FINDING OF NO SIGNIFICANT IMPACT
Madison Junction/Norris Junction, Road Improvement

YELLOWSTONE NATIONAL PARK
IDAHO/MONTANA/WYOMING

MANAGEMENT RECOMMENDATIONS AND APPROVAL

Recommended:

Superintendent
Yellowstone National Park

6/15/99
Date

Approved:

for Regional Director
Intermountain Region

6/21/99
Date

FINDING OF NO SIGNIFICANT IMPACT
Road Improvement Project, Madison Junction to Norris Junction,

YELLOWSTONE NATIONAL PARK
IDAHO/MONTANA/WYOMING

In accordance with the provisions of the National Environmental Policy Act of 1969 and the regulations of the Council on Environmental Quality, 40 CFR 1508.9, the National Park Service prepared an Environmental Assessment: *Road Improvement Project, Madison Junction to Norris Junction.* The project is one of many phases of road refurbishment identified in Yellowstone National Park's *Parkwide Road Improvement Plan* (approved June 1992). Resurfacing, restoration, rehabilitation and reconstruction, of the road are necessary to correct road deterioration and numerous safety hazards. The Environmental Assessment (EA) was released to the public March 8, 1999. Three alternatives were considered, including a no-action alternative and the preferred alternative.

PROPOSAL

The proposal (Alternative A, preferred alternative) is to reconstruct 16.3 kilometers (10 miles) of the Grand Loop Road between Madison Junction and Norris Junction to a 9.2 meters (30 foot) paved top width (3.4 meters (11.2 feet) travel lanes with 1.2 meter (3.9 feet) paved shoulders. Also, the road would be realigned between Gibbon Falls and Tanker Curve. The new alignment would follow an upland route above the canyon. This would require the construction of a new bridge, and the removal of one existing bridge, and the obliteration of 2.9 kilometers (1.8 miles) of existing road along the Gibbon River. Two historic bridges would be retained and their decks would be widened to accommodate the new road width.

The design and posted speed for the reconstructed road would be 35 mph, while congested areas such as Terrace Springs, Gibbon Falls, and Beryl Springs may be posted at lower speeds. A shoulder slope ratio of 1:4 (rise:run) would be the design standard. This action would aid reclamation/revegetation, but would extend slopes horizontally and widen the footprint of the road. Whenever possible, road base widening would be executed to minimize the amount of cutting and filling, with the centerline shifted accordingly, when only one side is widened, to avoid important natural or cultural features and minimize cut and fill slopes along the roadside. Centerline shifts would depend on existing road geometry and would comply with safety design standards.

The base structure would be repaired by excavation of poor-quality material and replacement with better draining aggregate. The large slope/cliff face opposite the Gibbon Falls overlook parking area would be further excavated to improve the stability of the slope. Approximately 120,000 cubic meters (157,000 cubic yards) of material would be removed. Some blasting would likely be necessary. Exposed concrete headwalls would be refaced with a simulated rock cap to blend with the historic culvert headwalls found elsewhere along the highway. To maintain the historic character of the roadway, design and materials for new culvert headwalls would be consistent with stipulations agreed upon by the Advisory Council on Historic Preservation (ACHP), National Park Service, and Wyoming State Historic Preservation Officer (SHPO) in the 1994 (as amended) programmatic agreement.

A number of informal and formal pullouts would be retained and improved at key wildlife and scenic viewing areas, river and fishing access points, and other areas of interest, and along the section of road between Gibbon Meadows and Norris Junction.

Retaining walls along the project length would not be affected by reconstruction or resurfacing.

Staging, stockpiling, disposal, and asphalt concrete production would be limited to areas already disturbed and used for these and similar purposes, with the exception of the Gibbon Falls picnic area.

A reclamation and revegetation plan has been prepared by park staff and will be funded and implemented as part of this project.

All project-related employees will be given orientation regarding food storage, disposal of garbage and other bear attractants, and approaching or harassing wildlife. Food storage and garbage retention will be regulated. Restrictions may be imposed if carrion or associated bear activity is documented in the project area.

