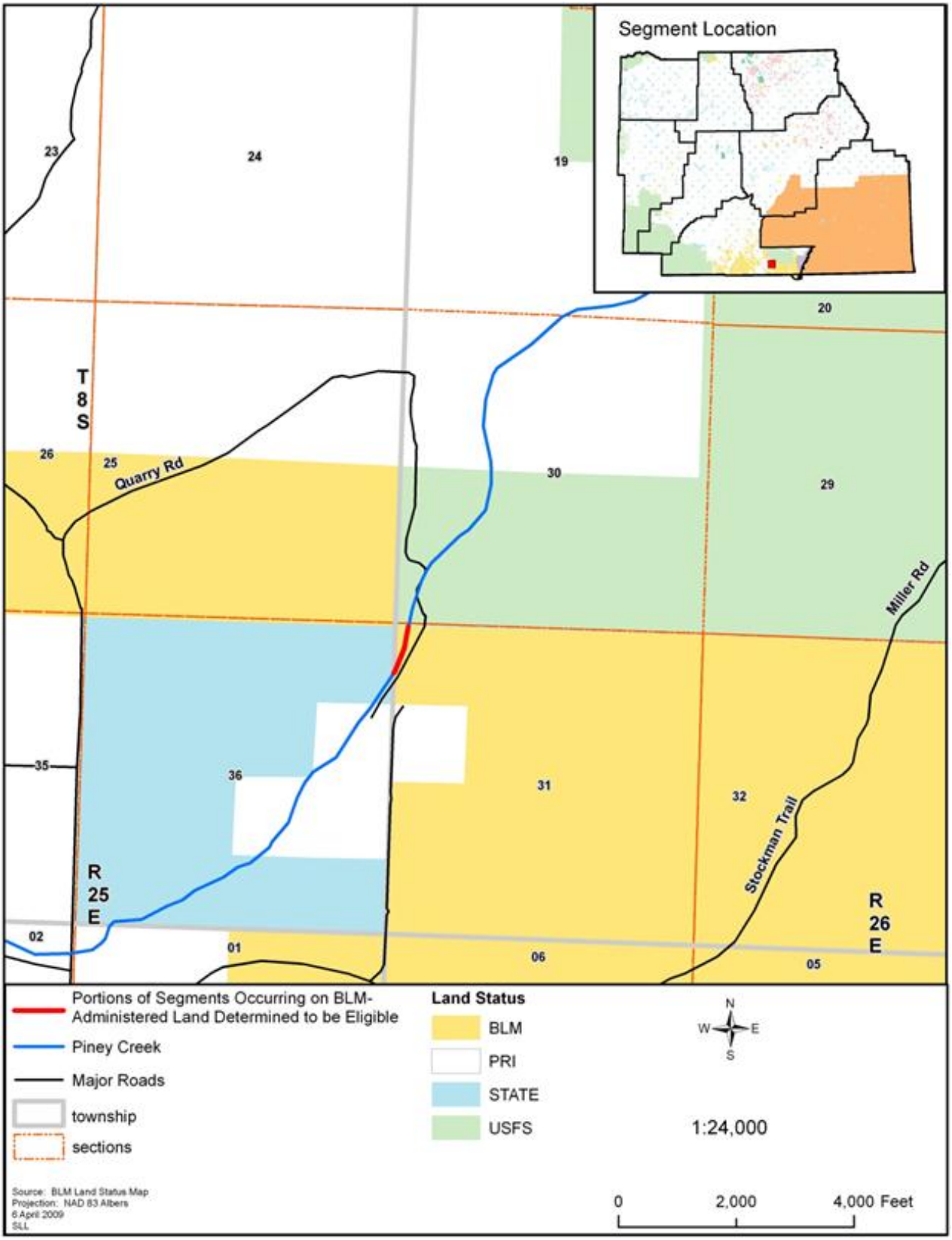
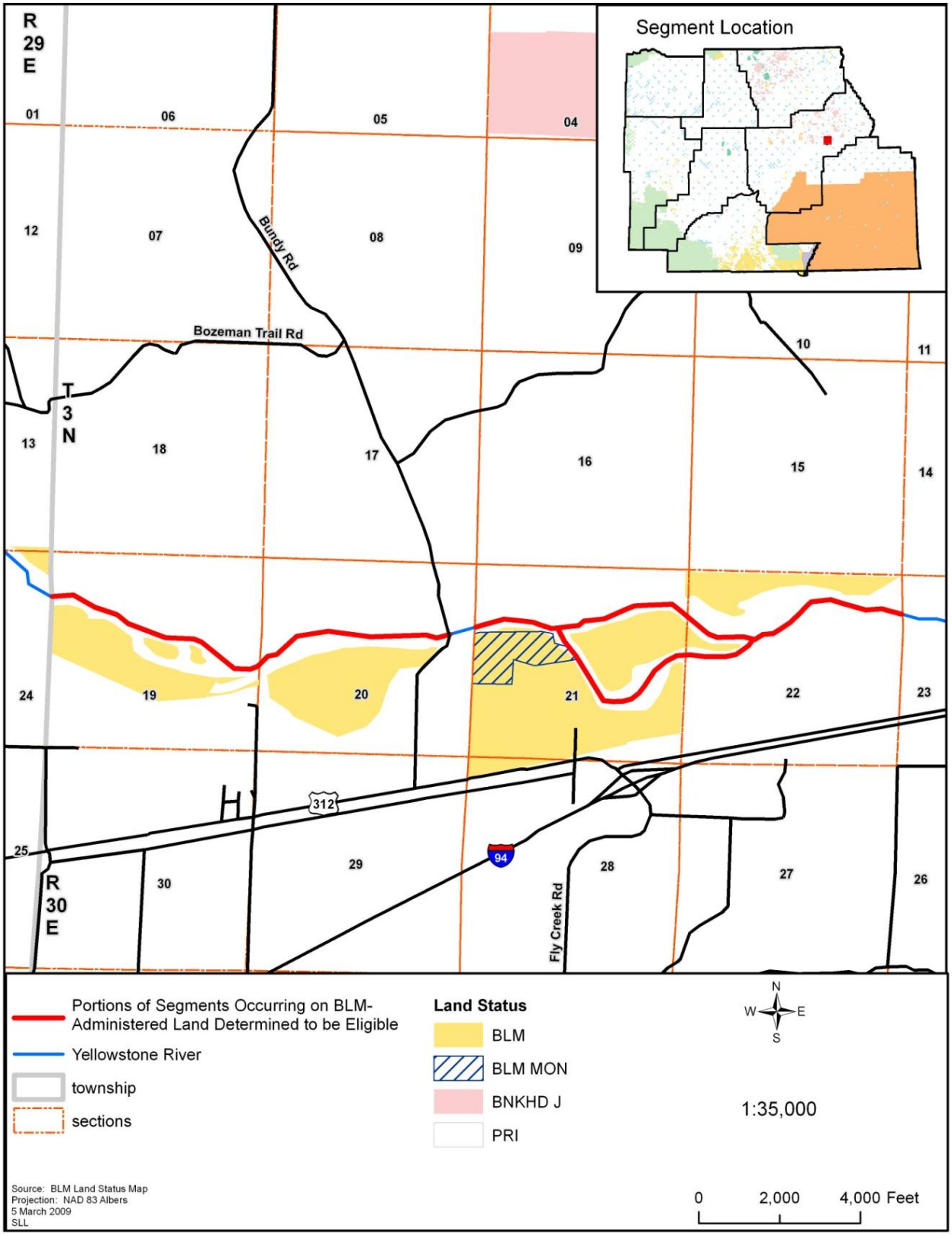


Figure 8: Yellowstone River – Pompeys Pillar



Suitability Determinations for Rivers in the Billings Field Office

Following the Eligibility Determination, the next step in the river assessment process is the determination of suitability. The purpose of the study phase is to determine whether eligible river segments are suitable or unsuitable for inclusion in the NWSRS, per WSR Act criteria. BLM Manual guidance identifies certain factors to be considered when completing the suitability study. The suitability determination is influenced by the unique characteristics and conditions associated with each particular river. Additional factors may be considered as they apply to a specific segment.

The suitability evaluation does not result in actual designation but only a recommendation for those river segments identified as suitable for designation. Only Congress can designate a wild and scenic river. In some instances, the Secretary of the Interior may designate a wild and scenic river when the governor of a state, under certain conditions, petitions for a river to be designated. Congress would ultimately choose the legislative language if any suitable segments are presented to them. Water-protection strategies and measures to meet the purposes of the WSR Act would be the responsibility of Congress in any legislation proposed. Rivers found unsuitable would be dropped from further consideration and would be managed according to the objectives outlined in the RMP.

Suitability is designed to answer these questions:

1. Should the river's free-flowing character, water quality, and ORVs be protected, or are one or more other uses important enough to warrant otherwise?

2. Will the river's free flowing character, water quality, and ORVs be protected through designation? Is it the best method for protecting the river corridor? In answering these questions, the benefits and impacts of WSR designation must be evaluated, and alternative protection measures considered.

3. Is there a demonstrated commitment to protect the river by any nonfederal entities that may be partially responsible for implementing protective management?

As provided by Sections 4(a) and 5(c) of the Wild and Scenic Rivers Act, the following factors were considered and documented as appropriate, as the basis of the study:

1. Characteristics which do or do not make the area a worthy addition to the National System.

2. The current status of land ownership, minerals (surface and subsurface), use in the area, including the amount of private land involved and associated or incompatible uses. Jurisdictional consideration must be taken into account to the extent that management would be affected.

3. The reasonably foreseeable potential uses of the land and water that would be enhanced foreclosed or curtailed if the area were included in the National System and the values which could be foreclosed or diminished if the area is not protected as part of the system.

4. The federal agency that will administer the area should it be added to the National System.

5. Federal, state, local, tribal, or other interests in designation or non-designation of the river, including the extent to which the agency proposes that administration of the river, including the costs thereof, are shared by state and local agencies.

6. The estimated cost to the United States of acquiring necessary lands and interests in lands and of administering the area should it be added to the National System. Section 6 of the WSRA outlines policies and limitations of acquiring lands or interests in land by donation, exchange, consent of owners, easement, transfer, assignment of rights, or condemnation within and outside established river boundaries.

7. A determination of the degree to which the state or its political subdivisions might participate in the preservation and administration of the river should it be proposed for inclusion in the National System.

8. The federal agency's ability or other mechanisms (existing or potential) to protect and manage the identified river related values other than WSR designation and the state/local government's ability to manage and protect the ORVs on nonfederal lands. Such mechanisms may include, for example, statewide programs related to population growth management, vegetation management, water quantity or quality, or protection of river-related values such as open space and historic areas.

9. An evaluation of the adequacy of local zoning and other land use controls in protecting the river's ORVs by preventing incompatible development. This evaluation may result in a formal finding that the local zoning fulfills Section 6(c)'s requirements, which in turn preempts the federal government's ability to acquire land through eminent domain if the river is designated.

10. Support or opposition to designation. Assessment of this factor will define the political context. The interest in designation or non-designation by federal, state, local and tribal governments and national and local publics should be considered, as well as the state's political delegation.

11. Historical or existing rights which could be adversely affected. In determining suitability, consideration of any valid existing rights must be afforded under applicable laws (including the WSRA), regulations, and/or policies.

12. The consistency of designation with other agency plans, programs or policies and in meeting regional objectives. Designation may help or impede the "goals" of other tribal, federal, state or local agencies. For example, designation of a river may contribute to state or regional protection objectives for fish and wildlife resources. Similarly, adding a river which includes a limited recreation activity or setting to the National System may

help meet statewide recreation goals. Designation might, however, limit irrigation and/or flood control measures in a manner inconsistent with regional socioeconomic goals.

13. The contribution to river system or basin integrity. This factor reflects the benefits of a "systems" approach, i.e., expanding the designated portion of a river in the National System or developing a legislative proposal for an entire river system (headwaters to mouth) or watershed. Numerous benefits are likely to result from managing an entire river or watershed, including the ability to design a holistic protection strategy in partnership with other agencies and the public.

River Segment Suitability Discussion and Findings

River Name: Bad Canyon Creek

Location, ORV description, and classification:
The Bad Canyon Creek segment is located on the east side of the Beartooth Mountains in Stillwater County, approximately 34 miles northwest of Red Lodge, Montana (Figure 2). Most of the immediate surrounding lands are public lands managed by BLM.

Bad Canyon Creek supports a population of Yellowstone Cutthroat Trout (YCT) (*Oncorhynchus clarkii bouvieri*) that has been designated a "core population" by the Interstate YCT Coordination Team. A core population is one that exhibits no hybridization and is essentially a genetically pure strain. This pure strain of YCT is very valuable in that they can be used to enhance other YCT populations or establish new populations in suitable waters.

These fish values are recognized nationally by the fisheries community. The ecological and sociological impact of losing a pure strain species is significant in itself. YCT are also listed as a Species of Concern by the MFWP and a federally sensitive species by the BLM and U.S. Forest Service (USFS). The BLM, MFWP, and USFS reinforced a significant natural barrier to upstream migration of non-native species in 2003. This barrier is located approximately five miles upstream from the lower BLM boundary; therefore most of the segment is not safe from the potential for non-native hybridization.

Access to the canyon is difficult resulting in little impact from adjacent land uses. High canyon walls, rock armoring, and limited access combine to provide excellent fish habitat and a setting that is primitive in nature. The presence of the core population of YCT in Bad Canyon Creek combined with the isolated, primitive setting of the canyon meets the criteria of an outstandingly remarkable value.

The proposed boundary is approximately 0.25 mile on from river bank on either side of the river. This river segment has been tentatively classified as scenic through the eligibility phase.

The current status of land ownership, minerals (surface and subsurface), use in the area, including the amount of private land involved and associated or incompatible uses.

(Jurisdictional consideration must be taken into account to the extent that management would be affected.):
BLM Segment Length: 4.5 miles
Total Segment Length: 5.0 miles

This stream originates in the USFS Custer National Forest and flows easterly to its confluence with the Stillwater River. The stream is too narrow and shallow for navigation by watercraft of any size. Access to the segment is limited by private land. Although there is a primitive road to the segment, the private landowner does not grant motorized access to public lands. Public access to Bad Canyon Creek on public lands is limited to walk-in access, requiring a strenuous hike on an unmarked and unmaintained 2½ mile trail with 1,300 feet of elevation change.

The BLM lands along this segment are available for livestock grazing. Private lands in the area are primarily used for livestock grazing.

It is free of impoundments although in the upper portion of the segment there is the small natural barrier noted above that was reinforced to serve as a fish barrier. The shoreline is mostly undeveloped and mostly primitive in nature. There are a few visible livestock fences that cross the segment and an ATV trail used by the local rancher for livestock management on his lands.

There is one access road that that follows the creek a short distance near the upper end of the segment.

The lands were burned extensively during the Derby fire in 2006. This transformed much the lands from an extensively timbered landscape to a grassland complex. The fire burned the riparian zone as well as most infrastructures (range developments, an illegal cabin, etc.). Most of the large cottonwoods survived and there has been substantial natural rehabilitation all along the fire path**.**

There are no active oil and gas leases present.

The reasonably foreseeable potential uses of the land and water which would be enhanced, foreclosed or curtailed if the area were included in the NWSRS, and the values which could be foreclosed or diminished if the area is not protected as part of the NWSRS:

The YCT core population could be further enhanced and protected. Existing cooperative efforts between BLM, Custer NF and MFWP have been managing the YCT core population in this segment. Efforts to further protect core populations could occur with or without inclusion in the NWSRS.

