10. Effects on Scenery

Timber management and associated road construction have the greatest potential to affect the visual appearance of the Forest On lands where timber harvest prescriptions and road designs are developed to maintain or enhance the visual resource, the scenery will have a natural appearance. On lands where timber harvest is conducted with little attention to the affect on scenery, the effect of this activity will be very evident, thus creating an unnatural-appearing landscape. In all alternatives except Alternative C-Modified, Forest visitors will experience a change from the existing condition of natural stands with larger trees and mixed ages to a more uniform, managed forest with smaller trees

Each alternative places different emphasis on maintaining or enhancing scenic quality. In each case, the scenery viewed from State highways will be managed to maintain a natural appearance Alternatives that allocate larger quantities of land to scenic corridors, old growth, and semiprimitive areas will maintain more of the Forest in a natural-appearing condition. Where more emphasis is placed on timber harvest, the Forest will have an altered appearance.

Alternative C-Modified, with its combination of scenic corridors, old-growth, semiprimitive areas, and growth of large diameter ponderosa pine, will manage a large portion of the Forest in a natural appearing to slightly altered appearance. Alternatives A, I, and F will have moderate levels of natural-appearing landscapes Alternative B-Modified provides emphasis on wood production which will result in a highly altered-appearing Forest. Table IV-12 identifies the expected visual condition from natural appearing to heavily altered for selected viewsheds on the Forest by alternative. Figure IV-13 gives graphic examples of landscapes varying from natural appearing to heavily altered

Due to the lack of specific information regarding management activities in Alternative NC, the effects of this alternative cannot be estimated and evaluated to the same degree as other alternatives Based on available information, Alternative NC will closely approximate Alternative A.

The management of livestock will have little effect on the scenery of the Forest. There may be isolated cases where mitigation will be needed to lessen impacts of grazing activities or structural developments in visually sensitive areas. Fish and wildlife habitat improvement can enhance the visual experience by increasing the potential to view wildlife Habitat improvement projects that emphasize returning habitat to a natural condition, such as riparian area improvement, enhance the scenic resource. Instream structural improvements can add to scenic variety and enjoyment, provided they do not create unnatural-appearing modifications to the stream Alternative C-Modified emphasizes rapid improvement of riparian habitat through natural processes on anadromous and resident fish streams. Alternatives B-Modified, F and I place emphasis on structural improvements and slower improvement of riparian areas on anadromous streams Alternative A primarily uses structures to improve anadromous fish habitat.

Due to the lack of specific information regarding management activities in Alternative NC, the effects of this alternative cannot be estimated and evaluated to the same degree as other alternatives Based on available information, Alternative NC will closely approximate Alternative A.

Fuels treatment and prescribed burning will have short-term effects on the visual resource During periods of concentrated burning, smoke could cause reduced visibility

In the long-term, scenic quality will be maintained in recreation-related areas. Semiprimitive areas will provide natural-appearing landscapes. Developed areas may have localized decreases in scenic quality Construction activities at developed sites may cause some short-term decrease in scenic quality Wildernesses have the effect of maintaining natural-appearing landscapes.

Mineral development may have a short-term adverse impact on scenic values Remnants of historic mining activity are now often viewed as scenic attractions by members of the public

Mitigation Measures

Mitigation measures for scenery are found in several National Forest Landscape Management handbooks. The following is a list of handbooks specifically addressing landscape management design and implementation techniques.

