

ENVIRONMENTAL ASSESSMENT

MAMMOTH HOUSING PLAN

October 2002

YELLOWSTONE

National Park • Wyoming / Montana / Idaho

Note to Reviewers and Respondents

If you wish to comment on this environmental assessment, you may mail comments to the address below. Our practice is to make comments, including names and home addresses of respondents, available for public review during regular business hours. Individual respondents may request that we withhold their home address from the record, which we will honor to the extent allowable by law. **If you wish us to withhold your name and/or address, you must state this prominently at the beginning of your comments.** We will make all submissions from organizations or businesses, and from individuals identifying themselves as representatives or officials of organizations or businesses, available for public inspection in their entirety.

Comments are due by November 4, 2002 and should be addressed to:

Planning Office
Mammoth Housing Plan/EA
P.O. Box 168
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INTRODUCTION

By Act of Congress on March 1, 1872, Yellowstone National Park was "dedicated and set apart as a public park or pleasuring ground for the benefit and enjoyment of the people" and "for the preservation from injury and spoliation, of all timber, mineral deposits, natural curiosities, or wonders...and their retention in their natural condition." The park is managed to conserve, perpetuate and portray as a composite whole the indigenous aquatic and terrestrial fauna and flora, the geology, and scenic landscape.

Preserved within Yellowstone National Park are Old Faithful and the majority of the world's geysers and hot springs. An outstanding mountain wildland with clean water and air, Yellowstone is the home of the grizzly bear and wolf, and free ranging herds of bison and elk. Centuries-old sites and historic buildings that reflect the unique heritage of America's first national park are also protected. Yellowstone National Park serves as a model and inspiration for national parks throughout the world. The National Park Service preserves unimpaired, these and other natural and cultural resources and values for the enjoyment, education and inspiration of this and future generations.

Historically, providing housing for park employees has been an issue in Yellowstone and many other national parks. The National Park Service provides housing to its employees and cooperating organizations in order to provide essential services and supply an adequate level of protection of natural and cultural resources, visitors, employees, and government property.

To provide sufficient quarters for employees at Mammoth seems to be an endless task, for no sooner is one family housed when another is on the waiting list. At the present time all available quarters are taken and there are at least two others of the present force who desire quarters this spring.

--Superintendent's Annual Report 1923

History

In the late 1980s the National Park Service approved a nationwide housing initiative. This initiative authorized both planning and construction programs for employee housing in the national parks. The planning portion of the initiative included preparation of a housing assessment report, housing needs survey, staffing needs assessment, and development of a community plan.

A housing needs survey for Yellowstone National Park was completed in 1990, and the staffing needs assessment was completed in 1991. In 1992, an environmental assessment (EA) was prepared to evaluate community plans for 9 of 12 communities

within the park (Norris, Canyon, Northeast, East, South, West, Grant, Madison, and Tower). Housing for the Lake area was addressed in the Lake/Bridge Bay Development Concept Plan (approved 1993), and for the Old Faithful area in the Old Faithful Development Concept Plan (1985). The EA for the twelfth community, Mammoth Hot Springs, is the subject of this document.

In the past, housing needs in Yellowstone have often been resolved with "temporary" solutions, often inadequate and visually incompatible structures such as mobile homes and "transahomes." These "temporary" solutions are still being used. A trailer replacement program is scheduled to continue until all trailers and transahomes are replaced.

In the fall of 1996, Congress passed Public Law 104-333, the Omnibus Parks and Public Lands Management Act of 1996, Section 814 (a)(4), National Park Service Administrative Reform, the "Housing Bill." The bill mandated that the National Park Service review and revise the existing criteria for providing housing to National Park Service employees.

In March 1997, *the Mammoth Housing Development Plan and Environmental Assessment*, was released for public review. Eighteen comments were received during the review period from March 5 to May 4, 1997. The preferred alternative at that time proposed 195 new housing units (this number included trailer replacement) for the North Entrance and Mammoth Hot Springs areas in Yellowstone National Park. This proposal was based on a projected 21 percent increase in staff (park and concessioners combined), with 50 percent of employees housed in the park during a 20-year period (1996 to 2015). Existing National Park Service and concessioner housing would be retained, and trailers and other substandard housing would be removed as new units were built to replace them.

The 1997 *Mammoth Housing Development Plan and Environmental Assessment* was not finalized or approved because the study mandated by Congress requiring parks to complete a housing needs assessment had not been completed.

Several studies have now been completed to meet the mandates of the Housing Bill. An independent contractor performed a Service-wide housing needs assessment in 1998 to determine the minimum number of housing units needed in each park in the National Park System. The *Housing Needs Assessment for Yellowstone National Park* was completed in September 1999. The housing needs assessment addressed the following: 1) the availability of housing in the private sector (housing market analysis), 2) an inventory of existing housing units, 3) a determination of an adequate response time to respond to emergencies in the park or out of the park, 4) the number of housing units needed to satisfy condition of employment requirements, 5) the number of units needed for employees designated as beneficial to the park after alternatives are exhausted, and 6) the number of units that are excess or deficit to park needs (Architectural Research Consultants, Incorporated 1999).

A housing market analysis was conducted for Gardiner, Montana, in March and April of 1995. The NPS determined that rental and purchase prices of housing in the Gardiner area were beyond the means of many NPS and concessioner employees. Results of a housing market analysis conducted in 1998 also showed that the local supply of housing in price ranges affordable to most NPS and concessions employees was inadequate. Vacancy rates were low, and the supply of affordable housing limited. This was still the case in 2001.

The contractor identified 134 NPS housing units in the Mammoth Hot Springs area in 1998. (Yellowstone's draft housing plan reported 142 NPS housing units in 1996.) The number of housing units available to accommodate NPS employees at the North Entrance and Mammoth areas is dynamic. Sometimes NPS housing provided to a concessioner or other non-NPS employer may later be returned to the NPS housing inventory. Some buildings in the housing inventory may be used for other functions such as offices. The number of units also changes when trailers or other buildings are taken out of service for repairs or because the unit is uninhabitable. In short, the number of housing units available for employees may change based on competing needs.

A review of Park Service employees that are "required occupants" was completed in 2000. A position is designated as a required occupant position when an employee's physical presence is required within a specific geographic area to provide a reasonable level of deterrent protection and timely response to emergencies. A "Required Occupancy Plan" was developed to address the park's needs on a position-by-position basis. As of January 2001, the actual number of required occupancy positions park-wide was 221. In addition, 8 new positions will be designated as required occupants, and 9 "floating" positions may be designated at the park Superintendent's discretion. The total number of required occupants for Yellowstone National Park is 238. There are 82 required occupants in Mammoth.

The contractors found a deficit of 79 housing units parkwide, with 47 of those units deficit in the Mammoth area. The housing needs of VIPs, SCAs, researchers, and concessioners were not included in the analysis done by the contractor. Yellowstone National Park projects an additional 10 units for these employees for a total of 57 new housing units needed, plus housing that would be built as part of the trailer replacement program. As of January 2001, 19 trailers and transahomes needed to be replaced in the Mammoth area. Thus, a total of 75 housing units are proposed in this plan. There were no excess housing units identified in Yellowstone National Park.

Considering the aforementioned studies and public comment received, the park will not build as many units as recommended in the *Mammoth Housing Development Plan and Environmental Assessment* that was released to the public in 1997. Because of changes to the preferred alternative, a new EA (this document) is being issued for public review.

This EA describes the alternatives considered, and the environmental effects associated with each proposed alternative. Proposed housing development is expected to take place in small increments, as funding becomes available. Proposed housing would vary in size from recreational vehicle (RV) sites for seasonal employees to multi-family apartment buildings and single-family homes for year-round employees. A housing unit is defined as follows: single family house = one unit; duplex = two units; apartment = x units (dependent on the number of apartments). An RV site is not considered a housing unit, though RV spaces are proposed in the preferred alternative.

This EA addresses the location of housing units required to meet current and near-future employee needs in the Mammoth Hot Springs area.

Insert Map of Yellowstone Park

Insert Mammoth vicinity map

PURPOSE AND NEED FOR THE ACTION

Yellowstone National Park is proposing the construction of new employee housing units and renovation of buildings for use as housing by NPS employees, concessioners, and cooperating organizations in Yellowstone. Proposed housing development is expected to take place in small increments, as funding becomes available. The purpose of this document is to evaluate alternatives and address the potential impacts related to each alternative.

The proposed development sites are located near the Mammoth Hot Springs area of Yellowstone. These sites are in Lower Mammoth and at the Young Adult Conservation Corps Camp (YACC Camp). Housing is also proposed on 6 NPS-owned lots in Gardiner, Montana. A map showing proposed development areas are provided on page 10.

As park visitation has increased, both staff and facilities necessary to protect Yellowstone's resources have also increased. However, improving employee housing has had less priority than improving visitor facilities. By current estimates, more than 30 percent of existing employee housing (parkwide) is in poor condition due to structural problems, leaky roofs, rodent infestation, or bad plumbing and wiring, just to name a few. In addition, there are often not enough employee quarters available to meet current and projected housing needs. As a result, not enough employees (or volunteers) can be hired to meet demand, and highly qualified employees reject employment opportunities.

Increased visitation and a rise in law enforcement-related incidents during the past 20 years have created a corresponding need for improved visitor protection. More visitation also means increased use of visitor facilities, roads, trails, and historic structures. These conditions have resulted in the need for additional law enforcement and maintenance staff.

Continuing emphasis on research, resource management, and extended visitor center hours require additional staff. The demographics of park employees are also changing. Seasonal employees tend to be older, often in their 30s and 40s. These employees work for longer periods than the traditional mid-June to Labor Day season and usually bring their families with them. An increased number of working spouses has necessitated daycare facilities for children of employees, resulting in the need for additional cooperating employees.

Winter visitation has increased from nearly zero (prior to 1975) to approximately 165,000 visitors in 2002. Visitation in spring and fall has also increased dramatically. These changes have necessitated increased seasonal and permanent staffing. Severe winter conditions create maximum demands on facilities, requiring considerable time and effort from Yellowstone's maintenance staff for plowing roads and grooming trails. Many traditional seasonal employee quarters have not been winterized, although use of

such housing now often extends beyond the summer months.

Other employees offer services critical to the Mammoth area and, in turn, are provided housing within the park. These employees include Yellowstone Park School teachers, Yellowstone Association Institute employees, Volunteers-in-the-Park (VIP), Student Conservation Association (SCA) volunteers, the U.S. Magistrate, a contracted physician, a contracted helicopter pilot and mechanic, and daycare center employees. Concessioner employees include those working for Xanterra Parks and Resorts (formerly Amfac), Yellowstone Park Service Stations, Yellowstone Park Medical Services, and Hamilton Stores, Incorporated. Tables 1 and 2, on the next page, provide housing numbers for NPS employees, essential cooperators, and concessioner employees that live in the North Entrance/Mammoth area.

The number of available housing units has increased only slightly in the last 20 years. The current housing shortage is due to both an increase in the number of employees and a change in housing use. More units are used year-round as permanent quarters, and several seasonal units have deteriorated and are no longer usable.

Although Yellowstone and many other older national parks have developed substantial infrastructure over the years, the more recent trend has been toward avoiding unnecessary construction and encouraging employees to live outside the park when possible. About half of the employees who work at Mammoth Hot Springs have found private housing in Gardiner, Montana. Some employees choose to live outside the park because of the better housing options there, or because of their spouse's job, their children's school, or other conveniences; others must do so because the park does not have enough housing to accommodate all the employees who would like to live there. Agreements with park concessioners call for them to house nearly all of their employees on land assigned to them by the park, or hire employees who obtain their own housing outside the park.

But the housing options outside the park are very limited. Gardiner experienced dramatic price increases in the real estate market in the early to mid-1990s, making investment in land or a housing difficult for the average park employee; the 1999 rental market was still characterized by high cost and limited selection because of competition from the increasing number of other seasonal employees in the tourism industry.

TABLE 1: NPS EMPLOYEES AND ESSENTIAL COOPERATORS WORKING AND LIVING IN THE NORTH ENTRANCE/MAMMOTH AREA

Employer	Employees Working at N. Ent/Mammoth	Employees Living in NPS Housing N.Ent/Mammoth
NPS	425	239
SCAs, VIPs, Researchers, etc.	26	26
Essential Cooperator		
U.S Magistrate	1	1
Yellowstone Park School Teachers/Staff	8	3
Helicopter Pilot and Mechanic	2	2
Yellowstone Association Institute	23	2
Little People's Learning Center	6	2
Totals	491¹	275¹

Note: ¹Includes seasonal employees
Information provided by Yellowstone NP, Planning and Maintenance Offices, 2001

TABLE 2: CONCESSIONER EMPLOYEES WORKING AND LIVING IN THE NORTH ENTRANCE/MAMMOTH AREA

Concessioner	Number Employed by Concessioner N. Ent/Mammoth	Number of Employees Living in the Park N.Ent/Mammoth
Yellowstone Park Medical Service	11	6
Yellowstone Park Service Stations	17	8
Hamilton Stores, Inc.	25	5
Xanterra Parks and Resorts	540	481
Totals	593¹	500¹

Notes: ¹Includes seasonal employees
Amfac Parks and Resorts changed its name to Xanterra in April 2002.
Information provided by Yellowstone NP, Business Management Office, 2001.