Potential opportunities exist to acquire additional lands or easements around this segment, with or without inclusion in the NWSRS. Possible, but not anticipated, increased visitation due to the inclusion in the NWSRS of this segment could jeopardize public access opportunities and/or create user/private landowner conflicts.

Existing water rights could potentially impact management of this segment if included in the NWSRS

Grazing on the BLM land could be subject to increased restrictions if the segment were included in the NWSRS. The BLM would monitor the effects of cattle access to the river to ensure that grazing use is not adversely affecting the outstandingly remarkable values. If restrictions are necessary to protect river values, the BLM would work with the grazing allotment permittee to establish adequate restrictions.

The federal agency or state agency that will administer the river and/or area should it be added to the NWSRS:
The Bureau of Land Management would have sole responsibility for this segment; if the National Forest finds its segment suitable, the management may be shared.

Federal, state, local, tribal, or other interests in the designation or non-designation of the river, including the extent to which the agency proposes that administration of the river, including the costs thereof, be shared by state, local, or other agencies and individuals:
Local and State Government have not indicated whether they support or oppose designation of Bad Canyon Creek as a WSR segment.

The USDA-Forest Service Gallatin/Custer NF may be interested in participating in joint management if their adjacent river segment is also designated. The BLM, MFWP and USFS already cooperate jointly in management actions for the protection of the YCT and this would continue.

The estimated cost to the United States of acquiring necessary lands and interest in lands and of administering the area should it be added to the NWSRS:
Any land acquisition would only be accomplished with willing sellers and it is unlikely that private land holders would be willing to sell the land. The BLM would be capable of managing for the protection and enhancement of the outstandingly remarkable values without acquiring any lands. However, if BLM seeks acquisition of this small parcel of private land in order to have a continuous 0.25-mile corridor, land prices would be set at current prices. Costs of administration would be minimal.

A determination of the degree to which the state or its political subdivisions might participate in the preservation and administration of the river should it be proposed for inclusion in the NWSRS:
It is not anticipated that the state or local governments would participate beyond what is currently being done for the protection of the YCT and the elimination of invasive weeds. MFWP would likely want to continue to manage for the recreational fisheries in this segment. This would be complimentary to the recreational outstandingly remarkable value that is linked to fishing opportunities.

The federal agency's ability or other mechanisms (existing or potential) to protect and manage the identified river-related values other than WSR designation and/or the state/local government's ability to manage and protect the ORVs on non-federal lands:
BLM is a cooperating agency in the YCT Conservation Strategy and existing agreements with MWFP and the Custer NF are in place to protect the species in this river segment.

The BLM is able to manage its lands along the west bank of the segment for the protection of identified river-related values through its RMP. In this RMP a Class II VRM classification would protect the scenic and geologic values along the segment. This classification would not limit development but would provide protection through project design mitigation. Other methods of managing to protect values would be with-drawing the corridor from all mineral entry and proposing a No Surface Occupancy for Oil and Gas.

The agency might also assist in placement of conservation easements on adjacent private lands.

An evaluation of the adequacy of local zoning and other land use controls in protecting the river's ORVs by preventing incompatible development:
No local zoning for the private lands.

Support or opposition to designation:
During the scoping period for the RMP, no support or opposition to designation of this segment was submitted. The public review of the draft RMP provided an opportunity for other agencies and the public to review the preliminary findings and voice opposition or support. There was no opposition. The lands were also evaluated for their wilderness characteristics (Naturalness, Primitive Recreation, Outstanding Solitude and its unique resources – archeological, geological, wildlife, etc.), and there was support for management for these attributes.

Historical or existing rights which could be adversely affected:
There are water claims on Bad Canyon Creek for various uses along its entire length. It does not appear that there is a reserve water right on the creek to maintain a minimum flow. There are active grazing permits (Allotments 5492, 5585, 55548, 5562, and 5558) for the BLM land and grazing is the historic use of the private land along Bad Canyon Creek and these would be affected if there is a management decision to restrict this activity. There is a newly proposed (FY 2014) 100 KV power line which is being prepared by Northwest Energy, the path of which would cross the canyon in T 4 S., R 16 E., Sections 9 and 10, and there is an existing 15 KV power-line owned by Beartooth Electric in T. 4 S., R. 16 E., section 14.

The consistency of designation with other agency plans, programs or policies and in meeting regional objectives:
Designation of this segment would be consistent with the objectives of the BLM's Billings Field Office RMP. Designation of this segment would complement the fisheries and recreational goals of the MFWP.

The USFS has not completed a study for this river unit. Designation would be consistent with the USFS eligibility determination, but successful management in part would depend on a similar suitability determination from USFS.

The contribution to river system or basin integrity:
From a practical standpoint it is likely in this case that a total system management strategy can be pursued with a focus on the total watershed in conjunction with the National Forest. Some benefits are likely to result from managing the entire river, including the ability to design and then implement a holistic protection strategy in partnership with other agencies and the public.

The potential for water resources development:
It is unlikely that further water impoundments would be installed on Bad Canyon Creek. It is unlikely flood control, hydropower facilities, dredging or diversions or channelization of Bad Canyon Creek will occur.

Finding: Suitable □Non-suitable X
Rationale: Management policies, goals and objectives are already in place to protect the values of this segment. Existing agreements between local, state, and federal agencies are in place to specifically protect and further enhance the YCT core population.

River Name: Bear Canyon Creek

Location, ORV description, and classification:
The Bear Canyon Creek segment is located at the south end of the Pryor Mountains in Carbon County approximately seven miles east of Warren, Montana (Figure 3). Water for this segment originates from a spring at the BLM-National Forest boundary. The length of flowing water in the canyon varies from ¼ mile to over a mile depending upon moisture conditions and time of year. The stream is too narrow and shallow for navigation by watercraft of any size. Originally, the segment length was ¼ mile; however, public comments during review of the draft report suggested the segment should be longer. After an on-site evaluation, the segment was lengthened to include the lower extent of the cottonwood intermittent riparian zone.

Visitors to Montana who want to see Blue-gray Gnatcatchers (*Polioptila caerulea*) and Black-throated Gray Warblers (*Dendroica nigrescens*) visit Bear Canyon because this is only place in Montana where these birds can be seen. This opportunity receives international attention through the National Audubon Society via their website (http://mtaudubon.org/birds/areas.html).

Listed by the National Audubon Society as an IBA (important bird area), Bear Canyon supports breeding populations of more than a dozen species on the Montana Priority Bird Species List. In particular, Bear Canyon has the highest known number of nesting Blue-gray gnatcatcher in Montana. Bear Canyon and a few nearby foothill canyons at the base of the Pryor Mountains constitute the entire range in Montana of this bird species. The State of Montana ranks this species as "S1" or at high risk due to extremely limited and potentially declining numbers. Both the BLM and the Forest Service also consider the Blue-gray Gnatcatcher a sensitive species. The riparian area and adjacent uplands of Bear Canyon also support other State Sensitive bird species such as the Loggerhead Shrike (*Lanius ludovicianus*), Sage Thrasher (*Oreoscoptes montanus*), Common Poorwill (*Phalaenoptilos nuttallii*) and Pinyon Jay (*Gymnorhinus cyanocephalus*).

Cultural elements in the landscape include a vision quest site, a buffalo kill site, tipi rings, petroglyphs, and habitation sites. The vision quest site was noted at the time of recording to have a vision quest structure on top of a rock formation. The evidence of occupation and use, especially for sacred purposes, meets the criteria for being an outstandingly remarkable value.

This segment has been tentatively classified as recreational through the eligibility phase process. The proposed boundary is approximately 0.25-mile on from river bank on either side of the river.

The current status of land ownership, minerals (surface and subsurface), use in the area, including the amount of private land involved and associated or incompatible uses. (Jurisdictional consideration must be taken into account to the extent that management would be affected.):
BLM Segment Length: 1.62 miles
Total Segment Length: 1.62 miles

All BLM lands in the proposed WSR segment are in public ownership and Custer NF forms the northern boundary of this segment. There are some possible valid existing rights (mining claims).

There are no active oil and gas leases present.

A variety of opportunities currently exist in this area, including wildlife viewing, hunting, and dispersed recreation. It is free of impoundments. Livestock grazing is readily evident throughout the entire corridor. Public access is through a two-track road that parallels a portion of the lower segment, often within several hundred feet of the segment. There is a non-motorized trail which follows the upper segment.

The reasonably foreseeable potential uses of the land and water which would be enhanced, foreclosed or curtailed if the area were included in the NWSRS, and the values which could be foreclosed or diminished if the area is not protected as part of the NWSRS:
Inclusion in the NWSRS could further protect the bird species (Audubon IBA); however, this may negatively impact hunting, if restricted. Dispersed recreation and primitive camping could be enhanced, while motorized recreation may be adversely affected if restricted.

The federal agency or state agency that will administer the river and/or area should it be added to the NWSRS:
Bureau of Land Management

Federal, state, local, tribal, or other interests in the designation or non-designation of the river, including the extent to which the agency proposes that administration of the river, including the costs thereof, be shared by state, local, or other agencies and individuals:
Local and State Government have not indicated whether they support or oppose designation of Bad Canyon Creek as a WSR segment. No comments have been received through the planning process in either support or opposition to designation.

The USDA-Forest Service Gallatin/Custer NF may be interested in participating in joint management if their adjacent river segment upstream is also designated.

The estimated cost to the United States of acquiring necessary lands and interest in lands and of administering the area should it be added to the NWSRS:
No lands would need to be acquired since all lands are public and costs of administration would be minimal.

A determination of the degree to which the state or its political subdivisions might participate in the preservation and administration of the river should it be proposed for inclusion in the NWSRS:
It is not anticipated that the state or local governments would participate beyond what is currently being done for the elimination of invasive weeds.

The federal agency's ability or other mechanisms (existing or potential) to protect and manage the identified river-related values other than WSR designation and/or the state/local government's ability to manage and protect the ORVs on non-federal lands:
The Billings RMP has identified some management measures which would protect the resources. These include closure of the existing vehicle route on the top end of the canyon and its designation as a non-motorized trail, an ongoing effort with the local county for invasive weed management, etc.

An evaluation of the adequacy of local zoning and other land use controls in protecting the river's ORVs by preventing incompatible development: Local zoning and other land use controls do not pertain to this segment because it is entirely located on Federal lands.

Support or opposition to designation:
There is support from certain non-governmental organizations (ex: Wilderness society, National Audubon Society, American Rivers, Pryor Coalition, etc.) to further acknowledge the important values associated with this segment. A finding of suitability may further their goals/objectives particularly for the bird species in this area. It is unknown whether the Native American tribes with affinity to this area would support or oppose a WSR designation. OHV users may object to designation due to the proximity of a major travel access in the lower reaches of the canyon and fear that its use may be restricted or lost.

Local and State Government support or opposition is unknown. Neither viewpoint has been expressed in the planning responses.

Historical or existing rights which could be adversely affected:
There is an active grazing permit (Allotment 4115) for the BLM land and grazing is the historic use of the private land along Bear Canyon Creek and this would be affected if there is a management decision to restrict this activity.

There are no ROWs present.

The consistency of designation with other agency plans, programs or policies and in meeting regional objectives:
BLM management policies address protection for cultural, wildlife and special status species. Current recreational use is compatible with the bird population. Motorized recreation is currently limited to designated routes and the trail within the upper canyon is only open for non-motorized use with a major motorized route in proximity to the lower portion. Current BLM policies provide protection for the sensitive bird species and cultural resources. The designation would be consistent with the Billings RMP.

The contribution to river system or basin integrity:
A limited contribution based on the size of the watershed and the size of the river segment.

The potential for water resources development:
Not enough year-round flow to lead to water development. Direct recreational use of water (fishing, floating, etc.) is not a feature of the area or Bear Creek and is unlikely in the future.

Values foreclosed/diminished:
Inclusion of this segment in the NWSRS could increase visitation and possibly this could impact the bird species in the IBA. Currently, visitation levels to the entire Pryor Mountain area are increasing as its resources are being actively marketed and are becoming better known. An additional designation may possibly attract additional users.

An increase in visitation to the area could adversely impact the integrity of the archeological sites.

Finding: **Suitable □ Non-suitable X**
Rationale: Current BLM policies provide protection for the sensitive bird species and cultural resources, while providing for the recreational opportunities and experiences. The motorized route along the lower portion of the river segment is a major access route into the Pryor Mountain and the type of activity is in conflict with the type of recreational activity expected for a suitable river segment. The upper portion which is a non-motorized trail along the river segment is the only portion appropriate to designation for the recreation ORV.

River Name: Crooked Creek above the Fish Barrier

Location, ORV description, and classification:
Located in Carbon County, Crooked Creek originates in the southern portion of the Pryor Mountains within the Custer National Forest and flows south onto public lands and towards Wyoming (Figure 4). The stream is too narrow and shallow for navigation by watercraft of any size and is inaccessible except with extreme difficulty by foot. See map 3 in the Eligibility Section.

This segment flows through the Burnt Timber Canyon Wilderness Study Area (WSA) and is rated as Class I for visual resource management. The current management objective is to maintain the existing character of the landscape. The deeply incised Crooked Creek Canyon cuts

through several hundred feet of the Pryor Mountain limestone strata. The combination of the dense riparian vegetation along Crooked Creek and the steep talus slopes of the canyon walls offer unique and outstandingly remarkable scenery.

The Pryor Mountains offer a unique combination of resource values that attract local, regional, and national visitors. This segment offers access to opportunities including fishing for a genetically pure strain of Yellowstone Cutthroat Trout, bushwhacking in a pristine riparian canyon, viewing Pryor Mountain wild horses at one of their limited watering sources and exploring for caves and bats in the canyon's limestone walls.

The Crooked Creek – Above Fish Barrier segment supports a population of Yellowstone Cutthroat Trout (YCT) (*Oncorhynchus clarkii bouvieri*) that has been designated a "core population" by the Interstate YCT Coordination Team. A core population is one that exhibits no hybridization and is essentially a genetically pure strain. This pure strain YCT is very valuable in that fish can be used to enhance other YCT populations or establish new populations in suitable waters. These fish values are recognized nationally by the fisheries community. The ecological and sociological impact of losing a pure strain species is significant in itself. YCT are listed as a Species of Concern by the MFWP and a federally sensitive species by the BLM and U.S. Forest Service. A fish barrier at the downstream end of the segment will maintain the genetic purity of this YCT population. Adjacent land uses have had little effect on this segment because the segment is within the WSA. The fish habitat is in good condition. High canyon walls, rock armoring, and limited access combine to provide a setting that is primitive in nature.

Although there is public motorized to within ¼ mile of the canyon bottom, visitors must hike through dense brush with no trails to reach the canyon bottom. The presence of the core population of YCT in Crooked Creek combined with the isolated, primitive setting of the canyon meets the criteria of an outstandingly remarkable value.

The Crooked Creek – Above Fish Barrier segment has a landscape with significant archaeological properties. The Demijohn Flat Archaeological District was listed on the National Register of Historic Places (NRHP) in 1974 as District # 74001092 (24CB478).

The Demijohn Flat Archaeological District retains archaeologically intact remnants of proto-historic period Crow tipi habitation. The size and relatively pristine nature of the site warrants protection. Beyond the registered archaeological district other sites include the petroglyphs (24CB205) and other nearby sites (additional tipi rings) possibly could be considered elements in a broad landscape associated with the archaeological district. This segment of the Crooked Creek Demijohn Flat Archaeological District retains unique qualities of outstanding scientific value on at least a regional level.