National Forest Landscape Management	Vol. 1	USDA Handbook 434
Ch 1, The Visual Management System	Vol. 2	USDA Handbook 462
Ch 2, Utilities	Vol 2	USDA Handbook 478
Ch 3, Range	Vol 2	USDA Handbook 484
Ch 4, Roads	Vol 2	USDA Handbook 483
Ch 5, Timber	Vol 2	USDA Handbook 559
Ch 6, Fire	Vol 2	USDA Handbook 608
Ch. 7, Ski Areas	Vol. 2	USDA Handbook 617

These handbooks are kept in the National, Regional, Supervisor's, and District offices of the USDA Forest Service

Implementation of these mitigation measures will greatly reduce the adverse impact of management activities on the visual resource. In some cases, these measures may actually improve scenic quality Applying these mitigation measures is somewhat subjective, because interpretation is based on the sensitivity of personnel responsible for their application Errors in judgment will normally result in a greater length of time for a return to natural-appearing conditions In the case of structures, errors in judgment could result in higher costs of corrective action To minimize errors in judgment, mitigation measures are applied under the guidance of a professional landscape architect Projects are designed and analyzed utilizing the most current computer simulation methods Examples of computer aids are the Viewit and Perspective Plot programs. These activities will be monitored for effectiveness When the principles of visual management are applied, they are very effective in maintaining visual quality This is based on 15 years experience in applying the visual management system.

Designated scenic areas and semiprimitive areas will have additional restrictions placed upon mineral operations to mitigate visual impacts during mining, and to ensure restoration of scenic values upon termination of mining

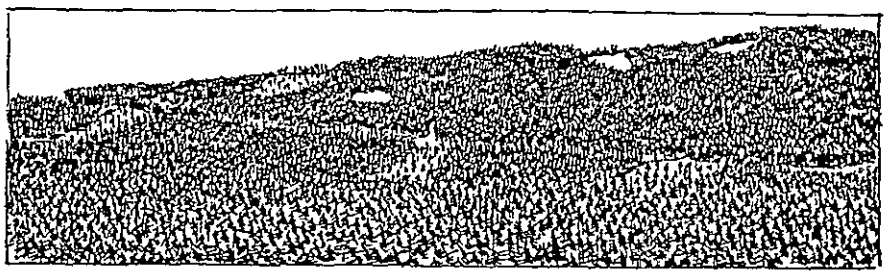
TABLE IV-12: Expected Condition of Viewsheds by Alternative 1/