Employment position types, appointment lengths, and changing employee demographics necessitate different types of housing units. Some employees may live with other employees such as family members or roommates. This may also be true for non-NPS and concessioner employees. Table 3 includes housing units occupied by employees of the NPS, U.S. Magistrate, Yellowstone Association Institute, Yellowstone Park School, and Little People's Learning Center (day care center).

TABLE 3: EXISTING NPS HOUSING, NORTH ENTRANCE/MAMMOTH, 2001

Type of Housing Unit	Number of Bedrooms	Total Housing Units
Single Family House	3 or more	49
	2	20
	1	4
Duplex	3 or more	1
	2	6
	1	3
Apartment	3 or more	8
	2	17
	1	9
	0 (efficiency)	14
Portable Apartment ¹	2	11
Trailer and Transahome ¹	2	19
Dormitory	Utah Dorm Rooms	6
	ATCO Trailer Rooms	3
	YACC Camp Dorm Rooms	8

Notes: ¹Modular housing units. Information provided by Yellowstone NP, Maintenance Office, 2001

Tables 4 and 5 list existing housing units used by concessioners.

TABLE 4: XANTERRA PARKS AND RESORTS HOUSING NORTH ENTRANCE/MAMMOTH AREA, 2001

Type of Housing Unit	Number of Bedrooms ¹	Total Housing Units
Single Family House	4 or more	3
	3	5
	2	4
Duplex	3	3
	2	1
Three-Plex	3	1
	2	2
Apartment (above engineering)	2	1
	1	2
Dormitory	Aspen Dorm Spruce Dorm Juniper Dorm Lodgepole Dorm Gardiner Bunkhouse	176 (total dormitory rooms)
RV Site		16
Cabin		2

TABLE 5: ADDITIONAL CONCESSIONER HOUSING, NORTH ENTRANCE/MAMMOTH AREA, 2001

Concessioner	Description of Housing
Yellowstone Park Medical Services	NPS provides housing for a physician plus seasonal staff on an annual basis
Yellowstone Park Service Stations	One dormitory (6 employees)
Hamilton Stores, Inc.	Two employees live in Xanterra housing One apartment (behind the store), 2 RV sites at the YACC Camp

Existing housing does not adequately accommodate singles, couples, or families employed by the NPS or concessioners. Future housing should include a variety of housing units that reflect changing employee demographics.

In addition, NPS housing at the North Entrance and Mammoth areas does not currently meet accessibility standards for persons with disabilities. In conformance with applicable laws and regulations, specifically the Architectural Barriers Act of 1968 (P.L. 90-480), the Rehabilitation Act of 1973 (P.L. 93-112), and the 1984 Uniform Federal Accessibility Standards (UFAS), 49 CFR 31528, a minimum of five percent of each type of new housing unit would comply with UFAS.

EMPLOYEE RIDESHARE PROGRAM

Through the years, the number of permanent employees who work in Mammoth and live north of Gardiner, Montana (as far away as Wilsall, Montana, approximately 85 miles from Mammoth) has grown to more than 40 employees. In 1998, Yellowstone National Park employees initiated a Rideshare Program to provide transportation between Livingston, Montana (approximately 60 miles), and the park. The park formed a partnership with the Department of Energy's Idaho National Engineering and Environmental Laboratory, which provided two surplus buses for the program. The Rideshare Program transports approximately 35 employees to and from work. One bus is fueled by biodiesel (a product of rapeseed oil) and others will soon be converted. Employees pay "dues" to pay for fuel consumption and maintenance of the bus. This successful program has many benefits including, energy savings from reduced fuel consumption, decreased air pollution, increased safety, decreased traffic, and fewer parking constraints. In addition the Rideshare Program has given employees the opportunity to build or buy more affordable housing outside Gardiner, in the Paradise Valley and Livingston, thus helping lessen the need for more in-park housing.

DESCRIPTION OF POTENTIAL HOUSING SITES

The following proposed development sites are in close proximity to park headquarters at Mammoth Hot Springs and are within existing developed areas. The town of Gardiner, Montana is the gateway community at the North Entrance to the park and is approximately five miles from Mammoth Hot Springs.

Town of Gardiner

Acquisition of property outside Yellowstone National Park would help fulfill housing needs and respond to NPS directives that housing needs for the park and concessioners should be met outside park boundaries whenever possible (when a park is adjacent to or in proximity to an established urban area or private development).

The town of Gardiner contains several potential infill sites, rental units, homes for sale, and RV sites. Pursuant to new regulations, the NPS can buy, lease, or receive donations of property or housing outside the park. Minor boundary adjustments could also be made to provide creative housing solutions. Acquisition of property outside the park would reduce the number of housing units built on park land. The park recently purchased the LaPeyre property in Gardiner that will provide three apartment units for park employees.

There are six NPS-owned lots on Water Street in Gardiner, Montana (Lots 3-8, Block 17, Original Townsite of Gardiner). These lots were jointly owned by Hamilton Stores, Incorporated and Yellowstone National Park, and were assigned for use by Yellowstone Park Service Stations. In February 2001, the lots became the sole property of Yellowstone National Park. The fenced storage area that covered most of the lots formerly contained large concrete cradles that once held oil tanks. An environmental survey conducted by Xanterra Parks and Resorts indicated there was no soil contamination. The site was cleared in May 2002. An existing tin shed and oil recycling barrels will be removed from the site in the future. The park is working with Park County, Montana officials to address construction, utilities, access, and administrative issues.

A site map of the NPS lots in Gardiner is found on page 19, with photograph on page X.

Lower Mammoth Infill Sites

The Lower Mammoth housing area is located near park headquarters and includes approximately 120 acres, with an overall housing density of one unit per 2 acres. Existing housing includes 57 ranch and bungalow-style houses constructed from 1938 to 1939, in the late 1940s, and from 1956 to 1966. Several potential infill sites are located within the Lower Mammoth housing area. Photographs of Lower Mammoth are provided on page 22.

Development of infill sites in Lower Mammoth has been proposed within an existing housing area in lieu of developing new areas. Access roads and utilities are already in place, so development costs for additional infrastructure items would not be required. Because new housing would be constructed among existing residences, there would be a limited impact to park resources.

Young Adult Conservation Corps (YACC) Camp

The YACC Camp site is located approximately 1.2 miles south of Mammoth within the existing YACC Camp and park maintenance area. The site consists of approximately 12.1 acres of open sloping land that is screened from the road by a dense conifer forest and several small hills. Existing housing at the YACC Camp consists of trailers (mobile homes), modular homes, RV sites, and a dormitory. The proposed YACC Camp development area includes the existing 4.9-acre modular housing/RV area, plus .57 acres just north of this area.

The YACC Camp site was proposed for new housing development because many of the existing housing units do not meet NPS housing standards. Under this housing plan, substandard dwellings would be removed and replaced with new housing with minimal impacts to park resources. Access roads and utilities are already in place, but may require upgrading depending on the number of housing units constructed. Because the area is hilly and surrounded by dense vegetation, additional housing could be added to this site without being any more visible to park visitors.

Photographs of the YACC Camp are provided on page 24.

ADAPTIVE USE OF HISTORIC BUILDINGS

Adaptive use of historic buildings for housing in Fort Yellowstone (within the Mammoth Hot Springs Historic District) could include the Powerhouse, Haynes Photo Shop, and the “old” paint shop. See page 27 for a map showing these buildings.

PARTNERSHIPS

Currently seven NPS employees are living in U.S. Forest Service housing north of Gardiner, Montana. Park management will pursue additional housing partnerships with the Forest Service.

TELECOMMUTING

Telecommuting or “Flexiplace,” the Federal Flexible Workplace Project, permits Federal employees to work at home or at other approved sites away from their conventional offices. Several park employees are or have participated in telecommuting.

Insert Gardiner Lots Map

Insert Gardiner Lots Photo

Insert Lower Mammoth Photos

Insert YACC Camp Photos

Insert “Adaptive Use of Historic Buildings” Map

HOUSING ALTERNATIVES CONSIDERED

ACTIONS COMMON TO ALL ALTERNATIVES

Existing NPS and concessioner housing would be retained. Trailers and transahomes would be removed from the YACC Camp and the North Entrance areas. Housing units would be constructed on the NPS-owned lots in Gardiner. The recently purchased LaPierre property would provide three apartments. Existing housing in Lower Mammoth would be maintained and remodeled. Adaptive use of historic buildings in the Mammoth Hot Springs Historic District would be pursued. Removal, relocation, new construction, and adaptive use of buildings would be based on funding.

In conformance with applicable laws and regulations, specifically the Architectural Barriers Act of 1968 (P.L. 90-480), the Rehabilitation Act of 1973 (P.L. 93-112), and the 1984 Uniform Federal Accessibility Standards (UFAS), 49CFR 31528, a minimum of 5 percent of the proposed housing units would be accessible to people with disabilities.

The Rideshare Program would continue to give employees the opportunity to build or buy more affordable housing outside Gardiner, in the Paradise Valley, and Livingston.

ALTERNATIVE 1: NO ACTION

Most commonly the no-action alternative means that the proposed action would not take place. However in this case, an existing, approved trailer replacement plan calls for construction on infill sites in Lower mammoth. Because this will occur regardless of the alternative chosen during this environmental assessment, this alternative is called the "no-action alternative."

Five infill units would be constructed in Lower Mammoth. The historic Powerhouse would be remodeled into 4 apartments (see Historic Resources section). Utilities are available to these lots, and the sewage system has the capacity to accommodate these additional sites. A map showing the proposed locations of infill sites in Lower Mammoth is provided on the next page.

Insert Alternative 1 - Lower Mammoth Infill

ALTERNATIVE 2

Lower Mammoth Infill

Alternative 2 is the same as Alternative 1, but in addition to infill housing, two existing single-story apartment buildings (the Powerhouse Apartments) would be removed and replaced by two new, 8-unit, two-story apartment buildings in Lower Mammoth. A duplex would also be added north of the Powerhouse and the Powerhouse would be remodeled into apartments (4 units). Up to 25 units, including single family homes, duplexes, and apartments, could be built among existing structures or adaptively used. A site map showing proposed housing in Lower Mammoth for Alternative 2 is provided on the next page.

Insert Alternative 2 and 3--Infill Lower Mammoth

ALTERNATIVE 3: PREFERRED ALTERNATIVE

In Alternative 3, 75 housing units would be constructed or adaptively used on NPS, concessioner, or cooperator owned land in Gardiner, Montana, Lower Mammoth, and the YACC Camp. It should be noted that although 75 new housing units are being proposed in the preferred alternative, only 50 housing units are shown on the drawings between Lower Mammoth and the YACC Camp. The number of housing units proposed for each location is conceptual and could change; though development would occur only within the areas analyzed in this EA. The additional 25 units would be accommodated in the adaptive use of historic buildings in Mammoth Hot Springs, construction of housing in Gardiner, and higher density housing in the YACC Camp, if necessary.

Lower Mammoth Infill

Alternative 3 for Lower Mammoth would be the same as Alternative 2. Up to 25 units, including single family homes, duplexes, and apartments, could be built among existing structures or adaptively used. A site map showing proposed housing in Lower Mammoth for Alternatives 3 is provided on the previous page.

YACC Camp

Alternative 3 for the YACC Camp site would remain within the limits of the YACC Camp housing area, except for 0.57 acres north of the development. Existing road and utility alignments in the residential area would be preserved for use, thus minimizing resident displacement during construction. This approach would minimize the amount of new development on undisturbed land. Housing for this area would be limited to RV sites and multi-unit dwellings.

Up to 20 new RV sites could be located immediately north of the maintenance facility. Seasonal employees who bring their personal RVs to the park would use the RV sites. No new permanent NPS or personal modular homes or mobile homes would be permitted within the YACC Camp.

Apartment housing would be located north of the proposed RV sites. The apartments would consist of multi-plex buildings containing efficiency, one bedroom, and two bedroom apartments. The "Scout House," currently used as an office, is located west of the RV sites. The Scout House could be remodeled as a new housing unit if necessary. A map showing proposed housing for the YACC Camp under Alternative 3 is provided on page 34.

Maintenance vehicles currently dominate the vehicular traffic throughout the YACC Camp. To avoid vehicle and pedestrian conflicts, maintenance vehicles would be

separated from resident traffic by construction of a new access road routed directly to the maintenance facilities. New residences would be set back from this road by at least 60 feet. A large turning area would be provided at the gas pumps to accommodate oversized maintenance vehicles.

The road realignment would require the removal/relocation of several maintenance sheds and removal of the ATCO trailer and the Utah dorm (currently used for housing). The boardwalk crew, quarters crew, and road crew functions would need to be relocated if the road is realigned. A building would be constructed for displaced maintenance storage. The ATCO trailer and Utah dorm would be removed from the housing inventory.