The tentative Classification is wild.
The proposed boundary is approximately 0.25-mile from river bank on either side of the river segment.

The current status of land ownership, minerals (surface and subsurface), use in the area, including the amount of private land involved and associated or incompatible uses. (Jurisdictional consideration must be taken into account to the extent that management would be affected.):
BLM Segment Length: 1.59 miles
Total Segment Length: 1.59 miles

In a 1992 Forest Plan amendment, the Custer National Forest determined Crooked Creek as being eligible for WSR study with cultural, fisheries, geologic and scenic values being outstandingly remarkable. At the forest boundary Crooked Creek flows onto BLM-administered lands for three miles before entering private lands. This three-mile reach on BLM was segmented at a fish barrier which is located close to the middle of the reach.

The area is currently used predominantly for recreational purposes such as hiking, camping, and providing access to climbing and caving areas.

There are no private lands along the river segment.

The BLM constructed the fish barrier for the protection of the native trout species.

The BLM and partners have monitored the canyon for the presence and condition of several bat species.

Extraction of minerals in the area does not currently occur in accordance with the WSA designation.

There are no active oil and gas leases present.

The reasonably foreseeable potential uses of the land and water which would be enhanced, foreclosed or curtailed if the area were included in the NWSRS, and the values which could be foreclosed or diminished if the area is not protected as part of the NWSRS:
If the lands continue to be a WSA or becomes a designated Wilderness, reasonably foreseeable potential land uses would be compatible with the protection and enhancement of the segment's outstandingly remarkable values. If the WSA designation is removed by Congress without designating it as Wilderness, then the area could be opened to an array of potential land uses.

Inclusion in the NWSRS may attract additional visitation which could impair the values associated with the segment by potential introduction of aquatic nuisance and/or undesirable species.

If the WSA designation was removed and the segment was designated in the NWSRS, mineral leasing and extraction would continue to be restricted under the RMP.

The federal agency or state agency that will administer the river and/or area should it be added to the NWSRS:
The Bureau of Land Management for the public lands and the Custer/Gallatin National Forest for the river segment on their lands.

Federal, state, local, tribal, or other interests in the designation or non-designation of the river, including the extent to which the agency proposes that administration of the river, including the costs thereof, be shared by state, local, or other agencies and individuals:
This segment is entirely within BLM-administered lands and adjacent to Custer NF lands in which Crooked Creek was determined to be eligible for further WSR study. Cost could be shared with the Custer National Forest if the entire stream length is acted upon and designated. It is not anticipated that State or Local Agencies would assume management responsibility.

The estimated cost to the United States of acquiring necessary lands and interest in lands and of administering the area should it be added to the NWSRS:
All lands are public lands, so there are no acquisition costs. Costs of administration would be minimal.

A determination of the degree to which the state or its political subdivisions might participate in the preservation and administration of the river should it be proposed for inclusion in the NWSRS:
It is not anticipated that the state or local governments would participate in the preservation and administration of the river segment beyond the current management efforts (control of invasive species, management of sensitive species, etc.).

The federal agency's ability or other mechanisms (existing or potential) to protect and manage the identified river-related values other than WSR designation and/or the state/local government's ability to manage and protect the ORVs on non-federal lands:
BLM does not have the authority to regulate land uses upstream of the eligible segment, however, the Custer NF determined the Crooked Creek segment (on forest lands) to be eligible for further study. There are no non-federal lands present.

The area is recognized as containing wilderness characteristics through the WSA designation and additional Lands with Wilderness Characteristics (LWC) inventory. With or without inclusion in the NWSRS, certain management policies are in place through the WSA and the Resource Management Plan decisions to protect the values associated with this segment.

Protection and enhancement of the recreational and scenic outstandingly remarkable values are currently provided by the areas designation as a WSA. The management goals and objectives within the WSA are compatible with management as an eligible segment. WSA designation is temporary. Congress has the ability to either designate the area as Wilderness under the Wilderness Act, or remove the WSA designation entirely. If WSA designation is removed, the area would be managed in accordance with the RMP. Removal of WSA designation, without making it a designated Wilderness area, could open the area to land uses such as timber harvest and mineral activity. Introduction of these land uses in the area could degrade the riparian

corridor and result in impacts on the recreational and scenic outstandingly remarkable values that make the segment a worthy addition to the NWSRS.

An evaluation of the adequacy of local zoning and other land use controls in protecting the river's ORVs by preventing incompatible development:
Local zoning and other land use controls do not pertain to this segment because it is entirely located on Federal lands.

Support or opposition to designation:
There is support from a range of non-governmental entities for the potential designation of this segment of the rivers as a WSR. It is recognized as possessing significant resources and warranting protection. Local and State Governments have not made their position known, however they have been generally opposed to special designations of most kinds due to the perception of additional restrictions. Native American tribes with affinity to the area generally favor additional restrictions for cultural resources, however it is unknown whether they support or oppose designation.

Historical or existing rights which could be adversely affected:
There are no known historical or existing rights that could be adversely affected with designation. There are no Rights of Ways (ROWs) present.

The consistency of designation with other agency plans, programs or policies and in meeting regional objectives:
These uses are compatible with the protection and enhancement of the segment's outstandingly remarkable values. The Wilderness Study Area (WSA) protects the ORVs associated with this segment. WSA management policies protect the WSA values from impairment. Inclusion in the NWSRS could further enhance the ORVs, could be compatible with the Custer NF eligibility determination and would be compatible with the Billings FO RMP.

Existing cooperative efforts between BLM, Custer NF and MFWP have been managing the Yellowstone Cutthroat Trout core population in this segment. Efforts to further protect core populations could occur with or without inclusion in the NWSRS. The WSA Management Protection prescriptions found in the BLM Manual currently protects the ORVs associated with this segment. Lands within the PMWHR are also managed for the benefit of the wild horses and there are secondary values that the PMWHR are also managed for, including cultural, paleontological and wildlife values.

The contribution to river system or basin integrity:
Some benefits are likely to result from managing the entire river, including the ability to design and then implement a holistic protection strategy in partnership with other agencies and the public.

The potential for water resources development:
The flows in the river segment are generally low except for the spring runoff. The potential for water resource development is low. It is unlikely flood control, hydropower facilities, dredging or diversions or channelization of will occur.

Finding: Suitable X Non-suitable □
Rationale: existing management, WSA, PMWHR, YCT Conservation strategy, etc.) currently protects wilderness characteristics and ORVs, should Congress release the WSA from further study, the area would be managed as an ACEC. Inclusion in the NWSRS has the potential to attract regional/national visitation to the area and may negatively impact the ORVs but BLM management measures are in place to control the use. Additional visitation could also be positive in terms of marketing the resources and acquiring funding. The river segment should be designated as "wild" due to its inclusion in the existing WSA, the quantity, diversity, and quality of the resources present. Existing agreements between local, state, and federal agencies are in place to specifically protect and further enhance the YCT core population.

River Name: Crooked Creek below the Fish Barrier

Location, ORV description, and classification:
Located in Carbon County, Montana, Crooked Creek originates in the southern portion of the Pryor Mountains within the Custer National Forest (

Figure 5). The creek flows out of the national forest onto BLM-administered lands for approximately three miles before entering private lands. The stream is too narrow and shallow for navigation by watercraft of any size, and is inaccessible except by foot with extreme difficulty. This three-mile reach on BLM was segmented above and below an existing fish barrier. This segment is below the fish barrier and is shown on Map 3.

This segment flows through the Burnt Timber Canyon Wilderness Study Area (WSA) and is rated as Class I for visual resource management. The current management objective is to maintain the existing character of the landscape. The deeply incised Crooked Creek Canyon cuts through several hundred feet of the Pryor Mountain limestone strata. The combination of the dense riparian vegetation along Crooked Creek and the steep talus slopes of the canyon walls offer unique and outstandingly remarkable scenery.

The Pryor Mountains offer a unique combination of resource values that attract local, regional and national visitors. This segment offers access to opportunities including bushwhacking in a pristine riparian canyon, viewing Pryor Mountain wild horses at one of their limited watering sources and exploring for caves and bats in canyon's limestone canyon walls.

The Crooked Creek – Below Fish Barrier segment has a landscape with significant archaeological properties. The Demijohn Flat Archaeological District was listed on the NRHP in 1974 as District # 74001092 (24CB478). The Demijohn Flat Archaeological District retains archaeologically intact remnants of proto-historic period Crow tipi habitation. The size and relatively pristine nature of the site warrants protection. Beyond the registered district other sites include the petroglyphs (24CB205) and other nearby sites (additional tipi rings) possibly could be considered elements in a broad landscape associated with the district area. This segment of the Crooked Creek Demijohn Flat Archaeological District retains unique qualities of outstanding scientific value on at least a regional level.

This segment has been tentatively classified as scenic through the eligibility phase of the process.

The proposed boundary is approximately 0.25-mile on from river bank on either side of the river.

The current status of land ownership, minerals (surface and subsurface), use in the area, including the amount of private land involved and associated or incompatible uses. (Jurisdictional consideration must be taken into account to the extent that management would be affected.):
BLM Segment Length: 1.56 miles
Total Segment Length: 1.56 miles

This segment is entirely within the Burnt Timber Canyon WSA and has motorized public access to within less than ¼ mile of the canyon rim. It is free of impoundments, although there is a man-made fish barrier at the beginning of the segment. The shoreline is undeveloped and primitive. There is little evidence of livestock grazing. There are no improvements or evidence of man (except for the old road which has been designated as a non-motorized trail).

This segment is currently managed as a WSA and part of the Pryor Mountain Wild Horse Range PMWHR).

There are no active oil and gas leases present.

The reasonably foreseeable potential uses of the land and water which would be enhanced, foreclosed or curtailed if the area were included in the NWSRS, and the values which could be foreclosed or diminished if the area is not protected as part of the NWSRS:
The Wilderness Study Area (WSA) generally protects the ORVs associated with this segment. Management policies protect the WSA values from impairment and restrict actions which could have adverse effects on WSR values. Inclusion in the NWSRS could further enhance the ORVs, similarity, enhance and protect the WSA values, and could be compatible with the Custer NF eligibility determination.

No additional restrictions would likely occur (the WSA designation provides management to protect the values of the area).

Potential exists to create user conflicts if or not included in the NWSRS with the private landowners on the southern boundary of this segment. (Note: Members of the public expressed concern regarding the tentative management classification of this segment (scenic) and felt it qualified to be classified as "wild", considering it is already within a WSA).

The federal agency or state agency that will administer the river and/or area should it be added to the NWSRS:
The Bureau of Land Management for the public lands and the US Forest Service for the river segment on adjacent FS lands managed by them.

Federal, state, local, tribal, or other interests in the designation or non-designation of the river, including the extent to which the agency proposes that administration of the river, including the costs thereof, be shared by state, local, or other agencies and individuals:
This segment is entirely within BLM administered public lands. This segment terminates on the southern boundary at private property.

The estimated cost to the United States of acquiring necessary lands and interest in lands and of administering the area should it be added to the NWSRS:
Acquisition of lands or interest in lands (willing buyer/willing seller) is possible but not likely and would not be necessary.

A determination of the degree to which the state or its political subdivisions might participate in the preservation and administration of the river should it be proposed for inclusion in the NWSRS:
MFWP is actively involved in a cutthroat trout restoration and protection program with the BLM and USFS in this river segment. It is expected that their involvement in the protection and enhancement of the fisheries outstandingly remarkable values would continue.

The federal agency's ability or other mechanisms (existing or potential) to protect and manage the identified river-related values other than WSR designation and/or the state/local government's ability to manage and protect the ORVs on non-federal lands:
The WSA Management Protection policies currently protect the ORVs associated with this segment. Lands within the PMWHR are managed for the benefit of the wild horses as well as other resources. There are secondary values that the PMWHR are managed for, including cultural, paleontological and wildlife.

The Custer NF determined the Crooked Creek segment (on forest lands) to be eligible for further study. The area is recognized as containing wilderness characteristics through the WSA designation. With or without inclusion in the NWSRS, management policies are in place through the WSA and PMWHR management prescriptions to protect the values associated with this segment. Other methods of managing to protect values would be with-drawing the corridor from all mineral entry and proposing a No Surface Occupancy for Oil and Gas.

An evaluation of the adequacy of local zoning and other land use controls in protecting the river's ORVs by preventing incompatible development:
Local zoning and other land use controls do not pertain to this segment because it is entirely located on Federal lands.

Support or opposition to designation:
There is both support and opposition to the potential designation of this segment as a WSR. It is recognized as having significant resources and warranting some level of protection, including the adjacent landowner, but there are also individuals and organizations opposed for a variety of reasons, chiefly for the perceived consequences of designation. It is unknown whether the Native American tribes with affinity to this area would support or oppose a WSR designation.

Historical or existing rights which could be adversely affected:
There are no known historical or existing rights that would be adversely affected by designation. There are no Rights of Ways (ROWs) present.

The consistency of designation with other agency plans, programs or policies and in meeting regional objectives:
Designation would be consistent with the Billings BLM RMP and the work being done with other agencies regarding management of this segment.

The contribution to river system or basin integrity:
Some benefits are likely to result from managing the entire river, including the ability to design and then implement a holistic protection strategy in partnership with other agencies and the public.

The potential for water resources development:
The flows in the river segment are generally low except for the spring runoff. The potential for water resource development is low. It is unlikely flood control, hydropower facilities, dredging or diversions or channelization of will occur.

Finding: Suitable X Non-suitable □
Rationale: Although current management prescriptions (WSA, PMWHR, LWC, etc.) currently protects wilderness characteristics and ORVs, should Congress release the WSA from further study, the area would be managed as an ACEC, but not necessarily protect other values. Inclusion in the NWSRS has the potential to attract regional/national visitation to the area and may negatively impact the ORVs but management prescriptions are in place to protect the resources. The inclusion of the river segment as suitable would be consistent with WSA, PMWHR, and LWC prescriptions. Existing agreements between local, state, and federal agencies are in place to specifically protect and further enhance the YCT core population.

River Name: Gyp Spring

Location, ORV description, and classification:
The Gyp Springs segment is located in Carbon County, approximately 12 miles southeast of Warren, Montana (Figure 6). This segment originates from Gyp Springs, an important source of livestock and wildlife water. The stream is too narrow and shallow for any navigation by watercraft of any size. Access to segment is through well maintained county and BLM graveled roads. .

In 1864, Jim Bridger, famed early trapper and mountain man, and later guide for the Captain William Reynolds Exploration military and emigrant parties, blazed what would become known as Bridger Cutoff, an alternative route for a section of the Bozeman Trail emigrant route. The present day Gyp Springs Road (still in-use) follows generally along the Bridger Cutoff through the Gyp Springs area. The trail passes directly through and continues west of Gyp Springs. The spring was likely used historically as a watering and camp site and was an integral part of Bridger Cutoff of the Bozeman Trail. The trail was designated as site number 24CB1242 within the Montana portion in 1991 (Taylor 1991) beginning below Gyp Springs, following Gyp Springs Creek north from the border with Wyoming and continuing along the creek, through the springs, and then continuing to the northwest. The Bridger Cutoff was determined eligible for inclusion to the NRHP on a state level. The trail has at least regional significance because it is associated with events that have made a significant contribution to the broad pattern of European settlement and it is associated with the lives of persons significant in the past.

Gyp Springs and the immediate vicinity retain archaeological evidence of both historic and prehistoric use and it is documented as site 24CB604. Confirmed substantial surface and subsurface cultural remains indicate possible long, intensive and continued use of the springs in prehistoric through historic periods. The prehistoric component is comprised of artifact scatter and intact subsurface deposits indicative of a habitation site. Diagnostic materials indicate an occupation or occupations as early as late Paleolithic/archaic period up to late prehistoric period.