Viewsheds	Total Acres	Existing Condition	Recommended 2/ Condition	Alternatives NC&A	B-Mod	C-Mod	F	I-Pref
Highway 395	38,248	NA	SA	SA	SA	SA	SA	SA
Highway 26	28,107	SA	SA	SA	SA	SA	SA	SA
Highway 7	11,399	SA	SA	SA	SA	SA	SA	SA
County 20	25,506	SA	SA	SA	SA	SA	MA	MA
Wilderness Loop	62,691	MA	SA	SA	SA	SA	SA	SA
Canyon Creek	3,550	SA	SA	SA	SA	SA	MA	MA
Fawn Springs	455	SA	SA	MA	HA	MA	HA	SA
Strawberry	366	NA	NA	NA	NA	NA	NA	NA
Emigrant	4,142	MA	MA	MA	MA	MA	MA	MA
FS RD 37	9,166	MA	MA	MA	HA	MA	HA	HA
FS RD 31	12,124	MA	MA	MA	HA	MA	HA	HA
FS RD 24	9,994	SA	MA	MA	HA	MA	HA	HA
Yellowjacket	4,675	SA	SA	SA	SA	SA	SA	SA
John Young	2,778	MA	HA	HA	HA	MA	HA	HA
FS RD 21	8,746	SA	MA	MA	HA	MA	HA	HA
Izee	7,190	SA	MA	MA	MA	MA	MA	MA
King Mountain	4,451	MA	HA	HA	HA	MA	HA	HA
FS RD 28	8,110	SA	MA	MA	HA	MA	HA	HA
FS RD 17	3,680	SA	MA	MA	HA	MA	HA	HA
FS RD 15	5,490	MA	MA	MA	HA	MA	HA	HA
FS RD 16	9,468	SA	MA	MA	HA	MA	MA	MA
Malheur River Tr.	1,627	NA	SA	SA	SA	SA	SA	SA
N.F Malheur R.Tr.	8,603	NA	NA	NA	SA	NA	NA	NA
Glacier Loop	12,470	MA	MA	MA	HA	MA	MA	MA
Table	1,122	SA	HA	HA	SA	SA	SA	SA
Skyline Trail	958	SA	SA	SA	MA	SA	SA	SA
Roads End	3,475	MA	SA	MA	HA	MA	MA	MA
Middle Fork Canyon	1,587	SA	HA	HA	HA	MA	HA	HA
FS RD 45	5,771	SA	MA	MA	HA	MA	HA	HA
FS RD 36	3,035	MA	MA	MA	HA	MA	HA	HA
Long Creek	3,787	SA	MA	MA	HA	MA	HA	HA
FS RD 18	4,724	SA	MA	MA	MA	MA	MA	MA
Magone	4,173	SA	SA	MA	MA	MA	MA	MA
FS RD 3160	4,286	MA	MA	MA	HA	HA	HA	HA
FS RD 47	5,668	MA	MA	MA	HA	HA	HA	HA
FS RD 3750	3,038	MA	MA	MA	HA	HA	HA	HA
FS RD 46	3,664	MA	MA	MA	HA	HA	HA	HA
Vinegar	5,492	MA	MA	MA	HA	HA	HA	HA
FS RD 2640	7,276	MA	MA	MA	HA	HA	HA	HA
Wiley Creek	4,027	MA	MA	MA	HA	HA	HA	HA
Four Corners	1,689	MA	MA	MA	HA	HA	HA	HA
Fox Valley	2,015	MA	MA	MA	HA	HA	HA	HA
Cedar Grove	3,146	MA	MA	MA	HA	HA	HA	HA
Starr Ridge	4,557	MA	MA	MA	HA	HA	HA	HA
Lake Creek Plus	2,373	MA	MA	MA	HA	HA	HA	HA
FS 16 to Boundary	3,391	MA	MA	MA	HA	HA	HA	HA
Malheur Ford Rd	3,736	MA	MA	MA	HA	HA	HA	HA
FS RD 3770	4,134	MA	MA	MA	HA	HA	HA	HA

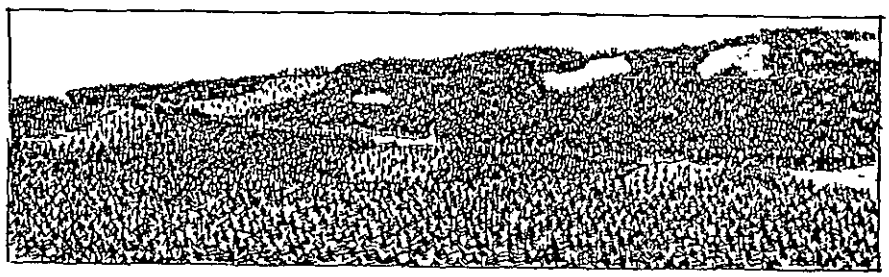
1/NA = Natural Appearing, SA = Slightly Altered, MA = Moderately Altered, HA = Heavily Altered

2/Recommended visual condition is based on application of the visual management system which does not consider other resource objectives

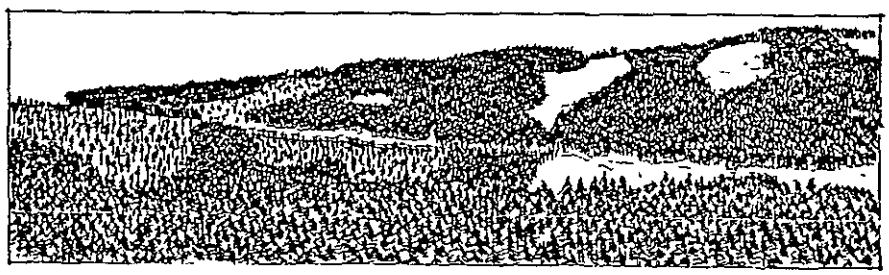
FIGURE IV-13: Viewshed Appearance



Natural Appearing



Slightly Altered



Moderately Altered

Heavily Altered

11. Effects on Cultural Resources

Cultural resources are unique, fragile, and nonrenewable features of the environment As such, they are recognized by a special set of historic preservation laws, regulations, and policies. Consequently, efforts will be made in every alternative to inventory, evaluate, preserve, and protect the significant cultural resources of the Forest