ALTERNATIVES CONSIDERED

Alternative B is the Reconstruct the existing roadway alignment to a 7.4 meter (24-foot) paved width. The design recommendations would be the same as in Alternative A, except the intent of this alternative is to reduce construction impacts from the 9.2-meter width alternative. Consequently, exceptions to design speed, fill slopes, and cut slopes could occur more often.

In the Gibbon Canyon the proposed road design would raise the road elevation to meet the 50-year flood event, however slope protection (riprap, 10,125 cubic meters, 13,250 cubic yards) would be required along the shoreline of the river to protect the road from erosion. About 200 meters (655 feet) of rock walls would be constructed along the shoreline. Most cuts and fills would be in the 3-6 meter (10-20 foot) height range, with maximum cuts of about 26 meters (85 feet). About 1,400 meters (4,600 feet) of wall would be used in about 14 places to reduce disturbance in cut and fill situations.

Alternative C is the no-action alternative. With this alternative no major road reconstruction work would occur in the Madison Junction to Norris Junction area in the near future. The current use and management of the above-described road segment and its associated features would occur. Maintenance activities such as pothole patching, periodic chip-and-seal coat applications, and removal of rockfall and slumping debris would increase. In some roadway sections, regular road maintenance would be inadequate because the road has deteriorated to the point where substantial improvement has become necessary. Progressive deterioration of the roadway would continue with reduced riding quality and increased accident potential. Road maintenance activities would require an increasing proportion of funds.

PUBLIC INVOLVEMENT

The Environmental Assessment was made available for public comment during a 60-day period ending May 6, 1999. During that period and during the five business days following, 12

responses were received from various agencies and individuals. No significant problems were discovered. The EA or notification of EA availability was sent out to approximately 180 addresses (other than NPS staff). A press release was also issued on the availability of the EA. A summary of comments for this EA is attached.

No new major issues were raised by the public comments that were not addressed in the EA.

FINDING

The National Park Service proposes to implement improvements to the Madison Junction to Norris Junction Road. Depending on funding, the work would begin as early as September of 1999.

The proposed Madison Junction to Norris Junction Road resurfacing, restoration, rehabilitation, and reconstruction project is not a major Federal action that normally requires the preparation of an Environmental Impact Statement (EIS). Negative environmental impacts that could occur are minor and temporary in effect. There are no unmitigated adverse impacts on public health, public safety, threatened or endangered species, sites or districts listed in or eligible for listing in the National Register of Historic Places, known ethnographic resources, or other unique characteristics of the region. No highly uncertain or controversial impacts, unique or unknown risks, cumulative effects, or elements of precedence were identified. Implementation of the action will not violate any federal, state, or local environmental law.

There will be approximately 26 hectares (64 acres) of disturbance to soils and vegetation along the roadside during road reconstruction. Construction of new or relocation of existing parking areas/pullouts outside of the existing road prism would impact an additional 2.2 hectares (5.4 acres). The majority of all disturbances would be to lodgepole pine forest and associated understory species. Approximately 1.9 hectares (4.8 acres) of land would be recontoured and revegetated to establish a more natural landform following the removal of the Gibbon River canyon segment of road.

There are no federally listed or candidate plant species that occur in the park. A total of 18 individual rare plant sites would be affected. Approximately 0.2 hectare (0.5 acre) would be lost. Four of the rare plant sites contain plant species (*Carex flava, Carex livida, Cryptantha spiculifera, Eriophorum viridicarinatum, Lonicera caerulea* var. *caurina, Elocharis, tenuis* var. *borealis, Epilobium palustre, Muhlenbergia glomerata* and *Selaginella selaginoides*) unlikely to reestablish or recolonize areas disturbed by road construction.

Road reconstruction would affect portions of 7 thermally influenced areas (primarily hot ground and some small unvegetated thermal seeps) encompassing about 0.1 hectares (0.3 acre). Where possible steepened side slopes and rocked ditches will be used to keep fill materials from covering the features. Approximately 0.96 hectare (2.4 acres) of wetlands would be impacted. The total area of wetland reclamation would equal or exceed the total wetland area impacted.