One of the trailers in the YACC Camp, currently serving as a soil and water laboratory, would be displaced by new development. A proposal was made in the 1997 housing plan, to move the laboratory to the Yellowstone Center for Resources (YCR, Building 27). The YCR was remodeled, and there is no longer room for this function. The soil and water laboratory could be accommodated in a future building phase of the Yellowstone Heritage and Research Center.

As part of this housing alternative, two garages would be constructed for storage of vehicles belonging to employees living in remote areas of the park during the winter. The proposed garages would be located north of the gas pumps. The garages would help define the limits of the maintenance area and partially screen views of the maintenance area and gas pumps from the residential area. Additional screening could be provided with fencing or a vegetative screen along the north and west edge of the maintenance area. A community center could be built north of the RV housing. This facility could house a kitchen, laundry facilities, showers, a weight room, and a meeting room for community activities.

Insert Alternative #3 - YACC Camp

TABLE 6: SUMMARY OF POTENTIAL IMPACTS OF ALTERNATIVES

Impact Topic	Alternative 1 - No Action	Alternative 2	Alternative 3 - Preferred
Geology and Soils	There would be minor, direct, long-term, adverse impacts on .4 acres of soils in Lower Mammoth.	There would be minor, direct, long-term, adverse impacts on .6 acres of soils in Lower Mammoth.	There would be minor, direct, adverse, long-term impacts to approximately .57 acres of soils at the YACC Camp and .6 acres in Lower Mammoth.
Vegetation	There would be moderate, direct, long-term, adverse impacts to .4 acres of vegetation in Lower Mammoth.	There would be moderate, direct, long-term, adverse impacts to .6 acres of vegetation in Lower Mammoth.	There would be moderate, direct, long term, adverse impacts to approximately .6 acres in Lower Mammoth and .57 acres of vegetation at the YACC Camp.
Rare Plants	No impacts	No impacts	No impacts. YACC Camp area would be surveyed again before construction.
Wildlife	Some minor localized and short-term displacement of wildlife would occur during construction activities.	Some minor localized and short-term displacement of wildlife would occur during construction activities.	Some minor localized and short-term displacement of wildlife would occur during construction activities.
Threatened and Endangered Species	This alternative may affect, but is not likely to adversely affect bald eagles, grizzly bear, and gray wolf. There would be no effect on Canada lynx or whooping crane.	This alternative may affect, but is not likely to adversely affect bald eagles, grizzly bear, and gray wolf. There would be no effect on Canada lynx or whooping crane.	This alternative may affect, but is not likely to adversely affect bald eagles, grizzly bear, and gray wolf. There would be no effect on Canada lynx or whooping crane.

Wetlands and Other Waters of the U.S.	No impacts	No impacts	No impacts
Water Resources and Water Quality	No impacts	No impacts	No impacts
Air Quality	There would be no long-term, adverse impacts on air quality or visibility in the development area. Effects would be minor, temporary, and limited to the duration of construction.	There would be no long-term, adverse impacts on air quality or visibility in the development area. Effects would be minor, temporary, and limited to the duration of construction.	There would be no long-term adverse impacts on air quality or visibility in the development area. Effects would be minor, temporary, and limited to the duration of construction.
Visual Quality	There would be minor, direct, long-term impacts on visual quality due to new housing development.	There would be minor, direct, long-term impacts on visual quality due to new housing development.	There would be minor, direct, long-term impacts on visual quality due to new housing development.
Lightscape Management	There would be a minor, direct, long-term, adverse effect on the night sky resource associated with lights from additional housing.	There would be a minor, direct, long-term, adverse effect on the night sky resource associated with lights from additional housing.	There would be a minor, direct, long-term, adverse effect on the night sky resource associated with lights from additional housing.
Socioeconomic Resources	There could be minor, long-term economic benefit to the Gardiner and Mammoth areas with construction workers utilizing lodging and dining facilities.	There could be minor, long-term economic benefit to the Gardiner and Mammoth areas with construction workers utilizing lodging and dining facilities.	There could be minor, long-term economic benefit to the Gardiner and Mammoth areas with construction workers utilizing lodging and dining facilities.
Visitor Use and Experience	There would be short-term, minor, adverse impacts to Mammoth residents from construction activities associated with the project.	There would be short-term, minor, adverse impacts to Mammoth residents from construction activities associated with the project.	There would be short-term, moderate adverse impacts to Gardiner, Mammoth and YACC Camp residents from construction activities associated with the project.

Environmentally Preferred Alternative

The environmentally preferred alternative is determined by applying the criteria suggested in the National Environmental Policy Act of 1969 (NEPA), which is guided by the Council on Environmental Quality (CEQ). The CEQ provides direction that "[t]he environmentally preferable alternative is the alternative that will promote the national environmental policy as expressed in NEPA's Section 101:

- fulfill the responsibilities of each generation as trustee of the environment for succeeding generations;
- assure for all generations safe, healthful, productive, and esthetically and culturally pleasing surroundings;
- attain the widest range of beneficial uses of the environment without degradation, risk of health or safety, or other undesirable and unintended consequences;
- preserve important historic, cultural and natural aspects of our national heritage and maintain, wherever possible, an environment that supports diversity and variety of individual choice;
- achieve a balance between population and resource use that will permit high standards of living and a wide sharing of life's amenities; and enhance the quality of renewable resources and approach the maximum attainable recycling of depletable resources.

Alternative 3 is the environmentally preferred alternative because most of the proposed construction would occur on previously disturbed land that would minimize environmental impacts. Adaptive use of historic and non-historic structures would also minimize new development. This is also the alternative that best meets the above criteria. After consideration of public and employee comments throughout the scoping and planning process and careful review of potential natural, cultural, and socioeconomic impacts, Alternative 3, the preferred alternative, provides adequate employee housing, ultimately resulting in improved visitor services without degradation of the environment or risk of health or safety.

ALTERNATIVES CONSIDERED BUT DISMISSED FROM FURTHER ANALYSIS

Gravel Pit Site

The Gravel Pit site was considered in the Mammoth Housing Plan and EA in 1997. The site is west of the Gardiner School on park land. Further analysis of impacts on the pronghorn antelope population is needed before additional development at the Gravel Pit site is considered.

Lower Mammoth Expansion Site

This site is east of the existing Lower Mammoth housing area. The site topography consists of gently rolling terrain with several depressions that remain wet most of the year. The site is approximately 44 acres in size and currently contains the Mammoth heliport. The Lower Mammoth Expansion Site was rejected due to its high visibility, wetlands, wildlife, archeological concerns, and proximity of the heliport.

AFFECTED ENVIRONMENT

Comments received during public scoping, from specialists in the National Park Service, and other federal and state agencies identified issues and concerns affecting the proposed action. Impact topics are the resources of concern that could be affected by the range of alternatives. Specific impact topics were developed to ensure that alternatives were compared on the basis of the most relevant topics. The following impact topics were identified on the basis of federal laws, regulations, orders, and National Park Service *Management Policies* (2001): geology and soils, vegetation, rare plants, wildlife, threatened and endangered species, wetlands, water resources and water quality, air quality, visual quality, lightscapes; archeological, historic, and ethnographic resources; cultural landscapes; socioeconomic resources, and visitor use and experience.

Because of the high level of disturbance due to past uses, and its location within a residential area, the Gardiner lots are not addressed in the Affected Environment or Environmental Consequences sections of this EA, however, rare plant and archeological surveys were conducted and there were no concerns.

Natural Resources

Geology and Soils

Yellowstone National Park is located in a geologically active area in the intermountain seismic belt of the Rocky Mountains and is noted for outstanding geologic features resulting from volcanism, faulting, and glaciation. Yellowstone is one of the most active geothermal areas in the world. The park is world-renowned for its hot springs, geysers, mudpots, and fumaroles. In addition, earth tremors are recorded frequently in and around the park. The proposed development area is located in the northwestern section of the park.

The Lower Mammoth sites are located on travertine deposits near an active geothermal area. The YACC Camp consists mainly of glacial till and a trace of landslide debris.

Lower Mammoth sites have the potential for elevated radon levels. Radon originates from a variety of natural geologic deposits and is a gaseous element occurring when radium disintegrates naturally.

The Lower Mammoth areas have surficial deposits consisting primarily of geothermal travertine deposits. These deposits have the potential to develop caverns and sinkholes when ground water dissolves travertine. The Mammoth area is well known for naturally occurring hot springs. In this area, soils are developed upon kames and kettles with localized hot spring deposits.

Although faults are mapped in lower Mammoth, the proposed housing exists within a fault block. As shown on the map of lower Mammoth, some buildings *are* situated along a known fault zone. Current mapping indicates *no* mapped Quaternary (<1.8 million years) movement on these fault segments.

At the YACC Camp soil developed upon glacial till have dark colored surface horizons with sandy loam or loam textures. The horizons are typically between 3 to 8 inches in thickness, and contain approximately 50 percent rock fragments. These soils are enriched with calcium carbonate 6 to 12 inches below the surface. The soils also have an argillic horizon, which is a layer of soil where clay has accumulated.

Soil at the YACC Camp consists mainly of glacial till from the Pinedale Glaciation with a trace of landslide debris. The glacial till is an unsorted, nonstratified, compact mixture of round stones, sand, silt, and clay. Near the southern boundary of the YACC Camp is a basalt erratic, most likely derived from Quaternary lava flows. Additionally, an intrusive formation related to the Gallatin Intrusion is present along the crest of a morainal ridge in the YACC Camp area.

In the YACC Camp area, geologic concerns with regard to proposed development involve (1) the potential for destabilizing a slow moving or stabilized landslide and (2) the potential for movement along mapped faults. Current housing sits on or near the toe of a mapped landslide. Removing material from the toe of a landslide is a known way to destabilize or reactivate a landslide.

Several faults exist in the YACC Camp area. Current mapping does *not* indicate Quaternary (<1.8 million years) fault movement along the fault segment trending north-northwest through the YACC structures. However, Yellowstone National Park has experienced large historic earthquakes (magnitude 7.1) and is at high risk for damage from these large earthquakes.

Vegetation

The park botanist visited proposed housing sites in Lower Mammoth on August 9, 2002. Most of the sites are dominated by sagebrush (*Artemisia tridentata*), rabbitbrush (*Chrysothamnus* spp.), and various exotic species such as cheatgrass (*Bromus inermis*), spotted knapweed (*Centaurea maculosa*), smooth brome (*Bromus inermis*), and allysum (*Allysum alyssoides*). Adjacent housing already impacts these areas and the vegetation community that is currently present represents a significant change from the original condition. There were no rare plants present.

The native vegetation at the YACC Camp is predominated by a big sagebrush/Idaho fescue habitat type. This habitat type is similar to the native vegetation in Lower Mammoth areas. The YACC Camp contains individual and isolated stands of Douglas-fir and juniper. In addition, this area contains the same exotics as Lower Mammoth along with other exotic species such as ox-eye daisy and woolly mullein. A long-term vegetation research enclosure located north of the YACC Camp would not be affected by the proposed development.

Rare Plants

A rare plant survey conducted at the YACC Camp for the 1997 *Mammoth Housing Plan* employed the current list of rare plants obtained from the Wyoming Natural Diversity Database, Wyoming Plant Species of Special Concern (1994 edition). Two Wyoming plant species of special concern were observed in the vicinity of the YACC Camp. These were the crag aster (*Aster scopulorum*) and entire-leaved goldenweed (*Pyrrocoma integrifolia*). Crag aster is globally secure, but rare in the state of Wyoming where it is on the edge of its range. This plant is almost always present in sagebrush habitat. The only population of entire-leaved goldenweed in the park was observed at the YACC Camp. The proposed development area at the YACC Camp would be surveyed for this plant prior to construction so the plant could be avoided.

Wildlife

Yellowstone has 60 species of mammals, 12 species of native fish, 5 species of nonnative fish, 6 species of reptiles, 4 species of amphibians, and more than 300 species of birds. Among the 60 species of mammals are 7 species of native ungulates and 2 bear species.

The northern Yellowstone elk herd is one of the largest free-ranging herds in North America. During the winter, elk are commonly observed feeding on lawns in Gardiner and Mammoth. Elk are frequently observed in Lower Mammoth, and the YACC Camp. Elk have been observed calving and seeking cover from predators in the sagebrush and grassland near the proposed development areas.

The YACC Camp area provides ample protection for the elk during and shortly after the spring calving period. Rutting (mating) season occurs during September and October, and bulls tend to seek open meadows to be highly visible and maintain their harems (groups of elk cows). The open meadows near the Lower Mammoth housing area often attract bulls during rutting season.

Black bears are dispersed throughout the park and are most likely found in forested areas. Their primary diet includes grasses and sedges, but they opportunistically feed on fish, insects, roots, and berries, and they will scavenge, if necessary. Historically, black bears have been involved in more bear/human conflicts than grizzlies. Black bears have been seen less frequently along roadsides and in developed areas since intensive efforts to deny access to artificial foods was instituted by the park in the early 1970s. As a result, conflicts between black bears and humans have declined.

Black bear activity has been recorded within approximately 1/4 mile of Lower Mammoth and the YACC Camp. These areas are classified as high-quality spring and early summer bear habitat. Because these sites are in high-quality black bear habitat, appropriate management of food and garbage would be required during and after construction activities. Only one bear-human incident has been reported in any of the proposed development areas. This incident involved minor damage to a vehicle in Lower Mammoth and was attributed to an unknown species of bear.