In all alternatives, the decision whether to practice site avoidance or to carry out mitigation in lieu of avoidance will be based on both the nature and uniqueness of cultural values at the site and the costs of desired treatment (avoidance or mitigation).

Effects on cultural resources range from disturbance, to destruction or loss of part or all of the resource, to modification of the environmental setting around the site so that the feeling of the place is altered or destroyed The greater the number of known or potential sites that fall within management areas which allow a high level of modification, the greater is the risk of adversely impacting cultural resources

Some kinds of cultural resource properties on the Forest that could be affected by undertakings are

Prehistoric· Heavy concentrations of lithic sites which include quarries, quarry workshops, seasonal camps, hunting stations, cambium-peeled trees, fire hearths, house pits/villages, kill/butcher sites, middens, ovens, rock art, rock shelters, and rock structures such as cairns, hunting blinds, alignments, etc

Historic· Such as placer ditches, railroad grades, trails, wagon roads, and stock driveways; buildings and structures, including log cabins and Depression-era administrative sites; dendroglyphs; livestock management sites such as log troughs, salt licks, etc , and mines

The alternatives fall into three general groupings of their consequences on cultural resources These groupings are high, moderate, and low potential for impact The groupings are based on location and number of acres within each type of management area and on the type of effect that any particular management area is likely to have on cultural resources

High-potential alternatives (Alternatives NC, A, B-Modified, and F) could have major alterations of the environmental setting of significant sites; future management options constrained; direct impacts likely to occur to nonsignificant sites through timber harvest, road construction, livestock grazing, and increased accessibility, and high potential for disturbance of currently unidentified sites Opportunity for the identification of new sites, however, is also the greatest at this level

With moderate-potential, Alternative I alters the environmental setting of significant sites; direct impacts may occur to nonsignificant sites through timber harvest, recreational developments, road construction, and motorized recreational use, thereby increasing risks to unprotected sites Future management options are varied and there is substantial opportunity for interaction of the public with cultural resources

A low-potential alternative, Alternative C-Modified could have adverse impacts from land-modifying activities, although timber harvesting is limited, and motorized recreational use is constrained. This alternative has less emphasis on identification of new sites but more opportunities for preservation of sites in place

The primary effect of wilderness management will be to standing structures, but overall these constitute a small proportion of the cultural resources in the Wildernesses

The Oregon State Historic Preservation Office (SHPO) is presently preparing a Statewide Preservation Plan for cultural resources. Since it is in the preliminary stages, potential

conflicts between the effects of the Forest management alternatives and the objectives of the plan cannot be determined

Mineral operations can have a tremendous effect on cultural resources. Surface mining (placer, or open pit hard rock) have the potential to destroy a cultural resource site. The Forest is responsible for conducting a cultural resource inventory prior to approving mineral plans of operation. The mineral operator is responsible for mitigation of any adverse impacts to cultural resources

Many of the cultural resources on the Malheur National Forest are unique. They may provide the sole record of a former environment or past way of life In several instances, the cultural sites of the Forest are also part of a larger complex of past cultures which once extended northward into the Columbia Plateau and southward into the Northern Great Basin. Each site within this whole is a vital link to the others in interpreting patterns of human use through time

These same sites are also part of a rapidly diminishing, nonrenewable resource base. The combination of impacts from past landscape modifications, private developments, natural deterioration, and other projects has already destroyed much of this record in eastern Oregon. The exact extent of the loss and the range of site types affected cannot be determined since there was no cultural resource inventory preceding most of these activities. There are likewise few opportunities today to mitigate the cumulative effects of the past Once destroyed, a cultural resource cannot be resurrected. This points to the need for even more careful consideration of cultural resource values in the future

Within the Forest, cumulative effects can be analyzed on the basis of· (1) impacts of activities to the visual settings surrounding the cultural resources, (2) alterations that activities may create in above-ground objects, features, and structures, and the spatial relationships between these, and (3) impacts which activities may have on subsurface cultural deposits.