Wildlife would be temporarily displaced by construction activities. No significant increases in wildlife mortality are anticipated. There would be no effect on whooping cranes, peregrine falcons, or gray wolves. This alternative would not be likely to adversely affect the continued

existence of the grizzly bear or bald eagle populations. The road realignment section would probably be of some benefit to bears by relocating the road to slightly lower quality bear habitat than exists along the existing canyon alignment. Effects on air quality would be temporary in nature and minimized through adherence to all applicable regulations.

Three National Register eligible sites will be adversely affected. Those sites are 48YE723, a historic stone quarry; 48YE520, the historic Grand Loop Road; and 48YE867, a historic and prehistoric occupation site. Adverse effect to 48YE723 was mitigated by Historic American Engineering Record documentation; effects to 48YE520 mitigated by an MOA; and effects to 48YE867 mitigated by data recovery. National Register eligible sites for which the undertaking will have no adverse effect or no effect are 48YE807 and 48YE808, two historic bridges; 48YE768 and 48YE770, two historic dumps, and 48YE865, a prehistoric lithic scatter. Consultation with WYSHPO and ACHP on the effect of the project has been completed and concurrence of affect of the project to historic properties achieved. Significant cultural resources have been documented, and maintained according to the 1994 programmatic agreement with the Wyoming State Historic Preservation Office (WYSHPO). There would be no adverse impact on public health and public safety would be improved.

Based on the foregoing, it has been determined the project does not constitute a major federal action significantly affecting the quality of the human environment, an EIS will not be prepared.

SUMMARY OF COMMENTS AND RESPONSES
Madison Junction to Norris Junction Road Improvement
Environmental Assessment

A total of 12 letters on the Madison Junction to Norris Junction Road Improvement Environmental Assessment were received during or within five business days after the 60-day public review period, March 8 through May 6, 1999. Eight of the comments received were from consultative and regulatory agencies, and park concessionaires. Four comments were received from individuals.

COMMENT (Army Corps of Engineers):

Based on an October 7, 1998 site visit and additional coordination with Park and Federal Highway Administration (FHWA) staff, it has been determined that an individual Department of the Army permit is required for the project.

It is acknowledged that a significant portion of the mitigation of wetlands and waters impacts will not occur until the second and third phases of the project.

We intend to use the EA for our permit review process. However, while we conclude that the level of information contained in the EA is adequate for National Environmental Policy Act purposes, more detail relative to wetland and waters impact sites, site specific alternatives analysis, plans and specifications, wetland delineation report, mitigation designs, and other aquatic resource issues need to be addressed in greater detail for 404 permitting purposes. Most of these issues cannot be adequately addressed in detail until the design phase of the road. Attempting to address these information needs in the EA would unduly delay that NEPA document. All information requirements will be addressed in the permit application.

REPLY:
A permit application detailing the specifics listed above has been submitted to the Army Corps of Engineers from the Federal Highway Administration for the first phase of the project. Included in this application are detailed maps showing the locations of all impacted wetland areas.

COMMENT (State of Wyoming, Office of Federal Land Policy.):

The State supports implementation of the preferred alternative for this project. It will address improved traffic conditions and the safety of travelers utilizing this important route.

COMMENT (Wyoming State Geological Survey):

The road and bridge should be designed to be earthquake resistant, as there is the potential of having a magnitude 6.5-7.5 earthquake in the Park area. If such an event occurs, having a usable road and bridge is critical.

Regarding material sources for the project (p. 12); If possible, it would be less expensive to use material sources closer to this reconstruction project. Rather than using out-of-park sources or

the Sylvan Pass rock quarry near the east entrance as proposed, material sources are available along the Madison River just west of the west end of this project. Using these sources would save around $1.10 per short ton per mile, or at least $190,000, from the west entrance and around $500,000 from the Sylvan Pass Quarry for the projected 160,000 metric tons of material needed for the project. Heavy truck traffic would also be eliminated along proposed haul routes and associated road wear due to this truck traffic along these routes. Stone rip-rap or dimensional sources is also available in the park close to the project area, near Madison Junction.