Note: Grizzly bears are discussed in the 'Threatened and Endangered Species' section below.

The park rodent population includes pocket gophers, mice, voles, marmots, squirrels, chipmunks, muskrat, and beavers. Smaller mammals such as pine marten, weasels, and red squirrels are fairly common near Lower Mammoth and the YACC Camp. Beaver are known to use the river banks below Mammoth and near Gardiner.

Uinta ground squirrels frequent the proposed development areas. The landscaped lawns of Lower Mammoth provide an optimal artificial habitat for ground squirrels. Badgers observed in the proposed development areas are attributed to the large population of ground squirrels. Badgers are observed most often in the spring and fall digging up ground squirrel burrows.

Recent amphibian surveys indicate three species of amphibians are widespread and common in many parts of the park: the blotched salamander, boreal chorus frog, and Columbian spotted frog. Reptiles such as common garter snakes and bull snakes have been sighted in the Mammoth Hot Springs area.

Birds found in Lower Mammoth include Cassin's finch, pine siskin, mountain chickadee, vesper sparrow, common raven, and Clark's nutcracker. Birds found near the YACC Camp include the green-tailed towhee, osprey, Clark's nutcracker, great horned owl, warbling vireo, Brewer's sparrow, chipping sparrow, mountain bluebird, yellow-rumped warbler, golden eagle, prairie falcon, common raven, black-billed magpie, Townsend's solitaire, western meadowlark, and vesper sparrow.

Threatened and Endangered Species

There is one threatened and one endangered bird species and two threatened mammal species present in Yellowstone. The bald eagle (Haliaeetus leucocephalus) is threatened. The whooping crane (Grus americana) is endangered. The grizzly bear (Ursus arctos horribilis) and the Canada lynx (Lynx canadensis) are listed as threatened. Gray wolves (Canis lupus) are designated as an experimental, non-essential population within the greater Yellowstone ecosystem (GYE).

Both resident and migrating **bald eagles** can be found throughout Yellowstone. Bald eagle nesting sites occur primarily along the margins of lakes and along the shoreline of the larger rivers in the park. The bald eagle management plan for the Greater Yellowstone Ecosystem (GYE) has achieved the goals set for establishing a stable bald eagle population in the park and, in fact, the numbers are increasing. Bald eagles do not typically nest or regularly roost in the proposed development areas. However, they may occasionally forage and perch in these areas. Bald eagles use the YACC Camp area to hunt in the winter.

Whooping cranes have been occasional summer residents of Yellowstone in the past. However, there are no whooping cranes remaining in the park. Whooping cranes have not been observed in the park since the fall of 1999. The lone remaining whooping crane resides in the Centennial Valley of Montana. Therefore, the proposed development is not in whooping crane habitat and will not affect whooping cranes now or in the future.

Gray wolves were native to the Yellowstone area at the time the national park was established in 1872. The gray wolves were historically hunted for their hides and were the target of systematic poisoning from 1872 through the early 1900s. As a result, the gray wolf was extirpated from the ecosystem by the 1930s.

The USFWS released an EIS in May 1994 outlining wolf population recovery and reintroduction plans for Yellowstone and central Idaho. In 1995, 14 gray wolves were reintroduced to Yellowstone National Park. In 1996, 17 more wolves were released in the park. As of January 2002, there were about 216 wolves inhabiting the greater Yellowstone ecosystem. There are about 24 packs or groups in the GYE, most of which inhabit territories within Yellowstone or Grand Teton national parks. There are currently about 13 breeding pairs in the ecosystem.

In 1975, the **grizzly bear** was listed as threatened in the contiguous United States, and fewer than 1,000 grizzlies are thought to survive in the lower 48 states, mostly in Montana, Wyoming, and Idaho. The grizzly bear population within the 5.9 million acres encompassed by the Grizzly Bear Recovery Zone has been estimated at a at 280-610. Nearly 40 percent of this area, 2.2 million acres, is within the boundaries of Yellowstone National Park. The bear management program in Yellowstone is directed toward the recovery, maintenance, and management of the grizzly bear population while also providing for safe park visitor experiences.

Occupied grizzly bear habitat in the GYE has been divided into 18 grizzly bear management units (BMUs). The BMUs were created to monitor bear population trends and to analyze the effects of habitat use or development on local bear populations. Each BMU is assumed to be sufficient to support its bear population from spring through fall.

Grizzly bears prey on ungulates, fish, pocket gophers, moths, and ants. They also forage on the bulbs, roots, and foliage of many forest, meadow, and marsh plants. Whitebark pine seeds are a high quality food source for grizzly bears, especially during the late summer and fall. Grizzlies also feed on ungulate carrion. During winter, ungulates in the park migrate toward the northern range or near thermal areas where severe temperatures are moderated and vegetation is easier to obtain. Ungulate mortalities during the winter serve as a readily available and high protein food source for bears when they emerge from their dens in early spring. When food is scarce, bears are attracted to human developments.

The proposed development areas are located within the Gallatin BMU. Between 1997 and 2001, 63 grizzly bear activity reports were recorded within about 3 kilometers of Mammoth Hot Springs.

Grizzly bear activity has been reported in the Mammoth Hot Springs developed area. The area is designated as Management Situation 3 habitat. These habitats encompass developed areas and are managed for regular human use or occupation. Bear-human conflicts are resolved in favor of human uses.

On March 21, 2000, the USFWS listed the **Canada lynx** as threatened under the Endangered Species Act. There have been no lynx sightings in the YNP historical data base (records spanning 1887-1998) within 5 miles of the project area. There have been two lynx sightings of unknown reliability within 10 miles of Mammoth Hot Springs. No recent attempts have been made by NPS personnel to survey the area for lynx.

Grassland steppe, sagebrush steppe, and open (mature) montane forest (Douglas fir) provide the principal vegetative coverage in the area. These habitats currently provide little or no habitat for snowshoe hares or lynx. Should the area be burned by fire, habitats predominated by young, regenerating conifers are also unlikely to provide suitable habitat because xeric site conditions will preclude development of dense Douglas fir stands.

Wetlands

In Lower Mammoth, a thermal outflow stream from the hot springs terraces has been channelized through the existing housing area. The thermal stream flows down a hill from the west, past the Powerhouse, under the road, and through the residential area.

There are no wetlands in the area proposed for development at the YACC Camp.

Water Resources and Water Quality

The Mammoth area is well known for naturally occurring hot springs. The hot springs are located at least 1/2 mile southwest of the Lower Mammoth infill sites. The outflow of Mammoth Hot Springs flows into the Lower Mammoth housing area. This thermal stream has been channeled to avoid housing.

Air Quality

Under the Clean Air Act, Yellowstone is designated as a mandatory Class I area where air quality degradation is not acceptable. Air quality monitoring in the park is conducted at the Tower and Lake Ranger Stations. Air quality and visibility are generally excellent in Yellowstone. Ozone, sulfur oxides, and particulate matter are monitored on a regular basis in the park. The concentrations of these three parameters have not exceeded limitations specified under existing regulations.

Air quality in the proposed development areas is believed to be excellent, based on data regarding general air quality in Yellowstone. Occasional periods of degradation may occur due to regional haze or forest fire smoke. Localized emissions from wood burning stoves, campfires, and motor vehicles are occasionally visible.

Visual Quality

Visual quality affects both visitor enjoyment and perception of Yellowstone. The Lower Mammoth housing area is already developed and highly visible to the public.

The YACC Camp is removed from visitor use areas, except for the existing access to the Bunsen Peak Road trail, adjacent to the employee housing area. The surrounding forest and terrain helps reduce visibility of the YACC Camp from the Grand Loop Road. Housing and maintenance areas are adjacent to one another within the existing development, and there is little separation between the two functions.

Lightscape Management

The National Park Service strives to preserve the natural ambient landscapes, which are natural resources and values that exist in the absence of human-caused light. Artificial outdoor lighting would be limited to that which is necessary for basic safety requirements.

Cultural Resources

The National Historic Preservation Act, as amended in 1992 (16 USC 470 *et seq.*), and the National Environmental Policy Act, as well as the National Park Service's Director's Order-28, *Cultural Resource Management Guideline (1994)*, *Management Policies (2001)*, and Director's Order-12, *Conservation Planning, Environmental Impact Analysis and Decision-making (2001)*, require the consideration of impacts on cultural resources listed on or eligible for listing on the National Register of Historic Places. The undertakings described in this document are subject to Section 106 of the National Historic Preservation Act, under the terms of the 1995 Servicewide Programmatic Agreement among the National Park Service, the Advisory Council on Historic Preservation, and the National Conference of State Historic Preservation Officers. This document will be submitted to the Wyoming and Montana state historic preservation officers (SHPO) for review and comment.

Cultural resources evaluated include archeological, historic, and ethnographic resources and cultural landscapes.

Archeological Resources

An archeological investigation was completed in the Mammoth Hot Springs area in association with a US West cable replacement project (Daron 1995). The area from Mammoth Hot Springs to the YACC Camp was intensively inventoried and evaluated. Prehistoric lithic sites (48YE28, 48YE864) have been recorded near the proposed development areas (Cannon and Phillips 1993, Daron 1995). Small inventories in the Lower Mammoth housing area were found to be negative (Smith 1992). Lower Mammoth was probably not surveyed for archeological resources before the housing area was developed, beginning in the late 1930s. The park archeologist has taken the opportunity to examine the subsurface during ground disturbing activities such as the placement of underground storage tanks and has found little topsoil in the area.

Historic Resources

During the latter part of the 19th century, Euro-Americans homesteaded in the Yellowstone area. Increasing numbers of explorers, scientists, and visitors publicized Yellowstone's resources and scenery, leading to the formal establishment of the area as the country's first national park in 1872. Yellowstone was initially administered by civilians from 1872 through 1886. The park was managed by the military between 1886 and 1918, in order to control poaching and vandalism. The National Park Service assumed administration of Yellowstone National Park in 1916 and continues to manage the park today. The National Park Service was created in 1916, but was not funded to operate until 1918, so the Army stayed until then.

Yellowstone has 951 historic buildings and structures on the List of Classified Structures; of these 371 are listed on the National Register of Historic Places (National Register), while an additional 308 have been determined eligible for listing, 123 have been determined currently ineligible, and 149 have yet to be evaluated for eligibility. Among the listed resources are six National Historic Landmarks. These are the museums at Madison, Norris, and Fishing Bridge; the Northeast Entrance Station; the Old Faithful Inn, and Obsidian Cliff.

Historic resources have been identified near the proposed development areas. A summary of these historic resources is provided in Table 7. Additional information pertaining to these historic resources is included in the Environmental Consequences section of this report and in Table 7 on the next page.

TABLE 7: SUMMARY OF HISTORIC RESOURCES

Historic Resources	Site Identification Number	Development Area
Mammoth Hot Springs Historic District	48YE486	Lower Mammoth
Grand Loop Road Historic District	48YE520	Lower Mammoth, YACC Camp
Bunsen Peak Road Historic District	48YE825	YACC Camp

Fort Yellowstone was established by the U.S. Army in 1891 and is "one of the few military posts of the late 19th century to retain most of its major buildings in their original appearance and location" (Battle and Thompson, 1972). Several potential historic buildings and structures are present in the Lower Mammoth area, and are within the historic district. The buildings comprising the Mammoth Hot Springs Historic District (listed on the National Register of Historic Places on March 20, 2002) represent the initial development of administrative and concessioner facilities in Yellowstone. There are 187 buildings in the historic district of which 71 are considered significant. Most of the contributing buildings retain their historical and architectural integrity. They also retain their relationship with the historic landscape.

Fort Yellowstone includes 40 buildings dating from the 1890s and early 1900s that continue to be used for park administration, residences, and visitor services. Fort Yellowstone is currently being considered for National Historic Landmark status.

The Fort Yellowstone Powerhouse, built in 1911, is located in Lower Mammoth and is contributing to the Mammoth Hot Springs Historic District. The powerhouse is located at the base of a hill about one-half mile south of Fort Yellowstone, within the Lower Mammoth residential area. Historic homes in the Lower Mammoth housing area include buildings 80-89, 95, 96, 331, 332, 333 (garage) and 450 (a storage shed), and are also contributing to the Mammoth Hot Springs Historic District.

A number of historic road districts are located in or adjacent to the proposed development areas. The Grand Loop Road Historic District (48YE520) is located near Lower Mammoth and the YACC Camp. The Bunsen Peak Road Historic District (48YE825) is located on the northern perimeter of the YACC Camp.

Ethnographic Resources

Ethnographic resources are defined by the NPS as any “site, structure, object, landscape, or natural resource feature assigned traditional legendary, religious, subsistence, or other significance in the cultural system of a group traditionally associated with it” (DO-28, *Cultural Resource Management Guideline*, p. 191).