A Recreation Site Inventory and Evaluation Form completed by BLM before 1969 indicates a consideration of Gyp Springs and “Tipi Rings Area nearby” as contributing to the recreational attraction for the Crooked Creek Program Area. The “Tipi Rings Area” was recorded as 24CB604 in 1967. The combination of the historic and prehistoric values makes the cultural values outstandingly remarkable.

This segment has been tentatively classified as recreational through the eligibility phase.

The current status of land ownership, minerals (surface and subsurface), use in the area, including the amount of private land involved and associated or incompatible uses. (Jurisdictional consideration must be taken into account to the extent that management would be affected.):
BLM Segment Length: 0.46 miles,
Total Segment Length: 0.46 miles

It is free of impoundments. Livestock grazing, livestock fences, and the adjacent access road are readily evident along much of this short segment.

The segment is heavily infested with exotic invasive Russian olive trees. The most common concern expressed regarding this segment was the need to preserve the character of the corridor and that the current weed infestation was the largest threat. Weed infestation is apparent throughout the river corridor. Weeds are threatening scenic values, adjacent land and watersheds, and ecological functions within the river area.

Valid existing rights (mining claims) may be present. There are no active oil and gas leases present.

The amount and timing of stream flow is dependent on the climate and fluctuates yearly and seasonally.

The entire Gyp Springs site is eligible for the National Register of Historic Places for cultural and historic values. This area is being considered in the DRMP/DEIS as an RNA/ACEC and management actions would protect the cultural and historic values identified.

This segment is entirely within BLM-administered lands. The area below the segment is private and used for grazing.

The reasonably foreseeable potential uses of the land and water which would be enhanced, foreclosed or curtailed if the area were included in the NWSRS, and the values which could be foreclosed or diminished if the area is not protected as part of the NWSRS:
Valid existing rights (mining claims) may be present. Inclusion of this segment into the NWSRS would not enhance any of the uses (livestock grazing, dispersed recreation). Direct recreational use of water (fishing, floating, etc.) is not a feature of the area or this river segment and is unlikely to be so in the future. The historical and cultural values could potentially be diminished by inclusion in the NWSRS by increased visitation and potential vandalism.

The federal agency or state agency that will administer the river and/or area should it be added to the NWSRS:
Bureau of land Management

Federal, state, local, tribal, or other interests in the designation or non-designation of the river, including the extent to which the agency proposes that administration of the river, including the costs thereof, be shared by state, local, or other agencies and individuals:
Interest in designation or non-designation of this particular segment appears to be very low. No comments have been received. It is unknown whether the Native American tribes with affinity to this area would support or oppose a WSR designation

The estimated cost to the United States of acquiring necessary lands and interest in lands and of administering the area should it be added to the NWSRS:
No costs relating to acquiring lands since none are proposed for acquisition. Recurring activities such as patrols and monitoring would continue with or without designation. There would be no change in annual costs from current administration.

A determination of the degree to which the state or its political subdivisions might participate in the preservation and administration of the river should it be proposed for inclusion in the NWSRS:
Any costs associated with the administration of this segment would be the sole responsibility of the BLM.

The federal agency's ability or other mechanisms (existing or potential) to protect and manage the identified river-related values other than WSR designation and/or the state/local government's ability to manage and protect the ORVs on non-federal lands:
This area will be considered as an ACEC (Pryor Mountain Foothills RNA /ACEC) and has identified management actions to protect historical and cultural values.

An evaluation of the adequacy of local zoning and other land use controls in protecting the river's ORVs by preventing incompatible development:
Local zoning and other land use controls do not pertain to this segment because it is entirely located on Federal lands.

Support or opposition to designation:
Public comment showed little interest or support either for or against designation.

Historical or existing rights which could be adversely affected:
There are no Rights of Ways (ROWs) present.

There is an active grazing permit (Allotment 4105) for the BLM land and grazing is the historic use of the private land along and south of the Gyp Springs segment and these would be affected if there is a management decision to restrict this activity.

The consistency of designation with other agency plans, programs or policies and in meeting regional objectives:
Existing agreements and management policies are in place to protect and enhance the ORVs of this segment, particularly the portion located on the PPNM, which overlaps the Lewis and Clark NHT (which cover the entire segment).

The contribution to river system or basin integrity:
A limited contribution based on the size of the watershed and the size of the river segment as well as its physical location.

The potential for water resources development:
It is unlikely that water impoundments would be installed on the river segment. It is unlikely flood control, hydropower facilities, dredging or diversions or channelization will occur.

Finding: Suitable □Non-suitable X
Rationale: The entire Gyp Springs site is eligible for the National Register for cultural and historic values. This area is being considered in the DRMP/DEIS as an RNA/ACEC, and management actions would protect the cultural and historic values identified. Non designation would be more consistent with current management efforts and the long term goals found in the RMP, while management prescriptions in the RMP are in place to protect the river segment. The human impacts from the major travel routes all along the west boundary of the river segment substantially detract from the wild and scenic river values.

River Name: Piney Creek

Location, ORV description, and classification:
The Piney Creek segment is located in the southern Pryor Mountains in Carbon County approximately four miles northeast of Warren, Montana (Figure 7). Piney Creek flows for about ¼ mile on the Custer National Forest before entering BLM-administered land at the upper end of the segment. The stream is too narrow and shallow for any navigation by watercraft of any size, and heavy brush prevents even foot access along most of the segment.

The Piney Creek segment supports a population of Yellowstone Cutthroat Trout (YCT) (*Oncorhynchus clarkii bouvieri*) that has been designated a "core population" by the Interstate YCT Coordination Team. A core population is one that exhibits no hybridization and is essentially a genetically pure strain. YCT are listed as a Species of Concern by the MFWP and a federally sensitive species by the BLM and U.S. Forest Service. This pure strain YCT is very valuable in that they can be used to enhance other YCT populations or establish new populations in suitable waters. These fish values are recognized nationally by the fisheries community. The ecological and sociological impact of losing a pure strain species is significant in itself. These unique fish are recognized nationally within the fisheries community. The creek is accessible by road and the habitat is in fair condition. The threats to this population are the small size of the population, the irrigation diversion immediately downstream of the segment and the fact that it is an isolated stream. The presence of the core population of YCT meets the criteria of an outstandingly remarkable value.

This segment has been tentatively classified as recreational.

The current status of land ownership, minerals (surface and subsurface), use in the area, including the amount of private land involved and associated or incompatible uses.
BLM Segment Length: 0.16 miles
Total Segment Length: 0.16 miles

There is vehicle access to and along (within ¼ mile) the segment; there is no legal public access although current access across private property is currently unrestricted. An improved dirt road parallels the entire segment within ¼ mile.

The river segment is free of impoundments.

Livestock grazing is readily evident along the entire river segment.

There is a scattered land ownership pattern along Piney Creek which includes: BLM, Custer NF, state lands and private.

There are no active oil and gas leases present.

The reasonably foreseeable potential uses of the land and water which would be enhanced, foreclosed or curtailed if the area were included in the NWSRS, and the values which could be foreclosed or diminished if the area is not protected as part of the NWSRS:
No foreseeable changes or values diminished.

The federal agency or state agency that will administer the river and/or area should it be added to the NWSRS:
Bureau of Land Management

Federal, state, local, tribal, or other interests in the designation or non-designation of the river, including the extent to which the agency proposes that administration of the river, including the costs thereof, be shared by state, local, or other agencies and individuals:
The BLM manages only 0.16 miles of Piney Creek. Management of this segment, if included in the NWSRS would be difficult.

The estimated cost to the United States of acquiring necessary lands and interest in lands and of administering the area should it be added to the NWSRS:
Potential opportunities to acquire lands or interest in lands (willing buyer/willing seller) exist but are unlikely to occur.

A determination of the degree to which the state or its political subdivisions might participate in the preservation and administration of the river should it be proposed for inclusion in the NWSRS:
It is anticipated that costs associated with the administration of this segment would be the sole responsibility of the BLM.

The federal agency's ability or other mechanisms (existing or potential) to protect and manage the identified river-related values other than WSR designation and/or the state/local government's ability to manage and protect the ORVs on non-federal lands:
Due to the limited BLM public land ownership and length of this segment, the YCT core population would not necessarily be enhanced by inclusion in the NWSRS. Recurring activities such as patrols and monitoring would continue with or without designation.

An evaluation of the adequacy of local zoning and other land use controls in protecting the river's ORVs by preventing incompatible development:
Local zoning and other land use controls do not pertain to this segment because it is entirely located on Federal lands.

Support or opposition to designation:
Interest in designation or non-designation of this particular segment appears to be very low.

Historical or existing rights which could be adversely affected:
Historical or valid existing rights may be impacted through inclusion in the NWSRS. There is an active grazing permit (Allotment 4115) for the BLM land and grazing is one of the historic uses of the State, Forest and public lands along or on this segment and these would be affected if there is a management decision to restrict this activity. There is a telephone line Right of Way (Quest ROW Case File 57657 and a Big Horn Electrical 7.2 KV overhead line (Case File 74878).

The consistency of designation with other agency plans, programs or policies and in meeting regional objectives:
Current partnerships and management is working to protect the YCT core population of this segment. Existing agreements and management policies are in place to protect and enhance the ORV (YCT core population) of this segment.

The contribution to river system or basin integrity:
A limited contribution based on the size of the watershed and the size of the river segment as well as its physical location.

The potential for water resources development:
It is unlikely that water impoundments would be installed on the river segment. It is unlikely flood control, hydropower facilities, dredging or diversions or channelization will occur.

Finding: Suitable □Non-suitable X
Rationale: Due to the limited BLM public land ownership and length of this segment, the YCT core population would not necessarily be enhanced by inclusion in the NWSRS. Existing agreements between local, state, and federal agencies are also in place to specifically protect and further enhance the YCT core population. The road along the river segment and the travel on it would detract from the recreational opportunity and experience since the types of activities on the river segment and on the roadway are very different.

River Name: Yellowstone River, Pompeys Pillar

Location, ORV description, and classification:
The Yellowstone River – Pompeys Pillar is located in Yellowstone County approximated 25 miles northeast of Billings, Montana (Figure 8). The Yellowstone River flows over 500 miles through Montana from the Montana-Wyoming border near Gardiner, northeasterly to the Montana-North Dakota boundary northeast of Sidney. About 180 miles of the river flows

through the BiFO planning area. Within this 180-mile river reach BLM administers approximately 30 miles of shoreline and islands, most of which are small, scattered parcels.

Recreational opportunities attract local, regional, national and international visitors. In addition to being part of the Lewis and Clark National Historic Trail (NHT), this segment includes the Pompeys Pillar National Monument which provides visitors the unique and rare opportunity to view one of the most important landmarks along the entire Lewis and Clark NHT - Captain William Clark's signature and date of passage carved in the soft sandstone. Wildlife viewing, especially birding, is exceptional and attracts local and regional visitors.

The Pillar is a prominent sandstone outcrop separated by erosion from the bluffs on the north side of the Yellowstone River. No other similar geologic features are found along Yellowstone River between Livingston, Montana and the confluence with the Missouri River.

Pompeys Pillar National Historic Landmark was designated in 1996, and the National Monument was designated in 2001. Pompeys Pillar itself is a massive sandstone outcrop with tall vertical cliffs, and is marked with over 5,000 inscriptions including petroglyphs, pictographs and historic names and dates. Native Americans of prehistoric and historic periods considered Pompeys Pillar a notable place on the river. It served as a viewpoint and a camping area, as well as ritual location. The location is known to have been a Crow encampment according to the diaries and memoirs and stories of both the Crow people and the Euro-Americans. Euro-American explorers, trappers and the military used the area as a convenient stopping place on the river. Described in diaries by Francois Antoine Larocque, followed by Lewis and Clark and members of their expedition, James P. Beckwourth and others, the rock becomes the focus of a variety of historic events. Pompeys Pillar is recorded as archaeological site 24YL0176. A rock shelter at the pillar may have been a burial area. The Lewis and Clark National Historic Trail is documented here with Clarks name and date of July 25, 1806 carved on the pillar during his return trip from the west. Clark's name and date carved on the pillar represents the only remaining on-site physical evidence of one of this nation's most important historical events.

Cultural Values: Pompeys Pillar has been a natural landmark for the native people of the northern plains through the region's more than 11,000 years of occupation. Most recently it was acknowledged as within the homeland of the Crow people. There is archaeological evidence the Pillar was used for religious and burial purposes.

The proposed Boundary is approximately 0.25-mile on from river bank on the south side of the river. The tentative classification is Recreational.

The current status of land ownership, minerals (surface and subsurface), use in the area, including the amount of private land involved and associated or incompatible uses. (Jurisdictional consideration must be taken into account to the extent that management would be affected.):
BLM Segment Length: 4.19 miles
Total Segment Lengths: 4.46 miles

The Pompeys Pillar segment is accessible by road and the river. Development along the segment is confined to the area near the Pillar, which includes a large visitor center and associated administrative facilities and two bridges. Public land on Bundy Island has been developed by MFWP into a Fishing Access Site with a gravel parking area, unpaved boat ramp and vault toilet.

The river is free of impoundments. Although most of the shoreline is undeveloped, the facilities associated with the Pompeys Pillar National Monument constitute substantial evidence of human activity. There is active farming on some of the public lands within the corridor. There are two bridge crossings. One provides northbound motorized travel and the other is an abandoned highway bridge converted to foot traffic.

BLM-administered lands are primarily located along south bank of this segment with one parcel of private lands. Pompeys Pillar is currently managed within various zones, including an ACEC and a separate National Monument, which already affords protective management. Bundy Island is a proposed Special Recreation Management Area, and would be considered no surface occupancy (oil and gas) to protect the values of the area. MFWP currently holds a right-of-way to maintain a Fishing Access Site. The north bank of this segment is privately owned except for a small stretch east of the Pillar; current primary uses include grazing, and residential development.

Ownership of the mineral estate has not been established due to the complexities arising from the multiple ownerships previous to BLM acquisition. To the extent that the federal government owns the minerals at Pompeys Pillar National Monument and ACEC, they are withdrawn through a Secretarial Withdrawal which was put in place when the BLM acquired the National Monument and ACEC.

There are no active oil and gas leases present.

There are two major bridges which cross the river at this location. One is an abandoned highway structure and the other is newer bridge which replaced it. It is the major access portal in the area north of the river.

The reasonably foreseeable potential uses of the land and water which would be enhanced, foreclosed or curtailed if the area were included in the NWSRS, and the values which could be foreclosed or diminished if the area is not protected as part of the NWSRS:
There are multiple local, state and federal agency jurisdictional authorities that partner to address impacts to the Yellowstone River. This segment of the Yellowstone River is a part of the Huntley Project Irrigation District (which was established in the early 1900s) and there are valid existing rights associated with municipal water supplies and irrigation (diversions, distribution and return flows) and there are likely incompatible uses already in place. Many of these agencies have differing goals and objectives for management and inclusion of this segment in the NWSRS could potentially conflict with those mandates and policies.

The existing multi-agency task force sponsored by the United States Army Corps of Engineers (USCOE) is addressing management and development along the entire Yellowstone River corridor. The goals of this task force are to enhance river values and protect the river

environment. There could be some partnership opportunities to provide additional river management with MFWP, Yellowstone County, Crow Tribe, USCOE, Bureau of Reclamation and local communities or organizations. Concern has been expressed (through Yellowstone County Conservation District) about impacts to water rights from any designation. Yellowstone County Growth Plan addresses river-related values through their management goals and objectives. There are existing regulations in place for floodplain management.