REPLY:
The road and bridges will be designed and constructed to standards for seismic zone four. The material sources along the Madison River west of the project and within the park boundaries are located very close to the Madison to West Yellowstone Road. It is anticipated that to remove the quantity of material required for this project, the small amount of existing screening through vegetation and topography would be removed, thus making the site very visible to park visitors using this road segment far into the future. The Soldier pit also located in this area was determined not to have suitable material for this project.

COMMENT (Wyoming State Historic Preservation Office):

Sites 48YE723 and 48YE867 have been previously determined eligible for inclusion in the National Register of Historic Places (NRHP). Proposed road reconstruction activities will result in an adverse effect to both of these sites; however, measures to mitigate project effects to these properties have been completed and no further work or protective measures are necessary.

Bridges 48YE807 and 48YE808 are eligible for inclusion in the NRHP. Provided bridge reconstruction is conducted in accordance with the Park Road Programmatic Agreement, we concur that the project will result in no adverse effect to either of these structures.

Sites 48YE770 and 48YE789 are eligible for inclusion in the NRHP. From the documentation it is unclear if these sites will be avoided by project activities. If no construction related work is conducted in Mesa Pits #1 and #3 the project will result in no effect to these sites. If either of these pits are used for project related activities, additional consultation will be necessary to discuss potential effects.

The Tanker Curve realignment will result in an adverse effect to 48YE520, the Grand Loop Road. You have indicated in your cover letter that a Memorandum of Agreement (MOA) is being developed to mitigate the effects of this realignment. We will be unable to formally comment on project effect until the MOA addressing these effects has been executed. We look forward to working with you on this MOA and hope that you will be in contact soon regarding this issue.

REPLY:
Bridges 48YE807 and 48YE808 will be treated in accordance with the Park Road Programmatic Agreement. Site 48YE789 was a typographic error in the EA, and should read Site 48YE768 which is near Mesa pit #1. The project as presently planned will avoid site 48YE768. Site 48YE770 is in Mesa pit #2, and will be protected from potential impacts by protective fill and fencing that has been previously installed. The WYSHPO has determined the project will result in no adverse effect to this site. The above referenced MOA has been completed and agreed to

and signed by the park on 6/8/99, WYSHPO on 6/10/99, and the ACHP on 6/11/99. The agreement will be adhered to for the duration of this project.

COMMENT (U.S. Fish and Wildlife Service):

Based on the commitment from the park to extend the no blasting deadline from April 15 to June 22 annually, it is unlikely the project, as proposed, will affect threatened or endangered species or migratory birds in the project area. If the scope of the project is changed, the project is modified in a manner that may result in an effect to listed species, please contact this office to discuss consultation requirements pursuant to section 7(a)(2) of the Endangered Species Act of 1973, as amended.

REPLY:
Blasting restrictions as listed in the EA on page 56 will be extended to include the dates of April 15 to June 22 annually for the duration of this project. These dates will also be included in any construction contracts that are associated with this project.

COMMENT (Hamilton Stores Inc.):

Road closures other than nighttime closures may have a serious impact on visitor services in the park.

The plan to totally close the road from early August for the balance of the season will have a major impact on the ability to travel between the Tower/Roosevelt/Mammoth areas to the rest of the park. Once Dunraven is closed for the season, it would be impossible to travel through the park without going the long route through Livingston.

REPLY:
It is envisioned that the August 7 road closure will be needed only during the third phase of construction. During this road closure the new bridge will be constructed and the old bridge removed. This is tentatively scheduled for 2003. Every effort will be made to keep the full road closure as short in duration as possible to reduce impacts to park visitors, and park operations, while balancing with the additional costs caused by too confining contracts.

COMMENT (Crow Tribal Cultural Committee):

If the existing road can be improved with approximately 6-8 feet of new pavement and associated new disturbance and avoiding all known archeology sites, then the committee has no problems with the project. If new cultural sites are found though, the committee would like to be notified and have the work stopped in that area. Question the reason for the reroute from Gibbon Falls to Tanker Curve.