For at least 10,000 years, Native Americans occupied the greater Yellowstone area. A number of Native American tribes were historically present in Yellowstone on at least a seasonal basis. These tribes may have included the Shoshone, Crow, Blackfeet, Nez Perce, Bannock, Arapahoe, Salish, Kootenai, Lakota/Sioux, and Kiowa. During the early and middle 19th century, Euro-American explorers documented year-round occupation of areas within the park by a band of Shoshone Indians known as the Sheepeaters.

Today the tribes who are affiliated with Yellowstone National Park, and with whom consultation occurs on a semi-annual basis, are (listed in alphabetical order): Assiniboine and Sioux Tribes of Ft. Peck; Blackfeet; Cheyenne River Sioux; Confederated Tribes of Salish & Kootenai; Couer d'Alene tribe; Crow; Crow Creek Sioux; Eastern Shoshone; Flandreau Santee Sioux; Gros Ventre & Assiniboine; Kiowa Tribe of Oklahoma; Lower Brule Sioux; Nez Perce of Lapwai, Nespelem, and Colville; Northern Arapaho; Northern Cheyenne; Oglala Sioux, Rosebud Sioux, Shoshone-Bannock; Sisseton-Wahpeton Sioux; Spirit Lake Sioux; Standing Rock Sioux; and Yankton Sioux.

An ethnographic overview of Yellowstone National Park was completed in September 2000 and will be published in 2002. Ethnographic resources were not identified at any of the proposed housing development sites in the report.

The Mammoth Housing Plan was discussed with Native American tribal representatives at the annual consultation meeting in May 2002.

Cultural Landscapes

According to the National Park Service’s *Cultural Resource Management Guideline* (DO-28), a cultural landscape is “...a reflection of human adaptation and use of natural resources and is often expressed in the way land is organized and divided, patterns of settlement, land use, systems of circulation, and the types of structures that are built. The character of a cultural landscape is defined both by physical materials, such as roads, buildings, walls, and vegetation, and by use reflecting cultural values and traditions.”

The Mammoth Hot Springs Historic District, including Fort Yellowstone, is considered a cultural landscape.

SOCIOECONOMIC RESOURCES

Yellowstone National Park extends into three different states, including Wyoming, Montana, and Idaho. Most of the property surrounding the park is managed by the USFS, the states of Montana, Wyoming, and Idaho, and a few private land owners. The park plays a prominent role in the social and economic life of the greater Yellowstone area.

Gateway communities of varying sizes have developed outside the park—Cody, Dubois, and Jackson in Wyoming and Cooke City, Silvergate, Gardiner, and West Yellowstone in Montana. The Montana gateway communities are on the immediate border of the park or within a few miles; the Wyoming gateway communities are an hour drive or more from the park boundary. The gateway communities are relatively small, with populations ranging from less than 150 permanent residents for Cooke City and Silvergate combined to almost 9,000 for Cody. The population of West Yellowstone is approximately 1200 and Gardiner has approximately 850 residents, however the population increases during the summer months.

The availability of services varies from community to community. Yellowstone's recreational opportunities tend to create a tourist-based economy in communities surrounding the park. These communities receive significant income by providing goods and services to park visitors and employees. Local businesses also benefit from annual NPS and concessioner expenditures for salaries, goods, and services.

Gardiner, Montana is a small community situated at the original entrance to Yellowstone National Park and is the only year round entrance into the park. The town is located in the Upper Yellowstone Valley, surrounded by national park and forest lands. The Yellowstone River flows through the center of town. Gardiner relies on recreation, tourism, and the service industry to support its economy. Primary employers in the area include the National Park Service, Xanterra Parks and Resorts (formerly Amfac), and the U. S. Forest Service. Gardiner has a public school--kindergarten through 12th grade.

In 2001, during the peak (summer) employment season, the NPS employed approximately 800 permanent and seasonal workers. Yellowstone has contracts with four concessioners including Xanterra Parks and Resorts, Hamilton Stores, Incorporated; Yellowstone Park Service Stations; and Yellowstone Park Medical Services. There were 3,260 concessioner employees working during 2001. The majority of the Park Service and concessioner employees live in the park.

Less than 2 percent of Yellowstone is developed. Park infrastructure includes utilities, trails, roads, employee housing, administrative headquarters, and visitor services facilities in various areas throughout the park. The number of developed areas within

the park has decreased in recent years as park managers have removed some developments from resource areas and other developments have been consolidated.

As a result of increased park visitation over the years, there has been an increasing demand for concessioner services. This increased demand for concessioner services has resulted in an increased need for concessioner staff and associated housing. Current housing for concessioner and NPS employees is substandard and inadequate for current and future needs.

The quantity and quality of employee housing in Yellowstone is inadequate. By current estimates, 30 percent of existing employee housing presently fails to meet basic health, safety, sanitary, electrical, and building codes. There are not enough employee quarters available to meet housing needs.

Currently, NPS housing in the Mammoth area does not meet Uniform Federal Accessibility Standards (UFAS) for people with disabilities. Five percent of each type of new housing would comply with UFAS.

A housing market analysis was conducted for Gardiner, Montana, in March and April of 1995. The NPS determined that rental and purchase prices of housing in the Gardiner area were beyond the means of many NPS and concessioner employees. Results of the housing market analysis conducted in 1998 also showed that the local supply of housing in price ranges affordable to National Park Service employees was inadequate. Vacancy rates were low and the supply of affordable housing limited. This was still the case in 2000.

Poor housing causes a drain on park maintenance funds, lowers employee morale and retention, and may be a deterrent to recruiting new employees. Housing conditions affect the mood of park employees and job performance, as well as the social fabric of the park community. Adequate housing is necessary for park employees to serve visitors and protect the natural and cultural resources of Yellowstone.

Visitor Use and Experience

Visitor use and economic activities supporting the use of Yellowstone are highly seasonal. Visitation is lower during the shoulder-season months of April, May, and October. Winter use grew rapidly in the early 1990s, with annual increases of 10 to 15%. In 2000 the park recorded 2.8 million recreational visits, with 130,000 occurring in the winter season. A recreational visit is defined as visitors entering the park for any part of a day for recreational purposes.

Approximately 18 percent of the park's total visitors entered Yellowstone through the North Entrance in the 2000 summer season. In the 2000 winter season (mid-December

through mid-March), 35 percent of visitors entered the park through the North Entrance. The North Entrance is the only park entrance open all year to wheeled vehicles.

Impact Topics Dismissed from Further Consideration

Floodplains

Executive Order 11988, *Floodplain Management*, requires all federal agencies to avoid construction within the 100-year floodplain unless no other practical alternative exists. Because the proposed housing development sites are outside the 100-year floodplain, this topic was dismissed from further consideration. A Statement of Findings for floodplains will not be prepared.

Prime and Unique Farmlands

In August 1980, the Council on Environmental Quality (CEQ) directed that federal agencies must assess the effect of their actions on farmland soils classified by the U.S. Department of Agriculture's Conservation Service (NRCS) as prime or unique. Prime or unique farmland is defined as soil that particularly produces general crops such as common foods, forage, fiber, and oil seed; unique farmland produces specialty crops such as fruits, vegetables, and nuts. According to the NRCS, none of the soils in the project area are classified as prime and unique farmlands. Therefore, the topic of prime and unique farmlands was dismissed as an impact topic in this document.

Environmental Justice

Executive Order 12898, "General Actions to Address Environmental justice in Minority Populations and Low Income Populations," requires all federal agencies to incorporate environmental justice into their missions by identifying and addressing disproportionately high and adverse human health or environmental effect of their programs and policies on minorities and low income populations and communities. The proposed action would not have health or environmental effects on minorities or low income populations or communities as defined in the Environmental Protection Agency's Environmental Justice Guidance (1998). Therefore, environmental justice was dismissed as an impact topic in this document.

Soundscape Management

An important part of the National Park Service mission is preservation of natural soundscapes associated with national park units. The natural ambient soundscape is the aggregate of all the natural sounds that occur in parks, together with the physical capacity for transmitting natural sounds. Natural sounds occur within and beyond the range of sounds that humans can perceive and can be transmitted through air, water, or solid materials. (NPS policy for this topic is found in DO-47, *Sound Preservation and Noise Management and Management Policies* (2001), 4.9, Soundscape Management.)

Housing development would not generate significant noise, thus soundscapes were dismissed as an impact topic in this document

ENVIRONMENTAL CONSEQUENCES

Overview

The National Environmental Policy Act (NEPA) requires that the environmental effects or consequences of a proposed federal action be disclosed. In this instance, the proposed federal action involves construction of new employee housing within Yellowstone National Park. Housing development alternatives are presented in this environmental assessment. The potential environmental consequences of the proposed housing alternatives on natural, cultural, socioeconomic resources, and visitor use and experience and anticipated cumulative effects are discussed in this section of the EA.

The intent of this section is to provide an analytical basis for comparison of the alternatives and the impacts that would result from implementation of these alternatives. Impact topics have been selected for the analysis based on the potential for effects on significant resources and other key issues identified during planning. Expected impacts are described for each of the alternatives considered.

The Council on Environmental Quality (CEQ) regulations, which implement the National Environmental Policy Act, requires assessment of cumulative impacts in the decision-making process for federal projects. Cumulative impacts are defined as "the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions" (40 CFR 1508.7). Cumulative impacts are considered for both the no-action and proposed action alternative.

Cumulative impacts were determined by combining the impacts of the preferred alternative – constructing housing in Lower Mammoth, and the YACC Camp – with other past, present, and reasonably foreseeable future actions. Therefore, it was

necessary to identify other ongoing or reasonably foreseeable future projects at Yellowstone National Park and, if applicable, the surrounding region.

The analysis of the cumulative effects includes a discussion of current development plans within Yellowstone National Park and information about development plans for the lands surrounding the park within the Yellowstone ecosystem. Development plans in the immediate project area are primary factors in the analysis of cumulative impacts.

Although numerous construction and maintenance projects are planned for the Greater Yellowstone Area over the next 20+ years, the major emphasis of these projects is to replace, repair, and rehabilitate existing facilities that are approaching the end of their useful service life. Where new facilities are needed, they would be concentrated in and adjacent to existing developed areas to minimize the creation of new, isolated developments. Although some commitment of previously undisturbed resources is inevitable, as are some adverse cumulative effects, many of the projects to be undertaken involve the removal of existing development and the revegetation of other human activity scars.

In addition to determining the environmental consequences of the preferred and other alternatives, NPS policy (*Management Policies, 2001*) requires analysis of potential effects to determine whether or not actions would impair park resources. The following analysis of impacts was based upon whether the impacts would be:

- **beneficial** (a positive change in the condition of the resource, or a change that moves a resource toward its desired condition);
- **adverse** (a negative change in the condition of the resource, or a change that moves a resource away from its desired condition);
- **direct** (an effect that is caused by an action and occurs at the same time and place);
- **indirect** (an effect that is caused by an action but is later in time or farther removed in distance, but is still reasonably foreseeable);
- **short-term** (an effect which in a short amount of time would no longer be detectable, as a resource returns to its pre-disturbance condition; generally less than 5 years);
- **long-term** (a change in a resource or its condition that does not return to pre-disturbance levels and for all practical purposes is considered permanent).

The analysis is also based upon whether the intensity or severity of the impacts are:

- **negligible** (the impact is at the lowest levels of detection);
 - **minor** (the impact is slight, but detectable);
 - **moderate** (the impact is readily apparent)
 - **major** (the impact is a severe or adverse impact or of exceptional benefit).
- Impairment**

In addition to determining the environmental consequences of the preferred and other alternatives, National Park Service policy (*Management Policies, 2001*) requires analysis of potential effects to determine whether or not actions would impair park resources.

The fundamental purpose of the national park system, established by the Organic Act and reaffirmed by the General Authorities Act, as amended, begins with a mandate to conserve park resources and values. National Park Service managers must always seek ways to avoid, or to minimize to the greatest degree practicable, adverse impacts on park resources and values. However, the laws do give the National Park Service the management discretion to allow impacts to park resources and values when necessary and appropriate to fulfill the purposes of a park, as long as the impact does not constitute impairment of the affected resources and values. Although Congress has given the National Park Service the management discretion to allow certain impacts within parks, that discretion is limited by the statutory requirement that the National Park Service must leave park resources and values unimpaired, unless a particular law directly and specifically provides otherwise. The prohibited impairment is an impact that, in the professional judgment of the responsible National Park Service manager, would harm the integrity of park resources or values, including the opportunities that otherwise would be present for the enjoyment of those resources or values. An impact to any park resource or value may constitute an impairment. An impact would be more likely to constitute an impairment to the extent it affects a resource or value whose conservation is:

- Necessary to fulfill specific purposes identified in the establishing legislation or proclamation of the park;
- Key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park; or
- Identified as a goal in the park's general management plan or other relevant NPS planning documents.

Impairment may result from National Park Service activities in managing the park, visitor activities, or activities undertaken by concessioners, contractors, and others operating in the park.