If this segment is included in the NWSRS it could potentially attract more visitors to Pompeys Pillar and Bundy Island and could provide economic benefits to the local communities. The facilities are such that the area could accommodate increased visitation at Pompeys Pillar without impacting the resource values, as well as increase access opportunities to the Yellowstone River in this segment. The overall visitation to the area that may be generated as a result of a NWSRS designation is likely to be slight, but could diminish the current recreation experience, displace wildlife and create user conflicts. Peak visitation to the area occurred in 2006 during the Lewis and Clark Bicentennial celebration with visitation nearly 200% of typical levels. Since the bicentennial visitation has returned to pre-event levels and is increasing at less than 1% per year.

The federal agency or state agency that will administer the river and/or area should it be added to the NWSRS:
Bureau of Land Management

Federal, state, local, tribal, or other interests in the designation or non-designation of the river, including the extent to which the agency proposes that administration of the river, including the costs thereof, be shared by state, local, or other agencies and individuals:
The interest in designation or no designation by federal, state, local and tribal governments and national and local publics, as well as the State's political delegation, is beyond the scope of this RMP to consider. It is unknown whether the Native American tribes with affinity to this area would support or oppose a WSR designation

The estimated cost to the United States of acquiring necessary lands and interest in lands and of administering the area should it be added to the NWSRS:
The BLM has expressed interest in acquiring lands or interest in lands (willing buyer/willing seller basis) in the vicinity of Pompeys Pillar. This would enhance the opportunity to manage river-related values.

Several small scattered tracts located south of Interstate 94 have been identified for sale of exchange if the opportunity arises to consolidate land tenure patterns.

The interest in designation or no designation by federal, state, local and tribal governments and national and local publics, as well as the State's political delegation, is beyond the scope of this RMP to consider.
The interest in designation or no designation by federal, state, local and tribal governments and national and local publics, as well as the State's political delegation, is beyond the scope of this RMP to consider.

The federal agency's ability or other mechanisms (existing or potential) to protect and manage the identified river-related values other than WSR designation and/or the state/local government's ability to manage and protect the ORVs on non-federal lands:
Other methods of managing to protect values would be withdrawing the corridor from all mineral entry and proposing a No Surface Occupancy for Oil and Gas. All lands along the corridor could be placed in a retention zone or the agency could assist in placing conservation easements on adjacent private lands. Establishing all lands as VRM class II would help in preserving all values along the segment. This classification would not limit development but would provide protection through project design mitigation. Historic values could be protected through current historic preservation law. Historic and cultural properties could be better protected by providing additional educational and interpretive materials for the public. An evaluation of the adequacy of local zoning and other land use controls in protecting the river's ORVs by preventing incompatible development:

Support or opposition to designation:
The interest in designation or no designation by federal, state, local and tribal governments and national and local publics, as well as the State's political delegation, is beyond the scope of this RMP to consider.

Historical or existing rights which could be adversely affected:
There are number of existing Rights of Ways (ROWs) which cross the Yellowstone River at this location. These rights may be impacted through inclusion in the NWSRS. These include the following:

- Case File 27180, a 50' wide ROW for a 69 KV Power-line owned by Yellowstone Valley Electric Co., located in Section 22.
- Case File 94051, an underground ROW owned by Yellowstone Valley Electric Co., located in Section 21.
- Case File 90329, a 4.5 'wide ROW in Section 21 for the PPNM Visitor Center and associated facilities.
- A 7.2 KV Power-line for Yellowstone Valley Electric Co. in Section 20.
- Case File 82286 for the Sikes Act Habitat Agreement in Section 21.

The consistency of designation with other agency plans, programs or policies and in meeting regional objectives:
Designation may help or impede the goals of other tribal, federal, State, or Local agencies. Designation may contribute to some resource management actions, such as federal, state, or regional protection objectives for fish, wildlife, or cultural and historical resources. Similarly, the river or a segment portion such as this segment may have a limited recreation activity or setting that might better meet statewide, local, or regional goals. In this case as well however, designation might limit irrigation and/or flood control measures inconsistent with some regional socioeconomic goals. The designation for the public lands described in this river segment would be consistent and complementary with the BLM Billings RMP, as well as the Lewis and Clark National Historic Trail and the Pompeys Pillar National Monument designations by Congress. The PPNM Proclamation is number 7396, with a date of 1/17/2001 and is Case File 91363.

The contribution to river system or basin integrity:
Many benefits are likely to result from managing the entire river, including the ability to design and then implement a holistic protection strategy in partnership with other agencies and the public. The Yellowstone River is the longest undammed river in the lower 48 states of the USA and has significant resources and activities occurring all along its entire course. BLM management responsibilities in the Billings Field Office are very limited and in most cases limited only to the public lands it directly manages (with exceptions such as the Lewis and Clark National Historic Trail).

The potential for water resources development:
The intent of the Act is to preserve selected waters from what would be considered harmful effects of water development projects. A designation could limit development of water resource projects as diverse as irrigation and flood control measures, hydropower facilities, dredging, diversion and channelization. None of these types of projects are being considered on the public lands in this segment since the lands have already been reserved as a National Monument and an ACEC to protect resource values. However, these projects could be proposed elsewhere on the Yellowstone River.

Finding: **Suitable □ Non-suitable X**
Rationale: All relevant ORVs are provided protection through existing BLM designations and other agency management policies. Recreational opportunities could continue to be enhanced with or without inclusion in the NWSRS. The human improvements which cross the river (ROWs and the two bridges) substantially affect the suitability factor for the tentative recreational classification. The existence of large agricultural fields and private residences on private lands within the corridor on both sides of the river also affects the determination.

Wild and Scenic River Management Guidelines

Interim Management of Suitable Segments

The WSR Act requires that interim management measures be developed to protect the free flowing nature, outstandingly remarkable values, and recommended classification of suitable segments until Congressional action regarding designation is taken.

The Billings RMP ID Team met in the summer of 2009 to study the seven (7) river segments in consideration of the suitability criteria. Discussions from this meeting, as well as other public comment form the basis of this suitability assessment. For maps of the river segments, refer to the maps at the end of the Eligibility section of this Appendix (above).

Wild and scenic rivers shall be managed with plans prepared in accordance with the requirements of the Act, other applicable laws, and the following general management principles. Management plans will state: General principles for any land acquisition which may be necessary; the kinds and amounts of public use which the river area can sustain without impact to the values for which it was designated; and specific management measures which will be used to implement the management objectives for each of the various river segments and protect esthetic, scenic, historic, archaeological and scientific features.

If the classification or classifications determined in the management plan differ from those stated in the study report, the management plan will describe the changes in the existing condition of the river area or other considerations which required the change in classification.
General Management Principles Section 10(a) states:

> "*…Each component of the nation's wild and scenic rivers systems shall be administered in such a manner as to protect and enhance the values which caused it to be included in said system without, insofar as is consistent therewith, limiting other uses that do not substantially interfere with public use and enjoyment of these values. In such administration primary emphasis shall be given to protecting its esthetic, scenic, historic, archaeologic and scientific features. Management plans for any such component may establish varying degrees of intensity for its protection and development on the special attributes of the area."*

This section is interpreted as stating a non-degradation and enhancement policy for all designated river areas, regardless of classification. Each component will be managed to protect and enhance the values for which the river was designated, while providing for public recreation and resource uses which do not adversely impact or degrade those values. Specific management strategies will vary according to classification but will always be designed to protect and enhance the values of the river area. Land uses and developments on private lands within the river area which were in existence when the river was designated may be permitted to continue. New land uses must be evaluated for their compatibility with the purposes of the Act.

The management principles which follow stem from section 10(a). Managing principles will be implemented to the fullest extent possible under their general statutory authorities and existing Federal, State and local laws. Because of these limitations, however, implementation of the

principles may differ among and within components of the system depending on whether the land areas involved are federally, State, locally or privately owned.

Carrying Capacity: Studies will be made during preparation of the management plan and periodically thereafter to determine the quantity and mixture of recreation and other public use which can be permitted without adverse impact on the resource values of the river area. Management of the river area can then be planned accordingly.

Public Use and Access: Public use will be regulated and distributed where necessary to protect and enhance (by allowing natural recovery where resources have been damaged) the resource values of the river area. Public use may be controlled by limiting access to the river, by issuing permits, or by other means available to the managing agency through its general statutory authorities.

Basic Facilities: The managing agency may provide basic facilities to absorb user impacts on the resource. Wild river areas will contain only the basic minimum facilities in keeping with the "essentially primitive" nature of the area. If facilities such as toilets and refuse containers are necessary, they will generally be located at access points or at a sufficient distance from the river bank to minimize their intrusive impact. In scenic and recreational river areas, simple comfort and convenience facilities such as toilets, shelters, fireplaces, picnic tables and refuse containers are appropriate. These, when placed within the river area, will be judiciously located to protect the values of the popular areas from the impacts of public use.

Major Facilities: Major public use facilities such as developed campgrounds, major visitor centers and administrative headquarters will, where feasible, be located outside the river area. If such facilities are necessary to provide for public use and/or to protect the river resource, and location outside the river area is infeasible, such facilities may be located within the river area provided they do not have an adverse effect on the values for which the river area was designated.

Motorized Travel: Motorized travel on land or water is generally permitted in wild, scenic and recreational river areas, but will be restricted or prohibited where necessary to protect the values for which the river area was designated.

Agricultural and Forestry Practices: Agricultural and forestry practices should be similar in nature and intensity to those present in the area at the time of designation. Generally, uses more intensive then grazing and hay production are incompatible with river classification. Row crop production and timber harvest may be practiced in recreational and scenic river areas. Recreational river areas may contain an even larger range of agricultural and forestry uses. Timber harvest in any river area will be conducted so as to avoid adverse impacts on the river area values.

Other Resource Management Practices: Resource management practices will be limited to those which are necessary for protection, conservation, rehabilitation or enhancement or the river area resources. Such features as trail bridges, fences, water bars and drainage ditches, flow measurement devices and other minor structures or management practices are permitted when

compatible with the classification of the river area and provided that the area remains natural in appearance and the practices or structures harmonize with the surrounding environment.

Water Quality: Consistent with the Clean Water Act, water quality in wild, scenic and recreational river areas will be maintained or, where necessary, improved to levels which meet Federal criteria or federally approved State standards for aesthetics and fish and wildlife propagation. River managers will work with local authorities to abate activities with the river area which are degrading or would degrade existing water quality.

Additional management principles stem from other sections of the Act as follows:

- Land Acquisition: Section 6
- Water Resource Development: Section 7
- Mining: Section 9
- Management of Adjacent Federal Lands: Section 12(a)
- Hunting and Fishing: Section 13(a)
- Water Rights: Section 13(b)-(f)
- Rights-of-Way: Section 13(a)

The following policies are consistent with and supplement the management principles stated in the Act:

Land Use Controls: Existing patterns of land use and ownership should be maintained, provided they remain consistent with the purposes of the Act. Where land use controls are necessary to protect river area values, the managing agency will utilize a full range of land-use control measures including zoning, easements and fee acquisition.

Rights-of Way: In the absence of reasonable alternative routes, new public utility rights-of-way on Federal lands affecting a Wild and Scenic River area or study area will be permitted. Where new rights-of-ways are unavoidable, locations and construction techniques will be selected to minimize adverse effects on scenic, recreational, fish and wildlife and other values of the river area.

Other legislation applicable to the various managing agencies may also apply to wild and scenic river areas. Where conflicts exist between the provisions of the Wild and Scenic Rivers Act and acts applicable within the system, the more restrictive provisions providing for protection of the river values shall apply.

An interdisciplinary team of BLM resource specialists prepared this Suitability Study.

List of Preparers	
Name	**Role/Responsibility**
Tim Finger	Recreation, WSR, Visual Resources, Wilderness, Travel and Transportation Management
Jay Parks	Wildlife, Special Status Species
Larry Padden	Noxious and Invasive Species
Sheila Cain	GIS
Carolyn Sherve-Bybee	Cultural Resources, NEPA, Special Designation Areas
Jared Bybee	Wild Horses and Burros, Pryor Mountain Wild Horse Range
Dustin Crowe	Range, Soils
Ernie McKenzie	Riparian, Fisheries
Craig Drake	Assistant Field Manager - Consistency Review
Jim Sparks	Field Manager

References (Selected, not inclusive)

1986. Bureau of Land Management Handbook, H-8410-1, Visual Resource Inventory, January 17, 1986.

1992. Wild and Scenic Rivers—Policy and Program Direction for Identification, Evaluation, and Management. BLM Manual 8351. Rel. 8-61, May 19, 1992. BLM, Washington DC.

2003. Wild and Scenic Rivers—Policy and Program Direction for Identification, Evaluation, and Management. Changes made to original Manual Section 8351. BLM, Washington, DC.

2004a. Instruction Memorandum No. 2004-196, Clarification of Policy in the BLM Manual Section 8351, Wild and Scenic Rivers, with Respect to Eligibility Criteria and Protective Management. June 21, 2004. BLM, Washington, DC.

Huntington, M.H., and J.D. Echeverria. 1991. The American Rivers Outstanding Rivers List. American Rivers, Inc. Washington, D.C.

MFWP (Montana Fish, Wildlife, and Parks). 2004a. MFWP Stream Fishery Classification, 1999 Final Sport Fisheries Value, Class I and II Streams. Internet Web site: http://www.fwp.state.mt.us/fishing/class1and2.pdf.

2004b. Statewide Comprehensive Outdoor Recreation Plan. Internet Web site: http://www.fwp.state.mt.us/parks/scorp/default.asp..

NPS (U.S. Department of the Interior, National Park Service). 2004. Rivers and Trails Conservation Assistance Program. Nationwide Rivers Inventory – Montana Segments. Internet Web site: http://www.nps.gov/ncrc/programs/rtca/nri/states/mt.html.

BLM (US Department of the Interior) Montana Statewide Wilderness Study Report. September 1991. Volume II.

Audubon Society Internet Website: http://audubon.org/bird/iba

Forest Service (US Department of Agriculture, National Forest Service) Forest Plan, Gallatin National Forest, 1987. Montana.

Interagency Wild and Scenic Rivers Coordinating Council. 1999. The Wild and Scenic River Study Process, Technical Report. Washington, D.C.

Lower Yellowstone River Conservation Unit Implementation Team. 2000. Yellowstone Cutthroat Trout Management Program within the State of Montana.

American Rivers, Inc. 1991. The American Rivers Outstanding Rivers List. Compiled and Edited by M. H. Huntington and J. D. Echeverria, Second Edition, May 1991. American Rivers, Inc., Washington, DC.
American Whitewater 2006. Internet Website:
http://www.americanwhitewater.org/content/River/state-summary/state/MT

BLM Master Title Plats (MTPs):

T. 9 S., R. 27 E.
T. 9 S., R. 26 E.
T. 4 S., R. 16 E.
T. 8 S., R. 26 E.
T. 3 N., R. 30 E.

BLM Range Allotment Files

BLM Right of Way (ROW) Case Files

Appendix S:
Livestock Grazing and Range Allotments

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Incorporating GRSG RMP Decisions into Grazing Authorizations

Purpose

The purpose is to provide recommended language; outline the process for prioritizing the review and processing of grazing permits/leases to determine if modification is necessary (prior to renewal and in accordance with prioritization criteria); provide direction for including specific management thresholds and defined responses that will allow adjustments to livestock grazing within the terms and conditions of permits; and provide a process for prioritizing compliance monitoring within Sagebrush Focal Areas (SFAs) and Priority Habitat Management Areas (PHMAs).