REPLY:
The existing road width varies from 22-24 feet. The proposed width is 30 feet. There will be three phases of construction during the proposed project. Each construction phase will have specifications that include a standard clause that requires the contractor to notify the park of

any new archeological sites that are discovered and to stop work in that area. The park will then notify appropriate agencies or groups and formulate a course of action. The section from Gibbon Falls to Tanker Curve is to be rerouted to remove the road from the riparian and wetland area along the Gibbon River, to decrease costs associated with a very high maintenance section of roadway, to improve visitor safety on a road that currently is narrow, winding, has few turn-outs, and hazards associated with flood and storm events.

COMMENT (Greater Yellowstone Coalition):

We support the selection of Alternative A, with some specific concerns noted below. We recognize that if mass transit, such as use of buses, is to become more common, then a wider road width is necessary.

We continue to have significant concerns, however, about encouraging bicyclers at the same time as wide vehicles such as recreational vehicles (RVs) use the road, and the lack of stricter limits on the overall size of RVs that can use park roads. These large vehicles, particularly longer ones and those with extended mirrors, often create substantial hazards to other visitors. In addition, these slower-moving vehicles restrict the view of travelers behind them and too often fail to using existing turn-outs appropriately. Continuing to enlarge road widths to respond to larger and larger RVs does not address the safety problems that will continue to exist. We urge you to consider limiting the size of RVs on park roads to improve the safety and quality of travel for other visitors; to consider offering other transportation options for travelers in larger vehicles; and to continue to offer (and encourage) a period of time in the off-season for bicyclers.

REPLY:
A travel analysis for the Madison to Norris road segment showed a "Level of Service D" for this road could be obtained by reconstructing to a 30' paved width. A "Level of Service D" would mean that the road represents the upper range of traffic volumes that can be accommodated while maintaining stable traffic flow. Level of service is influenced by width of travel lanes, the presence of a usable road shoulder, the roadway grade and the mix of traffic. Bicycle use is expected to continue within the park, and the addition of a road shoulder is expected provide many benefits one of which is to improve safety for bicyclists.

We also support restoring the Gibbon River to a more naturally-functioning river system and hydrological pattern; restoration of the abandoned road between Gibbon Falls and Tanker Curve; and maintaining the existing 35 mph speed limit. These actions will help improve natural processes in Yellowstone and still provide a quality experience for all visitors. We suggest that restoration to a natural landform along the abandoned roadbed should not come at the cost of significant impact to natural resources. In many areas along the Gibbon River, for example, there are very few trees left between the road and the river, and every effort should be made to maintain these trees. Thermal areas in particular should be protected.

REPLY:
Most of the trees that are currently located in the reclamation area and between the road and the river will not be removed. In some instances however the rebuilding of pre-road contours and the limitations on how the work can be accomplished, will dictate the removal of some trees.

Thermal Areas
We are concerned about new impacts on thermal areas, including thermally-influenced wetlands. This includes the Terrace Springs parking and access area relocation, activities at Beryl Springs, and along Gibbon Meadows and Artist Paint Pots. The effects of blasting and subsurface drilling are of significant concern. We ask that the park consider the Yellowstone Compact, and the restrictions that Compact places on subsurface drilling and development outside of the park. The scrutiny that the public places on the park's activities, particularly when their own are limited, demands the utmost caution. We suggest minimizing such impacts to the greatest extent possible; visitor use of these areas should reflect the recognition that Yellowstone's geothermal resources deserve the highest level of protection, even at some inconvenience to the visitor.

REPLY:
In thermal areas such as Terrace Springs, construction details have been developed to reduce the depth of holes augured for guardrail posts, under-road culverts, and parking lot construction, such that these activities will not interfere with natural thermal functions. Blasting will not occur within close proximity to thermal features.