Measures Common to All Alternatives

In all alternatives, additional measures to be implemented to avoid/minimize adverse impacts to grizzly bears include but are not necessarily limited to the following:

- All contractors, subcontractors, and their employees receive orientation regarding the protected status of the bear and precaution/safety measures necessary and regulations involved in working in bear country and should be held responsible for failure to comply.
- Contingency plans should be developed to outline necessary procedures should a bear come into the vicinity of a construction site, including, as necessary, the temporary cessation of construction or ongoing activities to resolve a potential or existing grizzly bear/human conflict. Such provisions shall be incorporated into any contracts/permits and all contractors/workers should be made aware of these procedures.
- Strict enforcement of food and attractant storage and sanitation regulations is essential to reduce conflicts between humans and bears. Compliance with the food storage and operating/contingency requirements, etc. should be mandated in any contract/permit.
- No temporary camps for contractors, subcontractors, and their employees should be permitted within the park.
- Compliance with all grizzly bear regulations as well as permit and/or contract conditions relative to resource protection (including the bear) should be monitored on a daily basis by park personnel. Adequate enforcement personnel must be available to ensure this occurs.
- Equipment should not be serviced or refueled near streams or riparian areas, and any parking or staging areas should be at least 150 feet from such areas.
- No work should occur between dusk and dawn in bear areas.
- All persons residing in developed areas shall implement the park's food/garbage storage regulations.
- All outdoor trash containers shall be of bear-resistant design and garbage pick-up will be scheduled to prevent overflow of cans and assure leaving as little garbage as possible overnight.
- Mishandling of garbage by park residents will be reported to the responsible supervisor and any repeated mishandling or any case of deliberate feeding of bears

shall be discontinued immediately.

- Park personnel shall check all food storage and garbage cans in residence areas on a regular basis and investigate and signs of deliberate feeding and use appropriate means to aggressively suppress this activity.
- An oil/hazardous material spill contingency should be developed if oil or other hazardous materials will be transported through/to the area. Such materials pose a risk to fish and wildlife resources in the event of a spill. The contingency plan should address the following: 1) reference to the EPA Region VIII Oil and Hazardous Substances Pollution Contingency Plan; 2) protocol for obtaining advice from our agency on clean up efforts that may affect Federally listed species; 3) identification of sensitive or critical habitats that could be affected by a spill; 4) identification of measures to prevent oil or other hazardous materials from entering streams or other wetland.
- If powerlines will be moved or retrofitted, efforts should be made to raptor-proof these and make them visible to birds.

ALTERNATIVE 1: NO-ACTION

Natural Resources

The effects of Alternative 1 on natural resources would be minimal. Five infill units would be constructed in an existing housing development in Lower Mammoth. The Powerhouse would be remodeled into apartments. Housing would be constructed on the six NPS-owned lots in Gardiner. Under the No-Action Alternative there would be minimal construction activities in the proposed development areas.

Geology and Soils

Approximately 0.4 acres of previously disturbed soils would be directly affected by the proposed infill housing. Effects would be minor, adverse, and long-term. Standard approved erosion control techniques and structures such as silt fencing would be implemented during and following construction. The Lower Mammoth area has the potential for elevated radon levels; therefore, building construction would provide provisions for radon testing and mitigation measures. Housing units in the proposed development areas would be appropriately designed to withstand earth tremors that occur frequently in and around Yellowstone. There would be no impairment to geology and soils.

Vegetation

Approximately 0.4 acres of non-native vegetation would be affected by the proposed infill housing. There would be a negligible effect on native vegetation due to construction activities, because the area is within a previously developed housing area. There would be minor, direct, adverse impacts to non-native vegetation.

The potential for spreading exotic plant species during construction is a concern that can be mitigated by adhering to proper construction techniques and precautions. A landscape plan and revegetation plan would be prepared for the area and work would follow guidelines in *Vegetation Management for Construction Disturbance in Yellowstone National Park* (1995). Native plant materials would be used for revegetation, and areas disturbed by construction would be monitored for early detection and removal of exotic species. Exotic plants would need to be closely monitored and managed until the establishment of desired vegetation was accomplished. Plant materials would reflect vegetation of the area. Revegetation efforts would reduce the severity of impacts to a minor level. There would be no impairment to vegetation in this alternative.

Rare Plants

There are no rare plants in the proposed infill sites, thus, there would be no impairment.

Wildlife

There would be short-term, minor impacts on wildlife at the Lower Mammoth infill sites. Wildlife could be temporarily displaced from habitat adjacent to the site due to construction equipment and activity for the duration of the project. No impairment to wildlife resources would occur as a result of implementing this proposal.

Threatened and Endangered Species

This alternative may affect, but is not likely to adversely affect **bald eagles**. Construction of housing in Lower Mammoth would have a negligible impact on bald eagles due to the existing housing development

Because this species is not present in the area, there would be no effect on **whooping cranes**.

The no-action alternative may affect, but is not likely to adversely affect **grizzly bears**. By confining construction to previously disturbed areas, the potential effect on grizzly bears and their habitat would be minimized.

The proposed project may affect, but is not likely to adversely affect **gray wolves**. Little potential for disturbance of denning wolves currently exists.

Construction of new buildings is not expected to disturb **lynx** or occlude their movements because this species likely does not reside in or near Mammoth Hot Springs or use this area as a travel corridor. No collisions with vehicles are expected as a result of construction or use of houses because lynx seldom, if ever, use the area. The proposed project would have no effect on lynx.

No impairment to threatened and endangered species would occur as a result of implementing the preferred alternative.

There would be no long-term adverse cumulative impacts to natural resources. Because the actions described in the alternative do not severely affect a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the establishing legislation or proclamation of Yellowstone National Park; (2) key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park; (3) identified as a goal in the park's general management plan or other relevant National Park Service planning documents, there would be no impairment of the park's resource or values.

Wetlands

There were no wetlands located in any of the proposed development areas. One infill site near the existing Powerhouse apartments is in close proximity to a wetland produced by an outflow of thermal waters from Mammoth Hot Springs. The wetland would be avoided and, thus, would not be affected by the proposed construction. There would be no impairment to wetlands.

Water Resources and Water Quality

There would be no adverse effects on water resources or water quality. Standard erosion control devices would be utilized to ensure runoff from the site would not make its way into the thermal stream near the Powerhouse. There would be no impairment to water resources or water quality.

Air Quality

There would be no long-term, adverse impacts on air quality or visibility in the development area. Effects would be minor, temporary, and limited to the duration of construction. Dispersed dust and mobile exhaust emissions would be caused by truck traffic and equipment activity, but would not be in sufficient quantities to degrade park air quality. Contractor activities would comply with state and federal air quality regulations, and contractors would operate under applicable permits. These actions would not constitute an impairment to air quality in the park.

Visual Quality

There would be a moderate, long-term, direct effect on views in the Lower Mammoth housing area. Buildings constructed in the vicinity of historic buildings in Lower Mammoth would be sensitive to the architectural design of the surrounding buildings.

Lightscape Management

Lighting for housing in the Lower Mammoth area would have a minor, direct, long-term effect on the night sky resource. Artificial outdoor lighting would be limited to that which is necessary for basic safety requirements. All outdoor lighting would be shielded to the maximum extent possible, to keep light on the intended subject and out of the night sky. All exterior lighting would comply with Yellowstone outdoor lighting guidelines for night sky preservation. Lighting for housing in Lower Mammoth would not cause impairment of the night sky resource.

Cultural Resources

Alternative 1 would have no adverse effect on cultural resources. The dilapidated trailers and transahomes at the YACC Camp and North Entrance would be removed. These buildings do not possess historic significance. The six infill units in Lower Mammoth would be designed to harmonize with existing structures in accordance with the U.S. Secretary of the Interior's guidelines.

Archeological Resources

A Class III cultural resource inventory of a block survey near Mammoth was conducted by the Office of the Wyoming State Archeologist in 1995 (Sanders 1996). A prehistoric lithic site (48YE28) is adjacent to the proposed development, but would not be impacted by housing construction. Should archeological resources be discovered during construction, work would cease and the Wyoming State Historic Preservation Officer (SHPO) would be consulted.

Historic Resources

There would be a long-term, moderate, direct visual effect on the Mammoth Hot Springs Historic District. One of the proposed duplexes in the Lower Mammoth housing area would be adjacent to the historic Powerhouse and historic residences, although outside the historic district. New housing would be designed to meet the Secretary of the Interior's Standard for the Treatment of Historic Properties. Architectural design (color, texture, form, and mass) would be sensitive to the surroundings.

Ethnographic Resources

There are no known ethnographic resources in the area proposed for construction. In the unlikely event that human remains, funerary objects, sacred objects, or objects of cultural patrimony are discovered during housing construction, provisions outlined in the Native American Graves Protection and Repatriation Act (25 USC 3001) of 1990 would be followed.

This environmental assessment will be made available to tribes traditionally associated with the lands of Yellowstone National Park for review and comment. If the tribes subsequently identify the presence of ethnographic resources, appropriate mitigation measures would be undertaken in consultation with the tribes. The location of ethnographic sites would not be made public.

Cultural Landscapes

No cultural landscapes have been identified in the Lower Mammoth housing area. However, the Grand Loop Road and the Mammoth Hot Springs Historic Districts are considered cultural landscapes. Yellowstone National Park would ensure that proposed housing construction would not adversely affect those qualities that qualify the Mammoth Hot Springs Historic District and Grand Loop Historic District for listing on the National Register of Historic Places. The buildings and site design would be sensitive to and compatible with the district's historic values.

Because the actions described in the alternative do not severely affect a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the establishing legislation or proclamation of Yellowstone National Park; (2) key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park; (3) identified as a goal in the park's general management plan or other relevant National Park Service planning documents, there would be no impairment of the park's resource or values.

Socioeconomic Resources

There could be minor, short-term beneficial economic impacts to the Gardiner and Mammoth areas because construction workers might utilize local restaurants, motels/hotels, and other services. The no-action alternative would provide minimal new housing, insufficient in quantity to meet current or future needs. In the long-term, if housing needs are not met, the resulting effect on employees could be overcrowding and dissatisfaction. This may have an adverse impact on the NPS and concessioners' hiring ability, potentially affecting their operations. There would be no impairment of socioeconomic resources.

Visitor Use and Experience

There would be short-term, minor disturbances to Mammoth residents from construction activities associated with the project. Continuing with minimal housing for park employees would expose staff to inadequate housing conditions and indirectly effect the quality of the experience for the park visitor. There would be no impairment of visitor use and experience.

Cumulative Effects

The cumulative effects of Alternative 1 on natural and cultural resources would be minor because of minimal construction activities.

ALTERNATIVE 2

Alternative 2 is nearly the same as Alternative 1, but in addition to infill housing, two existing single-story apartment buildings (the Powerhouse Apartments) would be removed and replaced by two new, 8-unit, two-story apartment buildings. In addition, the historic Powerhouse would be remodeled into apartments. Up to 24 units including single-family homes, duplexes, and apartments could be built among existing structures or adaptively used.

Natural Resources

The effects of Alternative 2 on natural resources would be minimal. The 24 infill units proposed in Lower Mammoth would be constructed in an existing housing development.

Geology and Soils

Approximately 0.6 acres of previously disturbed soils would be affected by the proposed infill housing. Effects would be minor and long-term.

Standard approved erosion control techniques and structures such as silt fencing would be implemented during and following construction. The Lower Mammoth area has the potential for elevated radon levels; therefore, building construction would provide provisions for radon testing and mitigation measures. Housing units in the proposed development areas would be appropriately designed to withstand earth tremors that occur frequently in and around Yellowstone. These impacts would not constitute an impairment to geology and soils.

Vegetation

Approximately .6 acres of non-native vegetation would be affected by the proposed infill housing. There would be a negligible effect on native vegetation due to construction activities, because the area is within a previously developed housing area. There would be minor, direct, adverse impacts to non-native vegetation.

The potential for spreading exotic plant species during construction is a concern that can be mitigated by adhering to proper construction techniques and precautions. A landscape plan and revegetation plan would be prepared for the area and work would follow guidelines in *Vegetation Management for Construction Disturbance in Yellowstone National Park* (1995). Native plant materials would be used for revegetation, and areas disturbed by construction would be monitored for early detection and removal of exotic species. Exotic plants would need to be closely monitored and managed until the establishment of desired vegetation was

accomplished. Plant materials would reflect vegetation of the area. Revegetation efforts would reduce the severity of impacts to a minor level. There would be no impairment to vegetation in this alternative.

Rare Plants

There are no rare plants in the proposed infill sites, thus, there would be no impairment to rare plants.

Wildlife

There would be short-term, minor impacts on wildlife at the Lower Mammoth infill sites. Wildlife could be temporarily displaced from habitat adjacent to the site due to construction equipment and activity for the duration of the project. No impairment to wildlife resources would occur as a result of implementing this proposal.

Threatened and Endangered Species

This alternative may affect, but is not likely to adversely affect **bald eagles**. Construction of housing in Lower Mammoth would have a negligible impact on bald eagles due to the existing housing development

Because this species is not present in the area, there would be no effect on **whooping cranes**.

Alternative 2 may affect, but is not likely to adversely affect **grizzly bears**. By confining construction to previously disturbed areas within the Lower Mammoth housing area, the potential effect on grizzly bears and their habitat would be minimized.

The proposed project may affect, but is not likely to adversely affect **gray wolves**. Little potential for disturbance of denning wolves currently exists.