The existing cultural resource compliance review process incorporates the consideration of cumulative effects to cultural resources of any proposed action taking place on National Forest land. These effects are subsequently avoided or mitigated through a variety of measures However, there is no adequate compensation for the physical loss of some sites These are resources which, in part, are aesthetically significant. They convey, by their existence in place, a special human link with the past and they are rare because of their tremendous depletion in the past

Mitigation Measures

Mitigation most often involves the use of methods or techniques that will minimize disturbance to cultural resources and their environmental setting A variety of potential mitigation measures exist These range from special project design criteria to be followed during ground-disturbing activities, to protective enclosures or exclosures around significant cultural sites, or to systematic monitoring of project activities Each would require further consultation with the Advisory Council on Historic Preservation and/or the State Historic Preservation Officer if the resource is determined eligible for the National Register of Historic Places The most desirable measures are those which effectively protect the cultural resources in place, are economically prudent, and are compatible with other resource management needs

In implementing mitigation measures, the Forest will follow guidelines, policies, and procedures listed in 36 CFR parts 60, 66, and 800, FSM 2361 and 2363, and the following memorandums of agreement

a Memorandum of agreement between the State Historic Preservation Office, State Parks Branch, Department of Transportation, State of Oregon and the USDA Forest Service (Pacific Northwest Region), 1979, and Amendment No 1 dated 1982

b. Regional Management Strategy for identification and treatment of Lithic Scatter Archaeological Sites Programmatic Memorandum of Agreement (Draft PMOA 1986)

c. Programmatic Memorandum of Agreement for management of Depression-era Administrative Structures on National Forest Lands in Oregon and Washington, 1983.

d. Other appropriate memorandums of agreement that are or may be implemented in the future.

In descending order of preference with respect to protection of cultural resource values, possible mitigation measures may include:

a. Adjustment of project boundaries to completely avoid cultural resources and minimize alteration of the environmental setting

b. Adoption of methods or techniques that will minimize disturbance to cultural resources and their environmental settings.

Frequently, activities may be carried out around a cultural site with minimal disturbance through creation of a protective buffer zone, through use of special techniques, or through reduction of the actual area of ground disturbance Such methods include:

(1) Use of an aerial or full-suspension yarding system.

(2) Where tractor logging is necessary, restriction of the overall number of skid trails and designation of a planned system of trails to reduce impacts In previously harvested areas, *reuse of existing skid trails wherever possible*

(3) Use of a buffer between equipment and the ground surface (such as snow)

(4) Removal of the cultural (historic) property to another appropriate location (if physically possible) after adequate documentation of the property and provisions for protection of its historic values and integrity.

(5) Mapping, photo documentation, and scaled drawings of the cultural resource (historic properties only) before proceeding with project implementation (and loss of the resource)

c. Data recovery, using professionally sound techniques, to reverse an adverse effect prior to implementing the project activities over or in the immediate vicinity of a site.

The nature of the data recovery effort, its scope, and its boundaries must be determined on a case-by-case basis There is no standard as to how much data recovery is sufficient *Excavation and/or surface collection of archaeological resources must use a professionally* sound research design in conformance with the Statewide Preservation Plan When properly implemented, this will be 100 percent effective in protecting and recovering the resource.