Archeological Sites
Similarly, the establishment of a staging area on five acres of newly disturbed ground at the Gibbon Falls Picnic Area within an archeological site with historic and prehistoric components may be interpreted as the park placing less-than-adequate value on such historic and prehistoric sites. The EA offered no analysis of alternative sites. Are any other locations available for a staging area and what impacts are associated with use of any such sites?

REPLY:
An area of data recovery has been completed within the Gibbon Falls Picnic area. All contractor-related activity will occur within this area. The WYSHPO concurs with this mitigated adverse effect. There are relatively few flat areas along this road segment that are suitable as a staging and stockpile area. Archeological sites, and distance from portions of the project that will generate materials needed to be stockpiled resulted in the preference of this location above others.

Vegetative Removal
During previous road reconstruction projects, the Greater Yellowstone Coalition has received numerous complaints from visitors about certain aspects of the projects, and in particular the scope of vegetative disturbance. Many believed that the park was allowing far too many trees and too much other vegetation to be impacted, and felt that the width of overall road clearance was greatly inappropriate for Yellowstone National Park. The park was also unable to answer our request for information about the ultimate disposition of trees removed from the roadways and the volume of trees removed. We ask that the park make such information available for this project. While we expect that the natural landforms will likely limit more narrowly the clearance alongside the road than has been the case for previous projects, we urge the park to strictly control and minimize such clearances.

REPLY:
The extents of vegetation removal are determined by geology of the area, soil type, the toe of the fill slope, and added features such as drainage ditches on the cut slope side. In all instances the

park has tried to minimize the amount of vegetation removal involved in the road reconstruction projects.

The EA notes that construction under Alternative A involves disturbance to 64 acres of soils and vegetation along roadsides (p. 49), and impacts to 70 acres of wildlife habitat adjacent to the roads (p. 52). It's not clear why there is a difference in these two figures, nor does the EA appear to disclose how much of the disturbance is permanent.

REPLY:
The 64 acres listed on page 49 does not include the 5.4 acres of disturbance from the parking areas and pullouts that are outside the existing road prism. Approximately one third of this area would be permanently lost as habitat due to the increased width of the roadway. The remainder would eventually provide habitat for species that would normally range directly adjacent to road surfaces.

Impacting 18 individual rare plant sites is also a concern for us, particularly for the rare plant species that are unlikely to recolonize disturbed areas, and especially because half of these 18 sites would be entirely lost. According to the EA, these 18 sites account for about 16 percent of all the sites within this road corridor where one or more plant species of special concern occur. The EA does not disclose the impact that losing or impacting these sites and the individual species has on overall health and abundance of the specific species. We suggest that without such data in the EA, the public can not anticipate the significance of such impacts. Similarly, the impacts to the wetland habitats of certain amphibians is not set in context of the overall health of these populations in the park, and should be included.

REPLY:
In many of the 18 rare plant sites, the plants are growing right up to the road prism on both sides of the road. Impacts to these sites are unavoidable. Where sites are located on only one side of the road, the road alignment was shifted to avoid the site when possible. In a few instances alignment shifts were not possible due to the design restrictions involved with aligning horizontal and vertical curves of the roadway. Seven of the nine sites that would be entirely lost contain the species Juncus tweedyi that grows in wet roadside ditches. These roadside ditches will be covered over with fill material as the road is widened. New roadside ditches will be constructed adjacent to the new road. If favorable conditions reestablish themselves within these ditches, Juncus tweedyi is expected to become recolonized in appropriate habitats.

Parking Areas, Pullouts, Slopes and Walls
The EA provides no indication that I could find of how many new parking areas and pullouts will be built, or where those new developed areas might be. Such information should be included, along with smaller scale maps of the various road segments to provide the public a better understanding of where many of these alterations, new developments and restorations will occur. We suggest giving careful consideration to minimizing the number of new pullouts and parking areas to limit new disturbance.

REPLY:
Two new parking areas will be constructed. One 16-vehicle parking lot at Terrace Springs, and one 16-vehicle lot at Artist Paint Pots. Two parking lots will be removed, one 10-vehicle lot at Artist Paint Pots and one four-vehicle parking area at Terrace Springs. A total of 24 pullouts

will be constructed. Nine of these are existing paved turnouts, 11 will consist of paving existing informal gravel turnouts, and four will be new turnouts with new disturbance. Four existing paved turnouts will be removed and the areas rehabilitated to a more natural appearance.