Construction of new buildings is not expected to disturb **lynx** or occlude their movements because this species likely does not reside in or near Mammoth Springs or use this area as a travel corridor. No collisions with vehicles are expected as a result of construction or use of houses because lynx seldom, if ever, use the area. There would be no effect on lynx.

No impairment to threatened and endangered species would occur as a result of implementing the preferred alternative.

Wetlands

There were no wetlands located in any of the proposed development areas. One infill site near the existing Powerhouse apartments is in close proximity to a wetland produced by an outflow of thermal waters from Mammoth Hot Springs. The wetland would be avoided and, thus, would not be affected by the proposed construction. There would be no impairment to wetlands.

Water Resources and Water Quality

There would be no adverse effects on water resources or water quality. Standard erosion control devices would be utilized to ensure runoff from the site would not make its way into the thermal stream near the Powerhouse. There would be no impairment to water resources or water quality.

Air Quality

There would be no long-term impacts on air quality or visibility in the development area. Effects would be minor, temporary, and limited to the duration of construction. Dispersed dust and mobile exhaust emissions would be caused by truck traffic and equipment activity, but would not be in sufficient quantities to degrade park air quality. Contractor activities would comply with state and federal air quality regulations, and contractors would operate under applicable permits. These actions would not constitute an impairment to air quality in the park.

Visual Quality

There would be a minor, long-term, direct effect on views in the Lower Mammoth housing area. Buildings constructed in the vicinity of historic buildings in Lower Mammoth would be sensitive to the architectural design of the surrounding buildings.

Lightscape Management

Lighting for housing in the Lower Mammoth area would have a minor, direct, long-term effect on the night sky resource. Artificial outdoor lighting would be limited to that which is necessary for basic safety requirements. All outdoor lighting would be shielded to the maximum extent possible, to keep light on the intended subject and out of the night sky. All exterior lighting would comply with Yellowstone outdoor lighting guidelines for night sky preservation. Lighting for housing in Lower Mammoth would not cause impairment of the night sky resource.

Cultural Resources

Archeological Resources

A Class III cultural resource inventory of a block survey near Mammoth was conducted by the Office of the Wyoming State Archeologist in 1995 (Sanders 1996). A prehistoric lithic site (48YE28) is adjacent to the proposed development, but would not be impacted by housing construction. Should archeological resources be discovered during construction, work would cease and the Montana State Historic Preservation Officer (SHPO) would be consulted.

Historic Resources

There would be a long-term, minor, direct visual effect on the Mammoth Hot Springs Historic District. One of the proposed duplexes in the Lower Mammoth housing area would be adjacent to the historic Powerhouse and historic residences, although outside the historic district. New housing would be designed to meet the Secretary of the Interior's Standard for the Treatment of Historic Properties. Architectural design (color, texture, form, and mass) would be sensitive to the surroundings.

Ethnographic Resources

There are no known ethnographic resources in the area proposed for construction. In the unlikely event that human remains, funerary objects, sacred objects, or objects of cultural patrimony are discovered during housing construction, provisions outlined in the Native American Graves Protection and Repatriation Act (25 USC 3001) of 1990 would be followed.

Copies of this environmental assessment will be made available to each tribe traditionally associated with the lands of Yellowstone National Park for review and comment. If the tribes subsequently identify the presence of ethnographic resources, appropriate mitigation measures would be undertaken in consultation with the tribes. The location of ethnographic sites would not be made public.

Cultural Landscapes

No cultural landscapes have been identified in the Lower Mammoth housing area. However, the Grand Loop Road and the Mammoth Hot Springs Historic Districts are considered cultural landscapes. Yellowstone National Park would ensure that proposed housing construction would not adversely affect those qualities that qualify the Mammoth Hot Springs Historic District and Grand Loop Historic District for listing on the National Register of Historic Places. The buildings and site design would be sensitive to and compatible with the district's historic values.

Socioeconomic Resources

There could be minor, long-term beneficial economic impacts to the Gardiner and Mammoth areas because construction workers might utilize local restaurants, motels/hotels, and other services. Alternative 2 would provide more housing than Alternative 1, but would not meet the number of housing units identified in the Housing Needs Assessment. In the long-term, if housing needs are not met, the resulting effect on employees could be overcrowding and dissatisfaction. This may have an adverse impact on the NPS and concessioners', and cooperators' hiring ability, potentially affecting their operations. There would be no impairment of socioeconomic resources.

Visitor Use and Experience

There would be short-term, minor disturbances to Mammoth residents from construction activities associated with the proposed project. Inconveniences would be temporary and would only continue during the construction phase of the project. There would be a minor increase in traffic in Lower Mammoth with construction of additional housing.

Cumulative Effects of Alternative 2

The cumulative effects of Alternative 2 on natural resources would be minor because construction activities would take place in an existing housing development. Alternative 2 would have no adverse effect on cultural resources if building designs conform with the Secretary of the Interior's Standards for the Treatment of Historic Properties.

ALTERNATIVE 3: PREFERRED ALTERNATIVE

Natural Resources

Implementation of Alternative 3 would have minimal effects on natural resources because the majority of the proposed development areas have been previously disturbed or developed. The total amount of newly developed land would be kept to a minimum and natural features would be preserved as much as possible. The lots in Gardiner have been highly disturbed by past uses, and therefore will not be addressed in this section.

Geology and Soils

Approximately 0.6 acres of previously disturbed land would be affected in the Lower Mammoth housing area and 0.57 acres of undisturbed land would be affected by the proposed project at the YACC Camp. Effects would be minor, direct, adverse, and long-term.

Although the Lower Mammoth sites are located near an active hydrothermal area, disturbance of hydrothermal features is not expected. Active landslides exist in the YACC Camp area. Any human activity such as road building, maintenance, and new construction, can initiate new or increased movements on landslides. Construction in the YACC Camp area should take care not to disturb any current landslide toe (Hank Heasler and Cheryl Jaworowski, Park Geologists, Personal Communication, July 2002).

Topsoil would be saved during construction for later reclamation and revegetation work. Standard approved erosion control techniques and structures such as silt fencing would be implemented during and following construction. Housing constructed in Gardiner or Lower Mammoth has the potential for elevated radon levels. New construction would include provisions for radon testing and mitigation measures. Housing units in the proposed development areas would be appropriately designed to withstand earth tremors that occur frequently in and around Yellowstone. These impacts would not constitute an impairment to geology and soils in this alternative.

Vegetation

There would be minor, direct, long-term, adverse effects on native and non-native vegetation at all proposed building sites due to construction activities. There would be impacts on approximately 0.6 acres of previously disturbed infill sites in Lower Mammoth. Proposed YACC Camp development includes 0.57 acres of disturbance for new development.

The potential for spreading exotic plant species during construction is a concern that can be mitigated by adhering to proper construction techniques and precautions. A landscape plan and revegetation plan would be prepared for the area and work would follow guidelines in *Vegetation Management for Construction Disturbance in Yellowstone National Park* (1995). Native plant materials would be used for revegetation, and areas disturbed by construction would be monitored for early detection and removal of exotic species. Exotic plants would need to be closely monitored and managed until the establishment of desired vegetation was accomplished. Plant materials would reflect vegetation of the area.

After construction activities are completed, disturbed areas would be revegetated with native plant materials, except in Lower Mammoth where bluegrass lawns are standard in the residential area. The long-term effects to the vegetation would be minor after completion of the revegetation efforts. There would be no impairment to vegetation.

Rare Plants

Two rare plants were identified in the YACC Camp area. Based on available information, Alternative 3 would not have a negative effect on either species. Before construction, the entire area would be surveyed to confirm that the rare plants are not located in an area that would be developed. Should a rare plant be located in an area proposed for development, actions would be taken to avoid the plant. There would be no impairment to rare plants as the result of this alternative.

Wildlife

Undisturbed wildlife habitat would not be significantly affected due to development activities under this alternative. The proposed development areas are to some degree within the habitat and range of the ungulate population of Yellowstone, with the most valuable ungulate habitat (relatively) located in and around the YACC Camp. The three areas also contain small mammals and a wide variety of birds. These animals would be temporarily displaced during construction activities but are expected to return. Impacts to wildlife are generally expected to be short-term in nature, and no significant increases in wildlife mortality are anticipated.

There would be short-term, minor impacts on wildlife at all proposed development sites. Wildlife could be temporarily displaced from habitat adjacent to the site due to construction equipment and activity for the duration of the project.

Food and garbage would be managed to ensure that it is not available to bears or other wildlife. Orientation sessions, including information on bears and wolves, would be conducted for construction personnel to reduce the potential for conflicts at the construction site.

No impairment to wildlife resources would occur as a result of implementing this proposal.

Threatened and Endangered Species

Bald eagles have been observed in each of the proposed development areas, particularly at the YACC Camp. During the winter, bald eagles may be found along the Yellowstone River in Gardiner. It is expected that bald eagles would continue to hunt in the proposed development areas. This alternative may affect, but is not likely to adversely affect bald eagles. Construction would have a negligible impact on bald

eagles due to the existing adjacent housing developments and recreational use of the areas.

Because this species is not present in the area, there would be no effect on the **whooping crane**.

Gray wolves have been observed on the perimeter of Mammoth Hot Springs. Immediate future use of these areas by wolves is not predicted due to high human use and the large amount of suitable prey in other areas. Little potential for disturbance of denning wolves currently exists. The proposed project may affect, but is not likely to adversely affect gray wolves.

Grizzly bear activity has been reported in the proposed development areas. The development areas are designated as management Situation 3 habitats. These habitats encompass developed areas and are managed for regular human use or occupation. Bear-human conflicts are resolved by trapping and moving the bear.

The overall trends in grizzly bear reproduction and survival appear to be positive in the short-term. Human activity in the proposed development areas may have an effect on grizzly bear movement, behavior, and mortality. By confining construction to previously disturbed areas, the potential effects on grizzly bears and their habitat would be minimized. Housing development is not likely to adversely affect grizzly bears. To ensure that human activity at the project site during and following construction activities would not attract bears, all project-related employees, such as contract and government construction employees, would be given orientation on how to avoid disturbing or encountering bears and how to minimize unavoidable effects or encounters. Orientation would include information about park regulations regarding food storage, disposal of garbage and other bear attractants, and approaching or harassing wildlife. Food storage and disposal precautions at housing development sites would be consistent with park policies and should greatly reduce or eliminate potential for adversely food-conditioning bears.

Construction of new buildings is not expected to disturb **lynx** or occlude their movements because this species likely does not reside in or near Mammoth Hot Springs or use this area as a travel corridor. No collisions with vehicles are expected as a result of construction or use of houses because lynx seldom, if ever, use the area. The proposed project would have no effect on lynx.

No impairment to threatened and endangered species would occur as a result of implementing the preferred alternative.

Wetlands

There were no wetlands located in any of the proposed development areas. One infill site near the existing Powerhouse apartments is in close proximity to a wetland produced by an outflow of thermal waters from Mammoth Hot Springs. The wetland would be avoided and, thus, would not be affected by the proposed construction. There would be no impairment to wetlands.

Water Resources and Water Quality

The outflow of Mammoth Hot Springs is located close to a proposed infill site in Lower Mammoth (as described in the wetlands section). Although construction activities are not expected to effect the thermal stream, erosion control barriers would be used to prevent stream degradation. There would be no impairment to water resource or water quality.

Air Quality

There would be no long-term impacts on air quality or visibility in the development areas. Effects would be temporary and limited to the duration of construction. Dispersed dust and mobile exhaust emissions would be caused by truck traffic and equipment activity. Contractor activities would comply with state and federal air quality regulations, and contractors would operate under applicable permits. These actions would not constitute an impairment to air quality in the park.

Visual Quality

The effects of the proposed development on visual quality would be both short-term and long-term in nature. Short-term visual effects would include disturbed land, construction equipment, and development activities. Contractors would be advised to maintain an organized construction site and to minimize adverse visual impacts on park residents and visitors.

Views of historic sites, especially in Lower Mammoth would be affected by the proposed development. New development would be conducted within the U.S. Secretary of the Interior's Standards for the Treatment of Historic Properties to maintain the historic value of the area. Buildings in the YACC Camp area would be limited to 20 feet in height to preserve the visual integrity of this area. There would be no impairment of visual quality.

Lightscape Management

Lighting for all of the proposed housing areas would have minor, direct, long-term effects on the night sky resource. There are existing streetlights and lights from businesses and residences in Gardiner, Montana. Proposed housing in Lower Mammoth and the YACC is within established developed areas. Artificial outdoor lighting would be limited to that which is necessary for basic safety requirements. All outdoor lighting would be shielded to the maximum extent possible, to keep light on the intended subject and out of the night sky. All exterior lighting would comply with Yellowstone outdoor lighting guidelines for night sky preservation. Lighting for housing would not cause impairment of the night sky resource.

Cultural Resources

Archeological Resources

A Class III cultural resource inventory of a block survey near Mammoth was conducted by the Office of the Wyoming State Archeologist in 1995 (Sanders 1996). A prehistoric lithic site (48YE28) is adjacent to the proposed development, but would not be impacted by housing construction. Should archeological resources be discovered during construction, work would cease and the Montana State Historic Preservation Officer (SHPO) would be consulted.