12 Effects on Roadless Areas

The specific environmental consequences of the alternatives on each roadless area on *the Forest are detailed in Appendix C of this Final Environmental Impact Statement.* Generally, the alternatives have various levels of retention of the areas from a portion of one area (13,322 acres in Alternative B-Modified) to all of the roadless areas (193,064 acres in Alternative C-Modified) Figure IV-14 displays, by alternative, how much of the areas are retained in an unroaded status The acres retained in each alternative are also shown in Table II-5 and Appendix C of this Final Environmental Impact Statement

In every alternative except Alternative C-Modified, the boundaries of the areas retained have been modified to improve manageability of the areas The goals in delineating these boundaries were to identify portions of the areas which provide high quality semiprimitive recreation experiences and to locate the boundaries where they would be most effective in protecting the integrity of those recreation opportunities In general, the manageable boundaries follow identifiable features such as ridges and streams, which the RARE II boundaries did not These adjustments will make it easier for both Forest managers and the public to identify the location on the ground, reducing chances that activities which detract from the unroaded dispersed recreation experience will occur in the area by mistake.

Alternative C-Modified retains every roadless area within RARE II boundaries and extends these boundaries in specific areas. The other alternatives retain various combinations of the areas, all within manageable boundaries. The acres noted as semiprimitive motorized will provide semiprimitive motorized recreation opportunities The acres noted as semiprimitive nonmotorized will provide semiprimitive nonmotorized recreation opportunities In Alternative F, additional semiprimitive recreation opportunities will be provided in the first decade in the Pine Creek, Shaketable, and Baldy Mountain roadless areas, where timber harvest is not scheduled in the first decade In Alternative NC, additional semiprimitive recreation opportunity would be provided in Pine Creek area, where timber harvest is deferred In Alternative C-Modified, the Pine Creek Further Planning Area is recommended for wilderness designation In Alternative I, wildlife emphasis areas will also provide semiprimitive recreation opportunities

Mining laws as applied to all alternatives, provide the right to "reasonable" access for mineral exploration and development This right may cause the roading of a roadless area, if it can be shown that a road is the most reasonable means of access to accomplish the goals of the mineral operator When selecting the most reasonable means of access, variables considered include the stage of exploration/development, the proposed activity, and the value of surface resources which will be impacted The effects of roading may be lessened by visual screening, route selection and obliteration upon termination of activity.