The very high cut slopes proposed in this project present significant challenges. Not only do such slopes contrast sharply with adjacent areas, but significant potential exists for dangerous mudslides, avalanches, erosion, and rockfall. We ask that the severity of such cut slopes be minimized.

REPLY:
The slope of the cuts is directly related to the type of material that is being cut. Masonry retaining walls will be used in two areas to reduce the height of cuts along this road segment.

Contractor Camp
We suggest that there should be no need to develop a contractor camp inside the park when this project is located so close to West Yellowstone.

REPLY:
A contractor camp will not be developed solely for this project.

Monitoring
There are a great number of mitigations associated with this project. In the past, some unacceptable activities have occurred because park monitoring of resource conditions or contractor activities was inconsistent or not implemented. We suggest that the park develop and implement a monitoring plan to assess and ensure compliance with these mitigations, and make such information accessible to the public.

REPLY:
Resource monitoring will occur in the areas of Vegetation, Hydrology, Soils, and Aquatic resources. Annual samples will be gathered to determine the percentage of area covered by hydrophytes, which will be compared to the existing condition baseline data. A determination will be made as to the need for a weed control plan. Groundwater levels shall be determined annually by the use of groundwater monitoring wells or excavation of test pits. An initial survey to determine that all fill over excavated former wetland soils will be done. It is expected that those soils will still retain some of the redoximorphic features that were formed before the wetlands were filled. Sediment loads within the Gibbon River will be monitored at Madison Junciton under a five-year contract with the USGS. The results will be compared with ten years of historic data for a whole-drainage comparison to determine whether any changes can be detected as a result of the project. Species composition, numbers, and age groups of fish will be estimated annually for a minimum of four years. Macro invertebrates will be inventoried annually. An annual survey of amphibians and reptiles will be conducted and compared with the findings of a 1995 survey. Mitigations for cultural resources have been reviewed and developed in association with the Wyoming State Historic Preservation Office. Any of the above information collected will be available upon request.

COMMENT (Individual):

The road in question is by far the most dangerous one left in the Park, whether on snowmobile or by car. Moving the road to another route would make it safer. Moving it would also give the wintering elk less traffic by their source of year around water. ...it would be a shame to completely get rid of this road. I think building roads would be less expensive if the new roads were completely new, not a remake of the old one. Then there would be no need for traffic control 24 hours a day. Eventually then the old roads could be redone and traffic would be one way per road. There would be cross over roads every 2 miles or so. If you left the trees off that get planted so close to the road and put in a large parking lane, then the tourists could stop and gaze without disrupting the flow of traffic.

REPLY:
One of the compelling reasons for widening the road and the reroute is improved safety for users of this road segment. Rebuilding existing roads is in most cases still less expensive than constructing new roads. Much of the road prism has already been constructed and the corridor has been cleared. As a National Park, the goal is not always visitor convenience, but resource protection is an equally important goal. It is because of this latter goal that it was determined to remove the road segment that is presently located in the Gibbon River Canyon.

COMMENT (Individual):

My primary concern in any of these projects is that the protection of thermal features along the route is at least maintained and improved where possible.

It is disappointing that the opportunity to properly relocate the road away from the Gibbon Falls will not be taken.

The entire road from Tanker Curve to the Gibbon Falls Picnic area should be relocated to follow the Canyon Creek drainage, then turn north south of Tanker Curve. Or a route paralleling the existing powerline should be considered. At the same time, the old road should be kept as a one-way access road, with weight restrictions if necessary.

The current road approaching the falls from the south is steep, narrow and dangerous due to blind curves and the congestion caused by visitors seeking parking, problems which this plan does not adequately address. By diverting through traffic away from the Falls, most of these problems would be alleviated.