Background

The BLM manages approximately 18,000 livestock grazing permits and leases on the public lands. Livestock grazing is an integral part of the BLM multiple-use mission and is authorized by the Taylor Grazing Act (1934), the Federal Land Policy Management Act (1976) and the Public Rangeland Improvement Act (1978). By statute and regulation, grazing leases and permits are normally issued for 10-year periods. Annually, a range of 1,200 to 3,200 grazing permits expire and the BLM receives 500 to 1,500 grazing permit/lease transfer requests.

The BLM currently issues permits/leases in accordance with:

- All applicable law, regulation, policy (NEPA, consultation, proposed/final grazing decision-also known as a fully processed permit); or
- Various appropriation authorities enacted between 1999 and 2014 extending terms and conditions of expiring or transferred permits/leases that the BLM is unable to fully process before their expiration; or
- Section 402(c)(2) of FLPMA (as amended by Public Law 113-291, enacted December 19, 2014).

Congress has acted to ensure that grazing permittees could continue to graze if the BLM is unable to complete the environmental analysis mandated by the NEPA and other applicable laws. Since 1999, a provision ("the rider") has been included in the Interior Appropriations bill that, in various forms, GHMAly authorizes the BLM to renew grazing permits and leases under their same terms and conditions until it fully processes the permit renewal in compliance with NEPA, ESA, and other legal or regulatory requirements. The most recent rider is contained in Section 411, Public Law 113-76.[1] The FLPMA amendment to Section 402 (c) allows BLM to renew

[1] The Consolidated Appropriations Act, 2014 includes the provision Section 411 which states: "Section 415 of division E of Public Law 112–74 is amended by striking ''and 2013'' and inserting ''through 2015.'' The terms and conditions of section 325 of Public Law 108-108 (117 stat. 1307), regarding permits at the Department of the Interior and the Forest Service, shall remain in effect through fiscal year 2015. A grazing permit or lease issued by the Secretary of the Interior for lands administered by the Bureau of Land Management that is the subject of a request for a grazing preference transfer shall be issued, without further processing, for the remaining time period in the existing permit or lease using the same mandatory terms and conditions. If the authorized officer determines a change in the mandatory terms and conditions is required, the new permit must be processed as directed in section 325 of Public Law 108-108." Where a FO is unable to fully process a permit renewal in compliance with all applicable laws prior to the permit expiration, Section 411 extends the authority to renew the grazing permit with the

grazing permits and leases under the same terms and conditions. This relieves the BLM's renewal processing workload, allowing the BLM to prioritize permit processing based on sensitivity of the resources at issue.[2]

The BLM may modify terms and conditions of a permit or lease at any time following completion of appropriate analysis and consultation, cooperation, and coordination with the affected lessees or permittees, the State having lands or responsible for managing resources within the area, and the interested public.[3] Under 43 C.F.R. 4160.1, the BLM must serve a proposed decision on any affected applicant, permittee or lessee, any agent and lien holder of record. Copies of the decisions are provided to the interested publics.

Recommended Language to be incorporated as Livestock Grazing Management Actions within the GRSG ADPPs:

- The BLM will prioritize the review of grazing permits/leases, including those prior to renewal to determine if modification is necessary, and processing of grazing permits and leases, in Sagebrush Focal Areas (SFAs) followed by PHMAs outside of the SFAs. In setting workload priorities, precedence will be given to existing permits/leases in areas not meeting Land Health Standards, with focus on those containing riparian areas, including wet meadows. The BLM may use other criteria for prioritization to respond to urgent natural resource conditions (ex., fire) and legal obligations.
- The NEPA analysis for renewals and modifications of livestock grazing permits/leases that include lands within PHMAs will include specific management thresholds based on GRSG Habitat Objectives Table and Land Health Standards (43 CFR 4180.2) and defined responses that will allow the authorizing officer to make adjustments to livestock grazing without conducting additional NEPA.
- Allotments within PHMAs, and focusing on those containing riparian areas, including wet meadows, will be prioritized for field checks to help ensure compliance with the terms and conditions within the grazing permits. Field checks could include monitoring for actual use, utilization, and use supervision.
- At the time a permittee or lessee voluntarily relinquishes a permit or lease, the BLM will consider whether the public lands where that permitted use was authorized should

same terms and conditions as the expiring permit. Section 325 provides the process for authorizing grazing until a permit or lease is issued in compliance with all applicable law and regulatory processes.

[2] The newly amended section 402(c) of FLPMA provides permanent authority to BLM to renew expiring permits. That section states, "The terms and conditions in a grazing permit or lease that has expired, or was terminated due to a grazing preference transfer, shall be continued under a new permit or lease until the date on which the Secretary concerned completes any environmental analysis and documentation for the permit or lease required under the National Environmental Policy Act of 1969 (42 U.S.C. 4321 et seq.) and other applicable laws."

[3] 43 CFR 4130.3-3 states: Following consultation, cooperation and coordination with the affected lessees or permittees, the State having lands or responsible for managing resources within the area, and the interested public, the authorized officer may modify terms and conditions of the permit or lease when the active grazing use or related management practices are not meeting the land use plan, allotment management plan or other activity plan, or management objectives, or is not in conformance with the provisions of subpart 4180 (Fundamentals of Rangeland Health and Standards and Guidelines for Grazing Administration).

remain available for livestock grazing or be used for other resource management objectives.

Addressing GRSG RMP Amendments/Revisions Objectives in Grazing Permits/Leases

BLM will develop criteria to prioritize the workload to process permits/leases (either fully processed or reauthorized based on the Appropriations rider, or issued under Section 402(c)(2) of FLPMA) and determine whether modification is necessary prior to renewal within PHMAs, beginning with those in SFAs. In setting priorities, those containing riparian areas and areas not meeting Land Health Standards (43 C.F.R. 4180) will take precedence. Potential criteria for prioritizing permit modifications could include:

- Are there riparian areas or wet meadows in the permit/lease area?
- Was current livestock grazing identified as a causal factor for not meeting Land Health Standards?
- Since the last allotment/watershed evaluation, is there current monitoring information to determine that the watershed/allotment is currently achieving or making significant progress towards achieving land health standards?
- Does the permit have terms and conditions adequate to ensure proper grazing practices to meet GRSG habitat objectives found in the Special Status Species section of the land use plan?
- Is there data that indicates that the GRSG habitat objectives, including the Habitat Objectives table, found in the Special Status Species section of the land use plan are being met?
- Is there a request from the permittee to modify the terms and conditions of his/her permit?

Additionally, if an existing permit/lease within PHMAs requires modification because current grazing is a significant causal factor for not meeting the Land Health Standards, the BLM will prepare the appropriate NEPA analysis and issue the proposed/final grazing decision under 43 C.F.R. Subpart 4160, subject to administrative appeal and potential judicial challenge.

The NEPA analysis for renewals and modifications of livestock grazing permits/leases that include lands within SFAs and PHMAs will include specific management thresholds based on GRSG Habitat Objectives Table and Land Health Standards (43 CFR 4180.2) and defined responses that will allow the authorizing officer to make adjustments to livestock grazing without conducting additional NEPA. Adjustments to meet seasonal Sage-Grouse habitat requirements could include:

- Season or timing of use;
- Numbers of livestock (includes temporary non-use or livestock removal);
- Distribution of livestock use;
- Intensity of use; and
- Type of livestock (e.g., cattle, sheep, horses, llamas, alpacas and goats).

Compliance Monitoring

The BLM will monitor grazing permits/leases renewed or modified in accordance with the direction contained in this guidance as follows: Allotments within SFAs, followed by those in other PHMA, and focusing on those with riparian areas, will be prioritized for monitoring to ensure compliance with the terms and conditions in the permits. The BLM will collect, at a minimum, the following monitoring data:

- Vegetation Condition
- Actual Use
- Utilization
- Use Supervision

Concerning Voluntary Relinquishments

All ADPPs will include the following language:

At the time a permittee or lessee voluntarily relinquishes a permit or lease, the BLM will consider whether the public lands where that permitted use was authorized should remain available for livestock grazing or be used for other resource management objectives.

For completing this, BLM offices should use WO IM 2013-184 Relinquishment of Grazing Permitted Use or the most recent policy guidance.

S. Range Allotments

Allotment Number	Public Acres	Public AUMs	Management Status[1]	Livestock Kind[2]	Land Health Status[3]	Threatened, Endangered, and Special Status Species[5]	Sage Grouse Status[4]
					Determination/ Standard/ Causal Factor/ Year		
1	38313	50 AUMS 120 AML	M	C WH/B	Not Meeting / 1,2,5/wild horses/ 2004	FM, PB, TBEB, MP, PF, YCT, DR, DM, MPP, LB, OEP, PC, SHOSH, SM, WM, YB	None
955	40	6	C	C	None	WO, GB	None
960	1533	213	M	C	None	BTPD, GSG	RA
970	640	146	C	C	None		None
978	40	6	C	C	None	GB	None
1460	1493	192	M	C	None	TBEB, GSG, RHW	None
1555	320	72	C	C	Meeting 2009	BTPD, WTPD, BO, GSG	PHMA
3114	40	4	C	C	None	GSG	RA
3155	320	45	M	C	None	BTPD	None
3195	474	81	C	C	None	TBEB, RHW	None
4100	230	48	C	C	SPT /1,5/ weeds/ 2008	BTPD, GSG, MS	GHMA
4101	6013	1253	I	C	Meeting 2002	BTPD, BO, GE, GSG, MP	PHMA
4103	50	15	C	C	SPT/1,5/weeds/2009	GSG, GSHL	None
4104	540	63	C	C	Meeting 2010	GSG	None
4105	20216	614	I	C	Meeting 2002	FM, PB, TBEB, BGG, BRSP, CCL, GSG, MP, ST, LS, YCT, GSHL, DR, DD, DM, GEM, MPP, OEP, SC, SH, WRM, YB	PHMA
4106	200	36	C	C	Meeting 2009	GSHL, YB	None
4107	120	20	C	C	Meeting 2008		None

Allotment Number	Public Acres	Public AUMs	Management Status[1]	Livestock Kind[2]	Land Health Status[3]	Threatened, Endangered, and Special Status Species[5]	Sage Grouse Status[4]
					Determination/ Standard/ Causal Factor/ Year		
4108	20	5	C	C	Meeting 2008		None
4109	880	210	C	C	Meeting 2009	BTPD, GSG, MS	GHMA
4110	320	21	C	C	Meeting 2007	TBEB, MP, DM, GEM, WRM, YB	None
4111	1475	228	I	C	Meeting 2009	GSG, GSHL, MS	PHMA
4112	520	40	C	C	Meeting 2006	GSG, GSHL	PHMA
4113	3331	453	I	C	Meeting 2011	BO, GSG, DM	PHMA
4114	1000	161	M	C	Meeting 2009	WTPD, BTPD, BO, GSG	PHMA
4115	17101	1767	M	C	Meeting 2002	TBEB, BGG, BRSP, GSG, BO, ST, LS, MP, YCT, GSHL, DD, NA, SC, SMBU, SH	PHMA
4116	200	37	C	C	Meeting 2011		None
4117	20	5	C	C	Meeting 2008		None
4118	1088	110	M	C	Meeting 2007	GSG	PHMA
4119	1320	309	M	C	Meeting 2007	GSG, GSHL	PHMA
4120	505	76	M	C	SPT/1,5/weeds/2009	GSG, GSHL	PHMA
4122	520	132	C	C	Meeting 2000		None
4123	80	16	C	C	Meeting 2009		None
4124	280	34	M	C	Meeting 2002	BGG, BRSP, GSG, BO	PHMA
4125	468	76	C	C	Meeting 2002		None
4126	1338	218	M	C	Meeting 2003	TBEB, GSHL, GM, PC	None
4127	320	32	C	C	Meeting 2008	GSG, PS	PHMA
4128	240	37	C	C	SPT/1,5/weeds/2008	GSG	GHMA
4129	880	146	M	C	Meeting 2007	GSG, MS, PS	PHMA
4131	1894	275	M	C	Meeting 2007	BGG, GSG, PS	PHMA

Allotment Number	Public Acres	Public AUMs	Management Status[1]	Livestock Kind[2]	Land Health Status[3] Determination/ Standard/ Causal Factor/ Year	Threatened, Endangered, and Special Status Species[5]	Sage Grouse Status[4]
4132	960	107	M	C	Meeting 2002	BGG, GSG, BRSP, LS, ST, LBC, YCT, GSHL	PHMA
4133	1380	196	M	C	Meeting 2002	BGG, BRSP, GSG, LBC, ST, LS	PHMA
4134	720	7	C	C	Meeting 2003		None
4135	4943	432	I	C	Meeting 2011	BGG, BOB, BO, GSG, ST	PHMA
4136	80	28	C	C	Meeting 2002	BO, GSG	PHMA
4137	963	288	M	C	Meeting 2003	FH, GE, GSG	PHMA
4138	40	7	C	C	Meeting 2009		None
4140	1635	456	C	C	Meeting 1999	GE, GSG	PHMA
4141	480	127	M	C	Meeting 2009	BTPD, GSG	GHMA
4142	40	12	C	C	Meeting 2004	BE	GHMA
4143	608	158	M	C	Meeting 2002	GSG	PHMA
4144	2658	443	M	C	Meeting 2010	GSG	GHMA
4145	160	55	C	C	Meeting 2000		None
4147	40	4	C	C	Fail/1,5/livestock/2009	GSG	PHMA
4148	840	77	I	C	None	CL, GB, WO, GSG, BLFG	PHMA
4150	890	94	C	C	Meeting 2002	GSG	PHMA
4151	160	46	M	C	Meeting 2002	GSG	PHMA
4152	1818	169	M	C	Meeting 2002	BTPD, BE, GSG, SA, SS	RA
4153	160	30	C	C	Meeting 2003	GSG	RA
4154	200	30	C	C	Meeting 2003	BTPD, BE, GSG, RHW, SA, SS	RA
4156	369	58	C	C	Meeting 2009	GB, PF	None
4157	160	16	C	C	Meeting 2011		None

Allotment Number	Public Acres	Public AUMs	Management Status[1]	Livestock Kind[2]	Land Health Status[3] Determination/ Standard/ Causal Factor/ Year	Threatened, Endangered, and Special Status Species[5]	Sage Grouse Status[4]
4158	240	37	C	C	Meeting 2006	BTPD	None
4159	640	94	M	C	Meeting 2004		None
4160	1440	388	I	C	Fail/1,5/livestock/2002	BTPD, GSG	RA
4161	3275	281	I	C	Meeting 2011	GSG	PHMA
4162	80	16	C	C	Meeting 2003	YBC	None
4163	40	8	C	C	Meeting 2003	YBC	None
4165	640	180	M	C	SPT/1,5/livestock/2008		None
4166	120	24	C	C	Meeting 2001		None
4167	7515	427	I	C	SPT/1,5/livestock/2005	BRSP, GE, GSG, LS, GSHL, YB	PHMA
4168	40	5	C	C	Meeting 2009	GB, WO, NG	None
4169	265	44	C	C	Meeting 2008	GSG	None
4170	320	47	C	C	Meeting 2010	GSG	RA
4171	290	57	C	C	Meeting 2011		None
4172	40	4	C	C	None	BE	None
4173	40	5	C	C	None	GB, WO	None
4175	40	8	C	C	None	GSG	PHMA
4803	35	9	C	C	Meeting 2011	GSG, GSHL	None
4804	300	20	M	C	Meeting 2011	GSG	PHMA
4808	472	111	C	C	Meeting 2009	GE, GSG	PHMA
4903	6734	1752	M	C	Meeting 2008	FH, GE, GSG	PHMA
4904	40	10	C	C	Meeting 2009	GSG	PHMA
4905	2160	508	M	C	Meeting 2006	GSG, GSHL	PHMA
4907	2562	528	I	C	SPT/1,5/livestock/2010	BTPD, BRSP, GE, GSG, ML, MP	PHMA