FIGURE IV-14: Acres of Unroaded Areas by Alternative

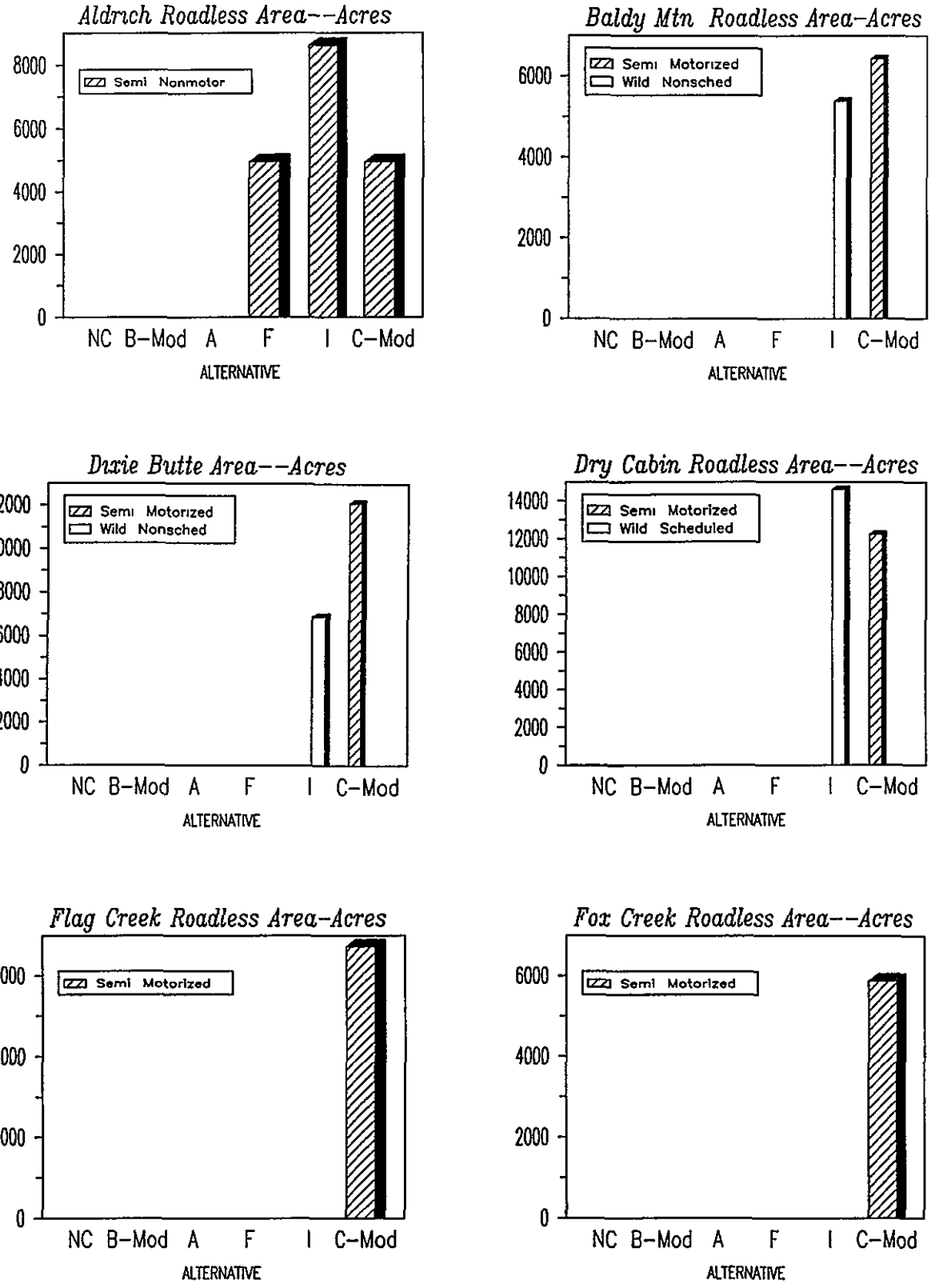
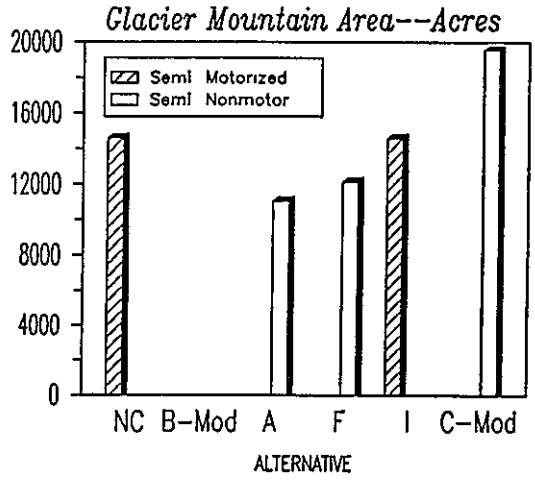
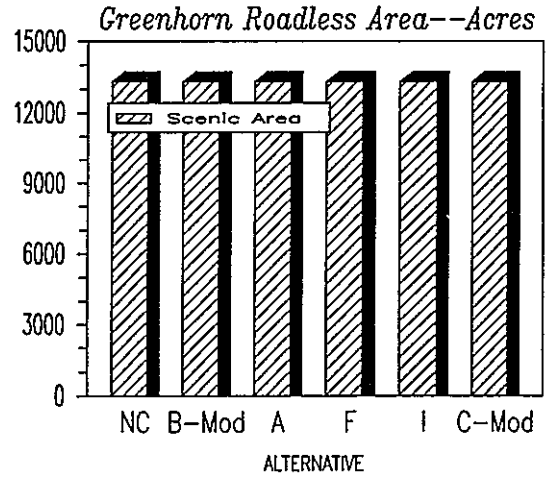
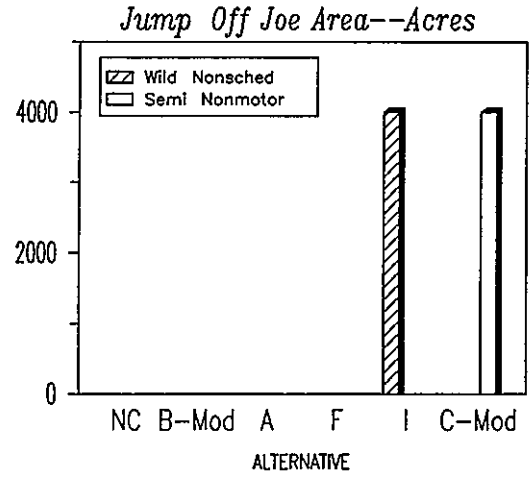
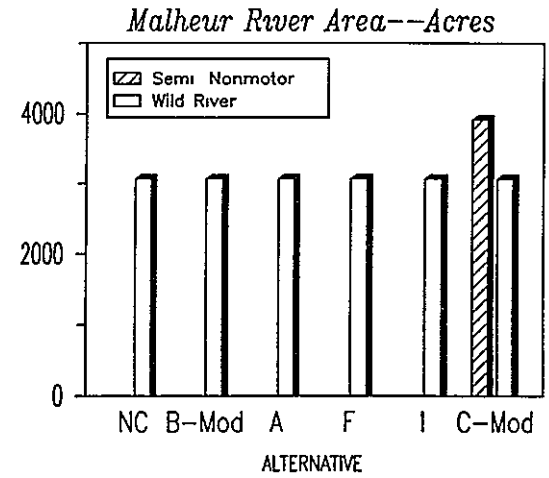