I support the relocation and expansion of the Artist Paint Pots parking area, and the creation of a distinct trail-head or minor attraction style arrangement, not just an expanded turnout. A parking area should also be provided for the trailhead to Monument Basin, along with an interpretive sign warning of the steepness of the trail. Care needs to be taken around Beryl Spring, as there are historic records which indicate that the old roadbed construction covered up a number of small thermal features. Uncovering them could cause their reactivation and deleterious effects on Beryl Spring, or even steam explosions.

REPLY:
Every effort was made to avoid thermal features along this route, through shifting the centerline of the road or steepening fill slopes. The Canyon Creek drainage alignment was considered but rejected. Reasoning is in the EA under "Alternatives Considered But Rejected (Tanker Curve to Gibbon Falls picnic area)". A goal of this project was to maintain vehicle access to the Gibbon Falls. By using the proposed alignment suggested in Alternative A, only one road needs to be maintained versus two. A formal parking lot for the Monument Geyser Basin trail is not being proposed, though the existing pullout for the trail will be paved and upgraded to meet the park's standard for pullouts.

COMMENT (Individual):

The road should be considerably wider than it is now, wider than the section of park road south of Old Faithful.

I would urge that three lanes be provided for uphill passing.

I would urge pullouts be constructed with long sweeping entrances and exits. Asking the slower traffic to use pullouts presents problems when the entrances and exits are abrupt. Traffic must slow down even more when a vehicle enters a pullout with an abrupt entrance. It would help traffic leaving the pullout to have some space to gain speed and then blend into the flow of traffic.

REPLY:
This segment of road has only two very short segments of approximately 7 percent grade. Both segments are less than 200 meters in length. The winding nature of the road, and resource impacts associated with construction of a third lane for passing purposes was not considered necessary for this road segment. The turnouts would be constructed more for viewing opportunities than passing areas. Speeds will have to be relatively low while entering and exiting these turnouts.

COMMENT (Individual):

This would be an excellent opportunity to make the road along the Gibbon Falls area, at least from the picnic area to the new road above the Gibbon Canyon a one-way road. This could be accomplished by moving the through road away from Gibbon Falls, as was done with the Firehole Falls Road (Firehole Canyon).

By constructing a new main road away from Gibbon Falls, there would be no need for an early August through November 1st road closure.

REPLY:
One of the main reasons the road was to be relocated through the Gibbon Canyon was to reclaim the area occupied by the current road. The area is a heavily used wintering area for elk, bison, and other species. One option that was considered was a realignment of the road from Tanker Curve to the Gibbon Falls Picnic area. A new bridge would still need to be constructed which would require a full road closure.

ERRATA SHEET

Environmental Assessment Page 10, Paragraph 3
Culvert design would allow fish passage.

Replace with:
Culverts that exist on streams that currently have fish populations will be designed to allow fish passage.

Environmental Assessment Page 51, Paragraph 4
A total of 27 individual wetlands would be affected.

Replace with:
A total of 31 individual wetlands would be affected.

Note: acreage stated in the EA does not change.

Environmental Assessment Page 40, Paragraph 7
48YE770 a National Register eligible dump in Mesa Pit 1 and 48YE789 a National Register eligible historic site of a CCC dump in Mesa Pit 3 will be inventoried prior to any use.

Replace with:
48YE770 a National Register eligible site located in Mesa Pit #2 and 48YE768 a National Register eligible dump is located east of the boundary of Mesa Pit #1 will be inventoried prior to any use.

Environmental Assessment Page 58, Paragraph 9
Should topsoil be temporarily stockpiled at Mesa Burn Pit 2, measures would be...

Replace with:
Should topsoil be temporarily stockpiled at Mesa Burn Pit 1, measures would be...

Environmental Assessment Page 25, Table
Protective measures will continue to be used for site 48YE#768 at Mesa Burn Pit 2, and additional surveys and compliance would be completed for Mesa Burn Pit 3 should it be used.

Replace with:
Protective measures will continue to be used for site 48YE770 at Mesa Burn Pit 2, and additional surveys and compliance would be completed for Mesa Burn Pit 1 should it be used.