Allotment Number	Public Acres	Public AUMs	Management Status[1]	Livestock Kind[2]	Land Health Status[3] Determination/ Standard/ Causal Factor/ Year	Threatened, Endangered, and Special Status Species[5]	Sage Grouse Status[4]
4908	160	62	M	C	Meeting 2007	GSG	GHMA
4911	960	275	C	C	Meeting 2009	BTPD, GE, GSG	PHMA
4912	40	6	C	C	Meeting 2007		None
4913	187	31	C	C	Meeting 2008	BRSP, GE, GSG, LS, ST, LIB	PHMA
4914	80	17	C	C	Meeting 2010	GSG	PHMA
4915	80	12	C	C	Meeting 2002	BTPD, GSG	PHMA
4916	40	9	C	C	Meeting 2006	GSG	PHMA
4917	200	48	C	C	Meeting 2008	BTPD, BO, GSG	GHMA
4919	40	12	M	C	Meeting 2002	BTPD, GE, GSG, GSHL	GHMA
4920	1120	133	M	C	Meeting 2009	BTPD, GE, GSG, GSHL	GHMA
4921	833	234	I	C	Meeting 2002	BTPD, GSG	PHMA
4922	317	102	M	C	Meeting 2008	GSG	PHMA
4924	1320	305	M	C	Meeting 1999	BTPD, BO, GSG	PHMA
4926	1021	304	M	C	Fails/1,5/livestock/2009	BTPD, GE, GSG	PHMA
4929	600	168	M	C	Meeting 2009	GSG	PHMA
4930	200	45	M	C	Meeting 2009	GSG	GHMA
4931	702	208	M	C	Meeting 2002	GSG	GHMA
4932	160	37	M	C	Meeting 2006	GSG	GHMA
4933	320	74	M	C	Meeting 2009		None
4934	2073	516	M	C	Meeting 2006	TBEB, GSG	GHMA
4935	800	230	M	C	Meeting 2009		None
4936	680	69	M	C	SPT/1,5/weeds/2008		None
4937	640	210	M	C	STP/1/livestock/2005	GSG	PHMA

Allotment Number	Public Acres	Public AUMs	Management Status[1]	Livestock Kind[2]	Land Health Status[3] Determination/ Standard/ Causal Factor/ Year	Threatened, Endangered, and Special Status Species[5]	Sage Grouse Status[4]
4938	160	39	M	C	Meeting 2000	GSG	PHMA
4939	1400	315	I	C	SPT/1,5/livestock/2008		None
4940	2840	580	M	C	Meeting 2010		None
4941	2212	649	M	C	Meeting 2010	BTPD, BO, GSG, MP	PHMA
4942	70	12	C	C	Meeting 2003	SS	None
4943	1759	489	M	C	Meeting 2009	GSG	PHMA
4944	160	47	M	C	Meeting 2008	TBEB, GSG	None
4945	1911	531	I	C	Meeting 2009	GSG	GHMA
4947	7454	1825	M	C	Meeting 2009	GSG	PHMA
4948	640	178	M	C	Meeting 2009	GSG	GHMA
4949	5135	1298	M	C	Meeting 2008	BTPD, BRSP, BO, GE, GSG, ML, MP	PHMA
4950	967	259	I	C	STP/1/livestock/2005	GSG	PHMA
4951	1800	415	I	C	SPT/1,5/livestock/2008	GSG	PHMA
4952	160	41	M	C	Meeting 2008		None
4953	655	167	M	C	Meeting 2002		None
4954	1170	305	I	C	Meeting 2000	GSG	GHMA
4955	40	10	C	C	SPT/1/livestock/2009	GSG	GHMA
4968	1280	369	M	C	Meeting 2006	GSG	PHMA
4969	960	264	I	C	None	GSG	GHMA
4970	640	137	M	C	Meeting 2003	GSG	PHMA
4971	2561	731	I	C	Meeting 2002	BO, BRSP, CCL, GE, GSG, LBC, ML, RHW, ST	PHMA
4972	5776	1626	M	C	Meeting 2011	BTPD, FH, GSG	PHMA

Allotment Number	Public Acres	Public AUMs	Management Status[1]	Livestock Kind[2]	Land Health Status[3] Determination/ Standard/ Causal Factor/ Year	Threatened, Endangered, and Special Status Species[5]	Sage Grouse Status[4]
4974	1180	401	M	C	Meeting 1999	BTPD, GSG, FH	GHMA
4975	800	288	I	C	Meeting 2008	FH, GSG, ML	PHMA
4976	320	114	M	C	Meeting 2006	FH, GSG	GHMA
4978	40	12	C	C	Meeting 2000	GSG	GHMA
4979	640	245	M	C	Meeting 2002	BRSP, CCL, GSG, LBC, ML, RHW, ST	PHMA
4980	320	125	M	H	Meeting 1998	GSG	GHMA
4981	6520	1344	I	C	Meeting 2004	BTPD, BO, FH, GSG, ML	PHMA
4982	320	96	M	C	Meeting 2001	GSG	GHMA
4983	200	47	M	C	Meeting 2002	GE, GSG	PHMA
4984	664	257	M	C	Meeting 2006	GSG	GHMA
4985	160	50	C	C	Meeting 2008	BRSP, CCL , GSG, ML, LBC, RHW, ST	GHMA
4986	40	9	C	C	Meeting 2002	WHNS	None
4987	40	9	C	C	Meeting 2009	GSG, WHNS	PHMA
4988	2986	734	I	C	Meeting 2002	BTPD, BO, FH, GSG, ML	PHMA
4989	1011	193	C	C	Meeting 1999	BTPD, GSG	PHMA
4991	800	169	M	C	Meeting 2002	GSG	PHMA
4992	492	174	M	C	Meeting 2002	GE, GSG	PHMA
4994	520	102	C	C	SPT/1/weeds/2009	BTPD, GE, GSG	PHMA
4995	240	55	C	C	Meeting 2009	BTPD, BO ,GSG	PHMA
4996	480	94	C	C	Meeting 2009	BTPD, GE, GSG	PHMA
4997	120	22	C	C	Meeting 2002	GSG	PHMA
4998	200	48	C	C	Meeting 2002	GSG, WHNS	PHMA

Allotment Number	Public Acres	Public AUMs	Management Status[1]	Livestock Kind[2]	Land Health Status[3] Determination/ Standard/ Causal Factor/ Year	Threatened, Endangered, and Special Status Species[5]	Sage Grouse Status[4]
4999	40	4	C	C	Meeting 2007	GSG	PHMA
5000	158	41	C	C	Meeting 2000	BTPD, GSG	PHMA
5002	512	110	C	C	Meeting 2007	GSG	PHMA
5004	80	24	C	C	Meeting 2009	GSG	PHMA
5006	160	36	C	C	Meeting 2004	BRSP, CCL, GSG, LS, ST	PHMA
5007	80	12	C	I	Meeting 2004	BTPD, BRSP, CCL, GSG, ST	PHMA
5008	160	17	C	C	Meeting 2009	BE, GSG	PHMA
5012	160	36	C	C	Meeting 2009	BTPD, GSG	PHMA
5020	640	150	C	C	Meeting 2009	BRSP, GSG, LS, ST	PHMA
5200	200	40	C	C	SPT/1,5/weeds/2008	GE, GSHL	GHMA
5201	40	7	C	C	None		None
5202	17447	1430	I	C	Meeting 2003	BRSP, GE, GSG, LS	PHMA
5203	9552	1021	I	C	Meeting 2004	CL, GB, WO, GE, GSG, LS, PS, BLFG, SHOSH	PHMA
5204	1340	88	M	C	Meeting 2009	BRSP, GSG, ST	PHMA
5205	32	5	C	C	Meeting 2008	GSG	PHMA
5206	200	20	C	S	SPT/1,5/weeds/2008	GSHL	None
5207	80	7	C	C	Meeting 2002	GE, GSG, GSHL	PHMA
5208	720	132	C	C	Meeting 2009	GSG	PHMA
5209	1115	127	M	C	Meeting 2003	GSG	PHMA
5210	10272	748	I	C	SPT/1,2/livestock/2006	BRSP, GE, GSG, LS, ST	PHMA
5212	40	13	C	S	Fails/1/livestock/2008	GSG	GHMA
5213	5940	481	M	C	SPT/1,5/livestock/1999	GSG, GSHL, MS, PS	PHMA

Allotment Number	Public Acres	Public AUMs	Management Status[1]	Livestock Kind[2]	Land Health Status[3] Determination/ Standard/ Causal Factor/ Year	Threatened, Endangered, and Special Status Species[5]	Sage Grouse Status[4]
5214	1970	151	M	C	SPT/1/livestock/2009	BTPD, GSG	PHMA
5215	480	60	C	C	Fails/1,5/livestock/2009	GSG, GSHL	PHMA
5217	6961	442	M	C	Meeting 2002	WTPD, BO, GSG, GM, OEP	PHMA
5219	200	24	C	C	Meeting 2008	GE, GSG, GSHL	PHMA
5220	80	16	C	H	Meeting 2009	WO	None
5221	520	68	M	C	SPT/1,5/livestock/2003	GSG	PHMA
5222	80	16	C	C	Meeting 2000	GSHL	None
5223	35	12	C	C	Meeting 2006	GSG	None
5224	1395	90	M	C	Meeting 2004	GSG	PHMA
5225	15294	1295	I	C	Meeting 2003	GB, WO, BRSP, GE, GSG, LS, LBC, PF, ST, GSHL, BLFG,SHOSH	PHMA
5228	240	30	C	C	Meeting 2004	GSHL	None
5229	1837	201	C	C	Meeting 2002	BRSP, GE, GSG, LS, LBC	PHMA
5231	160	40	C	H	Meeting 2004		None
5232	1040	120	I	C	Meeting 2007	GSG	GHMA
5233	255	52	M	C	None	BRSP, GSG, LBC	PHMA
5235	6369	425	I	C	Meeting 2004	GE, GSG, LS, GSHL, MS, DM	PHMA
5300	5240	856	I	C	Meeting 2006	BTPD, GSG	RA
5302	2147	344	I	C	Meeting 2006	BTPD, BO, GSG, GSHL, MS	RA
5304	3035	351	I	C	Meeting 2010	BTPD, BE, SA, SS	None
5307	960	130	M	C	Meeting 1999	GSG	None
5308	380	134	C	C	Meeting 2001		None
5309	400	78	C	C	Meeting 2009	BTPD, BO, GSG	RA

Allotment Number	Public Acres	Public AUMs	Management Status[1]	Livestock Kind[2]	Land Health Status[3] Determination/ Standard/ Causal Factor/ Year	Threatened, Endangered, and Special Status Species[5]	Sage Grouse Status[4]
5310	839	146	C	C	Meeting 2003	BTPD, BE, GSG, SA, SS	RA
5311	3275	455	I	C	Meeting 2006	BE, GSG	RA
5312	2480	300	M	C	Meeting 2006	TBEB, GSG	RA
5314	1910	610	M	C	Meeting 2009	BTPD, GSG	RA
5318	1355	175	M	C	Meeting 2008	GSG	None
5320	1577	222	I	C	Meeting 2006	BTPD	None
5322	638	89	M	C	Meeting 2006	BTPD, GSG	RA
5324	80	15	C	C	Meeting 2011	GSG	None
5326	480	70	M	C	Meeting 2004	BTPD, BE, GSG, SA, SS	RA
5329	120	12	C	C	Meeting 2006	BTPD, BE, GSG	RA
5330	184	24	C	C	Meeting 2011		None
5331	200	36	M	C	Meeting 2010	BTPD, GSG	None
5332	960	248	M	C	Meeting 2002		None
5333	160	37	M	C	Meeting 2001		None
5335	320	36	C	C	Meeting 2008		None
5337	1082	111	M	C	Meeting 2006	TBEB, RHW	None
5338	1033	166	M	C	Meeting 2006	BTPD, GSG	RA
5339	1600	266	M	C	Meeting 2002		RA
5340	640	92	M	C	Meeting 2003	GE, GSG	RA
5341	4000	542	M	C	Meeting 2006	BTPD, BE, GSG, SA, SS	None
5342	80	15	C	C	Fails/1,5/livestock/2009	BE, BO	None
5344	640	45	M	C	SPT/1/OHV/2009	GSG	None
5345	1465	79	C	C	Meeting 2010	GSG	RA

Allotment Number	Public Acres	Public AUMs	Management Status[1]	Livestock Kind[2]	Land Health Status[3] Determination/ Standard/ Causal Factor/ Year	Threatened, Endangered, and Special Status Species[5]	Sage Grouse Status[4]
5346	320	50	C	C	Meeting 2001		None
5347	320	55	C	C	Meeting 2000	GSG	RA
5348	1916	384	M	C	Meeting 2000		None
5349	136	16	C	C	Meeting 2000		None
5350	1980	273	I	C	Meeting 2006	BTPD, BE, BO, GSG	RA
5353	1258	180	C	C	Meeting 2006	GE, GSG	RA
5354	40	21	C	C	Meeting 2006	BTPD, GSG, LS	RA
5355	1760	313	M	C	Meeting 2007	BTPD, GSG	RA
5356	3559	483	I	C	Meeting 2010	BTPD, GSG	RA
5357	37	8	C	C	Meeting 2008		None
5361	320	48	M	C	Meeting 2008	BTPD, GSG	RA
5362	560	72	M	C	SPT/1,5/livestock/2010	BE, GSG, SA, SS	RA
5363	320	53	M	C	Meeting 2006	GSG	RA
5370	4039	679	M	C	Meeting 2006	BTPD, GSG	RA
5371	980	169	M	C	Meeting 2006	BTPD, GSG	RA
5372	640	100	M	C	Meeting 2006	GSG	None
5375	68	24	C	C	Meeting 2008	GSG, GSHL	RA
5377	233	34	C	C	Meeting 2002	GSG	RA
5378	1280	213	M	C	Meeting 2002		RA
5379	1708	290	M	C	Meeting 2003	BTPD, GSG, GSHL	RA
5380	1672	347	M	C	Meeting 2003	BTPD, BE, GSG, SA, GSHL, SS	RA
5403	80	17	C	C	Fail/1/livestock/2010	BE, GE	None
5404	40	10	C	C	Meeting 2004		None