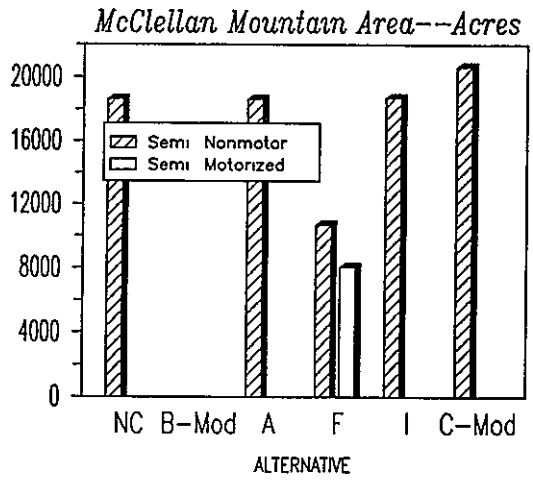
FIGURE IV-14: Acres of Unroaded Areas by Alternative (continued)











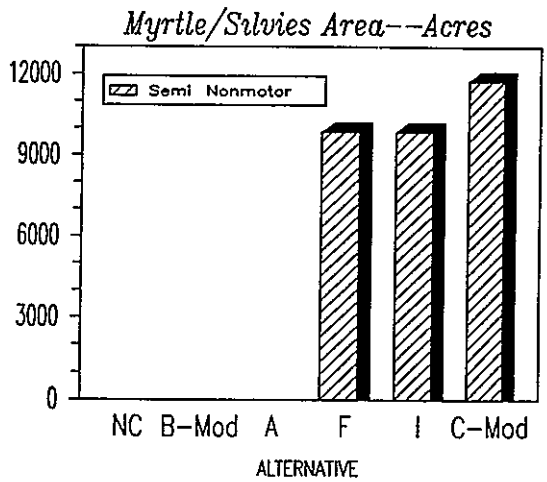


FIGURE IV-14: Acres of Unroaded Areas by Alternative (continued)