A complete archeological survey was conducted in January 1995 by the Midwest Archeological Center for the YACC Camp. The 1995 archeological survey concluded that the proposed development for the YACC Camp would not adversely affect cultural resources. A prehistoric lithic scatter site (48YE864) located near the YACC Camp is not eligible for the National Register. No proposed protective measures are planned for this lithic scatter site, and no further action is needed for this site.

Should archeological resources be discovered during construction, work would cease and the Wyoming state historic preservation officer (SHPO) would be consulted. No historic properties would be adversely affected and there would be no impairment of archeological resources.

Historic Resources

There would be a long-term, moderate, direct visual effect on the Mammoth Hot Springs Historic District. Some of the proposed housing in Lower Mammoth would be adjacent to the historic Powerhouse and historic residences, although outside the historic district. New housing would be designed to meet the Secretary of the Interior's Standards for the Treatment of Historic Properties. Architectural design (color, texture, form, and mass) would be sensitive to the surroundings.

The Grand Loop Road Historic District (48YE520) is located near Lower Mammoth and the YACC Camp. This district is eligible to the National Register and is located outside the area of potential effect (APE). Although no adverse effect is anticipated, an indirect visual effect could occur. Proposed protective measures include designs meeting the U.S. Secretary of the Interior's Standards. Further 106 review requirements include consultation with the Wyoming SHPO.

The Bunsen Peak Road Historic District (48YE825) is located near the YACC Camp. This district is unevaluated for the National Register and is located in the APE. Although no adverse effect is anticipated, an indirect visual effect could occur because the road is adjacent to the proposed development. Proposed protective measures include designs meeting the U.S. Secretary of the Interior's Standards for the Treatment of Historic Properties. Further 106 review requirements include a determination of eligibility and finding of effect in consultation with the Wyoming SHPO.

No historic properties would be adversely affected and there would be no impairment to historic resources.

Ethnographic Resources

There are no known ethnographic resources in the areas proposed for construction. In the unlikely event that human remains, funerary objects, sacred objects, or objects of cultural patrimony are discovered during construction of the Heritage and Research Center, provisions outlined in the Native American Graves Protection and Repatriation Act (25 USC 3001) of 1990 would be followed.

Copies of this environmental assessment will be made available to each tribe traditionally associated with the lands of Yellowstone National Park for review and comment. If the tribes subsequently identify the presence of ethnographic resources, appropriate mitigation measures would be undertaken in consultation with the tribes. The location of ethnographic sites would not be made public.

Cultural Landscapes

The Lower Mammoth housing area and YACC Camp are not considered cultural landscapes, though areas within view of the sites would be considered cultural landscapes, including the Mammoth Hot Springs Historic District, Grand Loop Road Historic District, and Bunsen Peak Road Historic District. Yellowstone National Park would ensure that the proposed housing does not adversely affect those qualities that qualify the historic districts for listing on the National Register of Historic Places. Houses would be designed to meet the Secretary of the Interior's Standards for the Treatment of Historic Properties. The buildings and site designs would be sensitive to and compatible with the districts' historic values.

TABLE 8: SUMMARY OF THE POTENTIAL EFFECTS OF ALTERNATIVE 3 ON CULTURAL RESOURCES

Archeological Resources	National Register Status	Proposed Development Area	Area of Potential Effect (APE)¹	Proposed Protective Measures	Further 106 Review Requirements
Prehistoric lithics (48YE28)	Eligible	Lower Mammoth	The site is located in vicinity.	Avoidance	No action required
Prehistoric lithic scatter (48YE864)	Not eligible	YACC Camp	The site is located in APE.	None	Consultation with Wyoming SHPO ³
MHS Historic District (48YE486)	Eligible	Lower Mammoth	The site is located in APE. Direct visual effect because proposed development is adjacent to Mammoth Hot Springs Historic District.	Designs meeting the Secretary of the Interior's Standards.	Consultation with Wyoming SHPO
Grand Loop Road Historic District (48YE520)	Proposed Eligible	Lower Mammoth and YACC Camp.	The site is located outside the APE. Indirect visual effect could occur.	Designs meeting the Secretary of the Interior's Standards.	Consultation with Wyoming SHPO and Finding of Effect
Bunsen Peak Road Historic District (48YE825).	Unevaluated	YACC Camp	The site is located in the APE. Indirect visual effect could occur because the road is adjacent to the proposed development. The existing trailhead needs to be relocated.	Designs meeting the Secretary of the Interior's Standards.	Consultation with Wyoming SHPO and Finding of Effect

Notes:

¹APE = Area of Potential Effect, the geographic area(s) within which an undertaking may cause changes in the character or use of historic properties, if any such properties exist.

²DOE = Determination of Eligibility

³SHPO = State Historic Preservation Officer

Socioeconomic Resources

There could be minor, long-term beneficial economic impacts to the Gardiner and Mammoth areas because construction workers might utilize local restaurants, motels/hotels, and other services. Alternative 3 would provide adequate housing to meet current and future needs, so park employees may serve visitors and protect the resources of the park. This may have a beneficial impact on the NPS and concessioners' hiring ability, potentially improving their operations. There would be no impairment of socioeconomic resources.

Visitor Use and Experience

There would be short-term, minor disturbances to park visitors, Gardiner and Mammoth residents from construction activities associated with the proposed project (but not all at the same time). Inconveniences would be temporary and would only continue during the construction phase of the project.

On a long-term basis, vehicular traffic could increase slightly between Gardiner and Mammoth, as some employees would commute to Mammoth to work. Conversely, some employees would no longer need to commute to Mammoth if they work in the Gardiner area.

Cumulative Effects of the Preferred Alternative

Alternative 3 is considered the Preferred Alternative by the NPS because this alternative would simultaneously improve existing poor housing conditions, minimize environmental impacts, and maximize park functions. If land were acquired outside park boundaries in Gardiner, Montana, natural, cultural, and socioeconomic resource inventories would be conducted to determine effects of proposed development. Regardless of which housing alternative is chosen, sewer lines at the YACC Camp need to be upgraded and replaced. As sewer line work needs to be conducted in the existing area anyway, undisturbed ground would not be used to install new sewer lines. The existing wastewater treatment plant is sufficient for all of the housing alternatives. Telephone, cable television, and power lines would be buried between Mammoth Hot Springs and the YACC Camp as determined by the Parkwide Telephone Improvement Project EA (NPS 1992).

Because the impacts described in Alternative 3 do not severely affect a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the establishing legislation or proclamation of Yellowstone National Park; (2) key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park; or (3) identified as a goal in the park's general management plan or other relevant National Park Service planning documents, there would be no impairment of the park's resources or values.

OTHER PLANNING EFFORTS IN THE MAMMOTH HOT SPRINGS AND NORTH ENTRANCE AREAS

Construction of a new public restroom in Mammoth Hot Springs began in the fall of 2001 and will continue in 2002.

Planning for construction of the Yellowstone Heritage and Research Center, a curatorial storage facility, is ongoing. The project will consolidate Yellowstone's museum collections, research library, archival collections, historic vehicles, and herbarium into one facility. The preferred alternative for the curatorial storage building is located at the Gravel Pit site, adjacent to Gardiner, Montana. Construction of the facility is planned to begin in late 2002.

A new courthouse facility is proposed for the Mammoth area in 2005.

Construction of housing by private individuals will continue in Gardiner, Montana.

CONSULTATION AND COORDINATION

Based on this EA, if the project would significantly effect the human environment, a notice of intent (NOI) to prepare an environmental impact statement (EIS) would be issued. Conversely, a finding of no significant impact (FONSI) would be issued if it was determined that there would be no significant impact from this project. The regional director would approve the FONSI.

Consultation with the USFWS on threatened and endangered species under 50 CFR Part 402, which implements the Endangered Species Act, would be completed. As part of the consultation process, the NPS would seek USFWS concurrence with the determination of effect on threatened and endangered species.

A national pollution discharge elimination system (NPDES) permit for stormwater runoff would be secured before construction, if needed. The Storm Water Rule (Clean Water Act, PL 95-217, Section. 402) requires a NPDES permit on certain categories of stormwater discharge.

Due to the phased nature of the proposed housing development included in this EA, a review of applicable permits would be conducted prior to each phase of construction. Contractor activities would comply with state and federal air quality regulations, and contractors would operate under applicable permits.

The undertakings described in this document are subject to Section 106 of the National Historic Preservation Act, under the terms of the 1995 Servicewide Programmatic Agreement among the National Park Service, the Advisory Council on Historic Preservation, and the National Conference of State Historic Preservation Officers. This document will be submitted to the Montana and Wyoming state historic preservation officers (SHPO) for review and comment.

Native American tribes traditionally associated with Yellowstone National Park will be contacted for input and comment on this report.

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PROJECT MANAGEMENT

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AGENCIES AND ORGANIZATIONS CONSULTED

Montana State Historic Preservation Office
U.S. Fish and Wildlife Service
U.S. Forest Service—Gardiner Ranger District
Wyoming State Historic Preservation Office
Yellowstone National Park's 26 Affiliated Tribes

AGENCIES AND ORGANIZATIONS THAT WILL RECEIVE THIS EA_

(The mailing list of individuals that were sent this EA is filed in Yellowstone's Planning Office. Yellowstone's Affiliated Tribes were notified of the availability of this EA.)

Billings, MT Public Library
Bozeman, MT Public Library
Cody, WY Public Library
Jackson, WY Public Library
Yellowstone National Park Research Library
Beaverhead National Forest
Big Hole National Battlefield
Bridger-Teton National Forest
Custer National Forest
Environmental Protection Agency, Region 8 - Denver
Gallatin National Forest
Glacier National Park
Grand Teton National Park
Grant-Kohrs Ranch National Historic Site
Idaho Department of Commerce
Idaho Department of Parks and Recreation
Idaho Fish and Game Department
Idaho State Historic Preservation Office

Little Bighorn Battlefield National Monument
Montana Department of Commerce
Montana Department of Fish Wildlife and Parks
Montana Intergovernmental Review Clearinghouse
Natural Resource Conservation Service - Bozeman and Cody
Shoshone National Forest
Targhee National Forest
Teton County Certified Local Government
Town of West Yellowstone
U.S. Army Corps of Engineers
U.S. Fish and Wildlife Service - Cheyenne, WY
Western Federal Lands Highway Division
Wyoming Department of Transportation
Wyoming Game and Fish Department
Wyoming Office of Federal Land Policy
Wyoming State Clearinghouse
Wyoming State Historic Preservation Office
Wyoming State Lands and Investments
Wyoming State Library
Wyoming Travel Commission
Advisory Council on Historic Preservation - Western Office of Project Review
Alliance for Wild Rockies
American Fisheries Society
American Wildlands
Bear Creek Council
Beartooth Alliance
Billings Chamber of Commerce
Bozeman Area Chamber of Commerce
Buffalo Bill Historical Center
Center for Urban Affairs
Cheyenne High Plains Audubon
Citizens for Teton Valley
Cody Chamber of Commerce
Cooke City/Silver Gate Chamber of Commerce
Defenders of the Rockies
Defenders of Wildlife
Fremont County Audubon Society
Gallatin County Commissioners
Gardiner Chamber of Commerce
Great Bear Foundation
Greater Yellowstone Association of Conservation Districts
Greater Yellowstone Coalition
Hamilton Stores, Incorporated
Idaho Falls Chamber of Commerce
Idaho Wildlife Federation

Jackson Hole Alliance for Responsible Planning
Jackson Hole Chamber of Commerce
Lander Chamber of Commerce
Livingston Chamber of Commerce
Montana Audubon Council
Montana State University
Montana State Historic Preservation Office
Montana Wildlife Federation
National Audubon Society
National Parks and Conservation Association
Nature Conservancy - Idaho Chapter
Nature Conservancy - Montana Chapter
Nature Conservancy - Wyoming Chapter
National Wildlife Federation
Northern Plains Resource Council
Northern Rockies Conservation Cooperative
Northwestern University
Park County (MT) Commissioners
Park County (WY) Commissioners
Park County Environmental Council
Pinedale Chamber of Commerce
Red Lodge Chamber of Commerce
Riverton Chamber of Commerce
Sacajawea Audubon Society
Sierra Club Idaho Chapter
Sierra Club Northern Plains Regional Office
Sierra Club Teton Group
Sierra Club Utah Chapter
Snake River Audubon Society
Star Valley Development Association
Stone Fly Society
Teton County Commissioners
Teton County Historic Preservation Board
University of Colorado
University of Wyoming
Upper Missouri Breaks Audubon Society
Utah Audubon Society
Utah Wilderness Association
Utah Wildlife Federation
West Yellowstone Chamber of Commerce
Wild Forever
Wilderness Society
Wyoming Wildlife Federation
Wyoming Association of Professional Historians
Wyoming Heritage Society

Wyoming Outdoor Council
Xanterra Parks and Resorts
Yellowstone Association
Yellowstone Park Foundation
Yellowstone Valley Audubon Society