Allotment Number	Public Acres	Public AUMs	Management Status[1]	Livestock Kind[2]	Land Health Status[3] Determination/ Standard/ Causal Factor/ Year	Threatened, Endangered, and Special Status Species[5]	Sage Grouse Status[4]
5405	132	30	C	C	Meeting 2010		None
5407	80	12	C	C	Meeting 2000	BOB	None
5409	896	184	C	C	Meeting 2006	GSG	GHMA
5414	388	75	M	C	Meeting 2009	CL, GB, WO	None
5416	80	23	C	C	Meeting 2004		None
5417	80	16	C	C	Meeting 2004		None
5418	40	8	C	C	Meeting 2006		None
5419	120	24	C	C	Meeting 2000		None
5424	78	12	C	C	Meeting 2010		None
5426	97	15	C	C	Meeting 2003	BE, GSHL	None
5427	119	24	C	C	Meeting 2008	GSG, PF	GHMA
5432	40	10	C	C	Meeting 2008		None
5434	160	50	C	C	Meeting 2008	GB, BOB, GSG	GHMA
5435	80	15	C	C	SPT/1,5/weeds/2008	BE, BOB	None
5437	308	60	C	C	Meeting 2001	GB, WO, GSG	None
5438	40	13	C	C	Meeting 2008		None
5439	360	24	C	C	Meeting 2009	CL, GB, WO	None
5440	60	10	C	C	SPT/1,5/weeds/2008	BE, BOB	None
5441	40	8	C	C	SPT/1,5/weeds/2008		None
5444	120	29	C	C	Meeting 2006		None
5446	40	8	C	C	Meeting 2006		None
5449	40	10	C	C	Meeting 2007	BE	None
5451	414	62	C	C	Fail/1,5/livestock/2009	BE, GE	None

Allotment Number	Public Acres	Public AUMs	Management Status[1]	Livestock Kind[2]	Land Health Status[3] Determination/ Standard/ Causal Factor/ Year	Threatened, Endangered, and Special Status Species[5]	Sage Grouse Status[4]
5453	215	49	C	C	Meeting 2008	GSG	GHMA
5454	320	36	C	C	Meeting 2003	GSG, YBC	GHMA
5458	80	20	C	C	Meeting 2002		None
5460	80	17	C	C	Meeting 2008	BOB	None
5461	480	24	C	C	Meeting 2001	GB, WO	None
5466	826	72	C	C	Meeting 2011	GB, WO	None
5467	40	14	C	Y	Fail/1,5/weeds and fire/2007		None
5470	160	36	C	C	Meeting 2008	GSG	GHMA
5471	674	120	C	C	Meeting 2009		None
5472	40	6	C	C	Meeting 2008		NONE
5474	533	163	C	C	Meeting 2009	GSG	GHMA
5476	160	20	C	C	Meeting 2003	FM, GB, WO	None
5477	640	114	C	C	Meeting 2009	GSG, PF	GHMA
5483	91	8	C	C	Meeting 2009		None
5485	80	11	C	C	Meeting 2008	GB, PF	None
5486	40	9	C	C	Meeting 2008	BASP, LBC	None
5488	481	70	C	C	SPT/1,5/weeds/2008		None
5490	567	103	C	C	Meeting 2009	BE, GE, PF	None
5492	1197	266	C	C	Meeting 2003	GB, WO, YCT	None
5498	240	24	C	C	Meeting 2010		None
5500	81	18	C	C	Meeting 2009		None
5501	560	14	C	C	Meeting 2009	CL, GB, WO	None
5502	40	6	C	C	SPT/1,5/weeds and fire/2008	GB, WO	None

Allotment Number	Public Acres	Public AUMs	Management Status[1]	Livestock Kind[2]	Land Health Status[3] Determination/ Standard/ Causal Factor/ Year	Threatened, Endangered, and Special Status Species[5]	Sage Grouse Status[4]
5503	520	63	C	C	Meeting 2009	GB, WO	None
5504	87	8	C	C	Meeting 2001		None
5505	120	24	C	C	Meeting 2002	GB	None
5508	40	7	C	C	SPT/1,5/weeds/2008	BE, BOB, PF	None
5510	160	35	C	C	Meeting 2004	WO	None
5511	40	15	C	C	Meeting 2004		GHMA
5512	80	17	C	C	Meeting 2008		None
5515	80	20	C	C	Meeting 2008		None
5516	337	58	C	C	Meeting 2001		None
5517	1040	180	C	C	SPT/1,5/OHV/2010	YCT, GSHL, MS, SS, WHNS	None
5520	609	120	C	C	Meeting 2010	BE	None
5521	160	32	C	C	Meeting 2001		None
5522	843	133	C	C	Meeting 1999	GB, WO, BOB, GSG	None
5523	480	88	C	C	Meeting 2009		None
5524	160	34	C	C	Meeting 2008	GSG	GHMA
5525	40	9	C	C	Meeting 2006	GSG	GHMA
5532	107	42	C	C	Meeting 2008	GSG	GHMA
5533	72	28	C	C	Meeting 2004	BOB, GSG, PF	GHMA
5534	360	58	C	H	Meeting 2009		None
5535	40	8	C	C	Meeting 2004		None
5537	30	5	C	C	Meeting 2006	YBC	None
5539	40	8	C	C	Meeting 2008		None
5540	40	13	C	C	Meeting 2008	BOB, GSG, PF	None

Allotment Number	Public Acres	Public AUMs	Management Status[1]	Livestock Kind[2]	Land Health Status[3] Determination/ Standard/ Causal Factor/ Year	Threatened, Endangered, and Special Status Species[5]	Sage Grouse Status[4]
5543	345	75	C	C	Meeting 2010	GB, WO, GSG	None
5544	160	20	C	C	Meeting 2002	GSG	GHMA
5545	685	215	C	C	Meeting 2000		None
5546	80	16	C	C	SPT/1,5/weeds & livestock/2008	MS	None
5547	2867	566	M	C	Meeting 2002	GE, GSG	PHMA
5548	710	139	I	C	Meeting 2009	GB	None
5549	40	12	C	C	Meeting 2008	FH, GSG	GHMA
5550	140	23	C	C	Meeting 2003	GB, WO	None
5552	802	167	C	C	SPT/1,5/weeds & fire/ 2008	GB, WO	None
5553	79	20	C	C	Meeting 2008	MS	None
5555	303	66	C	C	Meeting 2009		None
5556	120	10	C	C	Meeting 2003	BE	None
5557	240	14	C	C	Meeting 2003	CL, GB, WO	None
5558	320	62	C	C	Meeting 2010	GB	None
5559	141	19	C	C	Meeting 2006	GSG	GHMA
5560	120	24	C	C	Meeting 2008		None
5562	240	46	C	C	Meeting 2004	GB, PF	None
5565	25	6	C	C	Meeting 2010	GSG	GHMA
5566	40	8	C	H	Meeting 2008	GSG	GHMA
5567	40	24	C	C	Meeting 2004		None
5568	40	5	C	C	None		None
5569	80	24	C	C	Meeting 2006	GSG	GHMA
5571	80	10	C	C	Meeting 2006	BE	None

Allotment Number	Public Acres	Public AUMs	Management Status[1]	Livestock Kind[2]	Land Health Status[3] Determination/ Standard/ Causal Factor/ Year	Threatened, Endangered, and Special Status Species[5]	Sage Grouse Status[4]
5572	640	97	C	C	Meeting 2008	GSG	GHMA
5573	110	36	C	C	Meeting 1999	GSG	GHMA
5580	280	39	C	C	Meeting 2002		None
5581	160	26	C	C	SPT/1,5/weeds & fire/ 2008	GB	None
5582	40	10	C	C	Fail/3/unknown/2009	GSG	GHMA
5585	480	50	C	C	Meeting 2003	GB, YCT	None
5586	40	8	C	C	Meeting 2008		None
9648	40	7	C	C	Meeting 2009	GSG	GHMA
9652	40	14	C	C	Meeting 2008	LBC, MP	None
9654	40	13	C	C	Meeting 2006		None
9660	39	13	C	C	SPT/1,5/fire/2008	BE	None
9661	440	139	C	C	Meeting 2008		None
9667	160	26	C	C	Meeting 2010	GSG	GHMA
9678	205	35	C	C	Meeting 2008		None
9680	320	64	C	C	Meeting 2008	TBEB	None
9682	80	13	C	C	Meeting 2010		None
9686	40	6	C	C	Meeting 2006		None
9712	200	62	C	C	SPT/1,5/weeds/2009	GSG, WHNS	GHMA
9719	160	22	C	C	Fails/2/livestock/2009	SS	None
9720	40	12	C	C	Meeting 2008	BE	None
9734	213	64	C	C	Meeting 2006		None
9736	80	21	C	C	Meeting 2001	SS	None
9737	80	16	C	C	Meeting 2009		None

Allotment Number	Public Acres	Public AUMs	Management Status[1]	Livestock Kind[2]	Land Health Status[3]	Threatened, Endangered, and Special Status Species[5]	Sage Grouse Status[4]
					Determination/ Standard/ Causal Factor/ Year		
9740	65	13	C	C	Meeting 2009		None
9744	520	121	M	C	Meeting 2008		None
9765	200	44	C	C	Meeting 2004	WO	None
9768	40	8	C	C	Meeting 2008	WO	None
9781	162	38	C	C	Meeting 2001	LBC	None
9789	31	8	C	C	Meeting 2008		None
9791	1042	336	M	C	Meeting 2009	BTPD, GE, GSG	PHMA
9792	38	10	C	C	Meeting 2008	LBC, MP	None
9805	160	64	C	C	Meeting 2001		None
9824	80	15	C	C	Meeting 2008	GSHL	None
9837	80	18	C	C	Meeting 2000		None
9840	169	37	C	C	Meeting 2008		None
9843	241	33	C	C	Meeting 2009		None
9844	240	54	C	C	Meeting 2009	GSG	PHMA
9845	320	102	C	C	Meeting 2010		None
1003*	20968	1642	M	C	None	WTPD, BRSP, GE, GSG, ST, PS	PHMA
1005*	5413	455	M	C	Fail/1,2,3,4/livestock/2011	WTPD, GSG, LS, PS, DD, GEM MC, OEP, SMBU, SH	PHMA
1011*	2660	140	C	C	None	PB, TBEB, WTPD, BGG, BRSP, GSG, LS, MP, ST, GSHL, SH, DM	PHMA

*Allotments administered by the Cody Field Office, but contain public lands located in Montana

1. **Management Status**

"I" means that the allotment is in an "Improve Status". Major goals and objectives are for improvement of ecological conditions.
"M" means that the allotment is in a "Maintain Status". Major goals and objectives are to maintain current acceptable ecological conditions.
"C" means that the allotment is in a "Custodial Status". Custodial allotments are typically small, isolated and unfenced parcels of public land with little or no management opportunity.

2. **Livestock Kind**

"C" = Cattle
"H" = Horses
"I" = Indigenous
"S" = Sheep
"Y" = Yearling (cattle)
"WH/B" = Wild Horse and Burro

3. **Land Health Status**

This column lists the results of the most recent monitoring data collected on the grazing allotment, and the year the determination was made.

Determination

Meeting- All standards for rangeland health are being achieved.
SPT- All standards other than those listed are achieving standards. The standard(s) listed is making significant progress towards meeting standards.
Fail- All standards other than those listed are achieving standards. The standard(s) listed are failing to achieve the standard.
None- No monitoring data has been collected on this allotment.

Standards

Montana standards for rangeland health

1. Upland health
2. Riparian and wetlands
3. Water quality
4. Air quality
5. Habitat
6. Air quality

Wyoming standards for rangeland health

1. Soil health
2. Riparian and wetland vegetation
3. Upland vegetation
4. Habitat
5. Water quality

Causal Factor

The influence(s) occurring or that has occurred on an allotment which has led to one or more of the standards not being achieved.

4. **Sage Grouse Status**

This column lists the Greater sage-grouse management status that an allotment occurs in. Allotments were categorized by the management status that afforded the most protection to the Greater sage-grouse. No consideration was made for percent acreage within a management category. For example, if an allotment had 1% of its public lands in a PHMA, and 99% of its public lands in GHMA habitat. The allotment was considered a PHMA.
PHMA= Priority Habitat Management Area

RA= Restoration Area
GHMA=General Habitat Management Area
None=No Greater sage-grouse habitat occurs on public lands

5. **Threatened, Endangered, Candidate, & Special Status Species**
This column lists the symbol for threatened, endangered, candidate, and special status species which occur on public lands within the grazing allotments. The common name, scientific name, and symbol used in the table above. The symbols used for these tables are not the official species codes. Rows that do not contain an entry do not have threatened, endangered, candidate, or special status species identified on public lands.

Common Name	Scientific Name	Symbol		Common Name	Scientific Name	Symbol
Baird's sparrow	*Ammodramus bairdii*	BASP		Miner's candle	*Cryptantha scoparia*	MC
Bald Eagle	*Haliaeetus leucocephalus*	BE		Mountain plover	*Charadrius montanus*	MP
Beartooth large-flowered goldenweed	*Pyrrocoma carthamoides Var. subsquarrosa*	BLFG		Nama	*Nama densum*	NA
Black-tailed prairie dog	*Cynomys ludovicianus*	BTPD		Northern goshawk	*Accipiter gentiles*	NG
Blue-gray gnatcatcher	*Polioptial caerulea*	BGG		Obscure evening-primrose	*Camissonia andina*	OEP
Bobolink	*Dolichonyx orysivorus*	BOB		Pallid bat	*Antrozous pallidus*	PB
Brewer's sparrow	*Spizella breweri*	BRSP		Peregrine falcon	*Falco peregrinus*	PF
Burrowing owl	*Athene cuncularia*	BO		Plains spadefoot	*Spea bombifrons*	PS
Canada lynx	*Lynx canadensis*	CL		Platte Cinquefoil	*Potentilla plattensis*	PC
Chestnut-collared longspur	*Calcarius ornatus*	CCL		Red-headed woodpecker	*Melanerpes erythrocephalus*	RHW
Daggett rockcress	*Arabis demissa var. languida*	DR		Sage thrasher	*Oreoscoptes montanus*	ST
Dwarf mentzelia	*Mentzelia pumila*	DM		Sauger	*Stizostendion canadense*	SA
Ferruginous hawk	*Buteo regalis*	FH		Shoshonea	*Shoshonea pulvinata*	SHOSH
Fringed myotis	*Myotis thysanodes*	FM		Small Camissonia	*Camissonia parvula*	SC
Geyer's Milkvetch	*Astragalus geyeri*	GEM		Smooth Buckwheat	*Stenogonum salsuginosum*	SMBU
Golden eagle	*Aquila chrysaetos*	GE		Spiney Softshell	*Apalone spinifera*	SS
Gray's milkvetch	*Astragalus grayi*	GM		Spiny hopsage	*Grayia spinosa*	SH

Common Name	Scientific Name	Symbol		Common Name	Scientific Name	Symbol
Greater sage-grouse	*Centrocercus urophasinus*	GSG		Sweetwater milkvetch	*Astragalus aretioides*	SM
Greater Short Horned Lizzard	*Phrynosoma hernandesi*	GSHL		Torrey's desert dandelion	*Malacothrix torreyi*	DD
Grizzly bear	*Ursus arctos horribilis*	GB		Western hog nosed snake	*Heterodon nasicus*	WHNS
Indian breadroot	*Pediomelum hypogaeum*	LIB		White-tailed prairie dog	*Cynomys leucurus*	WTPD
Lesica's Bladderpod	*Physaria lesicii*	LB		Windriver Milkvetch	*Astragalus oreganus*	WM
Loggerhead shrike	*Lanius ludovicianus*	LS		Wolvorine	*Gulo gulo*	WO
Long-billed curlew	*Numenius americanus*	LBC		Yellow beeplant	*Cleome lutea*	YB
Mat Prickley Phlox	*Leptodactylon caespitosum*	MPP		Yellow-billed cuckoo	*Coccyzus americanus*	YBC
McCown's longspur	*Calcarius mccownii*	ML		Yellowstone cutthroat trout	*Oncorhynchus clarki bouvieri*	YCT
Milk Snake	*Lampropeltis triangulum*	MS				