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RESOURCE MANAGEMENT PLAN
THEODORE ROOSEVELT NATIONAL PARK
January 6, 1976

File
in N16

United States Department of the Interior
NATIONAL PARK SERVICE
ROCKY MOUNTAIN REGIONAL OFFICE
655 Parfet Street
P.O. Box 25287
Denver, Colorado 80225

IN REPLY REFER TO:
N22 (RMR)PN

DEC 24 1975

Memorandum

To: Superintendent, Theodore Roosevelt National Memorial Park

From: Acting Regional Director, Rocky Mountain Region

Subject: Resource Management Plan, Theodore Roosevelt NMP

I am pleased to inform you that your Resource Management Plan has been reviewed and approved.

To be approved, the Resource Management Plan must adequately describe your management program and must provide an effective analysis of your management decisions. Your plan accomplished these objectives.

As a working document, the Resource Management Plan is subject to change as management programs change. It is anticipated that submissions will fall into two categories:

1. The first class of revisions consists of changes in informational content. You are encouraged to use the RMP as a source of information or as a reference of information relating to the park's resource management program. These revisions to the basic RMP may be made as informally as desired. With the exception of an annual updating of the fiscal spread sheet, there is no requirement to submit informational changes to the Regional Office for review and approval.

2. The second class of revisions consists of changes in management strategy. Proposed changes in management strategy should be submitted to the Regional Office to determine if they are consistent with national and regional policies. Should your program change require additional funding, 10-237's and/or 238's will need to be completed.

The following elements of the plan were judged noncontroversial and involve no significant federal actions:

Roughrider Group Camp
Halliday Wells Group Campground and Environmental Study Area
Squaw Creek Campground and Picnic Area
Buffalo Corrals
Peaceful Valley Picnic Area
Developed Water
Boundary Fence
Visitor Center Complex and Maltese Cross Cabin
Painted Canyon
Exotic -- Pheasants
Wildlife -- Amphibians
Wildlife -- Carnivores
Wildlife -- Bighorn Sheep (Ovis Canadensis Californiana)
Wildlife -- Birds
Wildlife -- Deer, Antelope
Wildlife -- Feral Horses
Wildlife -- Porcupine, Beaver
Wildlife -- Reptiles
Wildlife -- Miscellaneous
Wildlife -- Sharptail Grouse
Wildlife -- Longhorn Cattle
Prairie Dog
Buffalo -- Bison
Exotic Plants -- Noxious Weeds

You have done an excellent job of involving the public in the development of this plan. The changes made to the plan in response to public comment are approved.

At some time in the future, we will request a response to the "third priority level" as described in the new Resource Management Plan Guidelines.

I wish to commend you for a very fine job.

Glen T. Bean

Enclosure
Resource Management Plan

S.U. 46182
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THEODORE ROOSEVELT NATIONAL MEMORIAL PARK

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Visitor Center Complex and Maltese Cross Cabin

Painted Canyon

Exotic -- Pheasants

Wildlife -- Amphibians

Wildlife -- Carnivores

Wildlife -- Bighorn Sheep (Ovis Canadensis Californiana)

Wildlife -- Birds

Wildlife -- Deer, Antelope

Wildlife -- Feral Horses

Wildlife -- Porcupine, Beaver

Wildlife -- Reptiles

Wildlife -- Miscellaneous

Wildlife -- Sharptail Grouse

Wildlife -- Longhorn Cattle

Prairie Dog

Buffalo -- Bison

Exotic Plants -- Noxious Weeds

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MCOtt:dsb 05/05/75

ROUGHRIDER GROUP CAMP

Area Description

Roughrider Group Camp is located approximately one mile north of Interstate 94 on the west side of the Little Missouri River. Geographically it is situated in terrace level number two which is a stable flood plain as described in the park overview. Typical plant species are plains cottonwood, boxelder, green ash, and mixed grasses, sagebrush and forbes. In addition to the riverine habitat, it is within easy access to the bluffs and buttes that are typical of the badlands geology.

The area is marred somewhat by previous National Park Service mismanagement. In response to visitor complaints concerning the presence of rattlesnakes in the sagebrush and low shrubs that surrounded the facility, a decision was made to cut and/or burn this growth in certain sections along the site's perimeter. Area was orginally cleared for use by the C.C.C. The resultant vegetative loss is obvious and detracts from the natural setting of the area. Additional blemishes include the remains of a large, deep fire pit once used here, and a section of fencing presumably used to delineate the facility.

Of the two group camping areas within the South Unit of the park, Roughrider receives the heaviest usage. It is also the newer of the two areas, and was constructed in response to heavy local demand for group camping and trail riding opportunities.

Facilities in this, as in the Halliday Wells Group Camp, can be described as rustic. Firegrates, picnic tables, drinking water, a loading ramp, a stock watering tank, three horse picket lines, and an unpaved parking area makeup the list of physical improvements that are available. Comfort facilities are represented by two basic pit toilets. The access road to this area is constructed of compacted "scoria", that is regularly maintained by the park maintenance division.

Current Management Action

Use of this area is managed on a reservation only basis. Reservations are not accepted before March 1 of each year. The facility is open for use from May 1 to October 1. Area use by any one group is limited to five nights. The total overnight campers are limited to 100, with or without horses. Campers are required to bring their own wood supply to this area, as wood is not furnished.

Results of Current Action

As in the Halliday Wells area, the reservation system used for Roughrider appears to be the best method to assure the highest use of the resource. Since no group can reserve the area more than once during the summer, over utilization by any one group is prevented. Too, the characteristically periodic use trends of both group areas tends to minimize adverse impact to surrounding vegetation. Demand for group camping opportunities seems to

be increasing steadily. Use figures from 1971 to 1974 are shown below. These figures represent campers at both Roughrider and Halliday Wells.

1971.....	296
1972.....	1341
1973.....	1956
1974.....	1038

Several local riding groups use both areas regularly, and the Roughrider area is especially popular as a base camp.

Even though buffalo frequent this area, their presence has not posed a serious problem. Fencing the area to segrate campers from these animals does not seem to be practical because of its size and physical layout.

The present comfort facilities do not conform to EPA standards as they may allow sewage to percolate to the ground water level.

There is only one water faucet to serve the entire area. This obviously causes some amount of inconvenience to campers who are located away from the central camp area. Additionally, the present water delivery system is not approved for use in public areas. A pressure system, PVC water lines, and approved faucets are a high priority need in this respect.

The area must be closed in inclimate, wet weather as the scoria road which serves as access becomes impassable when rain saturated. All efforts are made to adequately notify groups of reservation cancellation due to this or other factors, but this doesn't prevent complaints from those disgrunted campers with suddenly altered plans.

Alternatives

1. Redevelopment and Modernization: A Form 10-238 was submitted in December of 1973 for expansion and improvement of this facility. Since demand for group camping opportunities is increasing, it appears necessary to more fully develop existing camp areas to deal with the increased pressure. Work proposed for this site includes three vault-type restrooms, a sewage and water pressure system, additional water spigots, and a sewage treatment facility. Additional camp facilities include picnic tables, ground level campfire grates, group fire places, garbage cans and holders (buffalo proof), and a ramp for loading or unloading horses into large trucks. The one mile access road would be improved, and the parking area redesigned for pickup-horse trailer units. Justification for the proposal is based on the fact that this area is well suited, because of its easy access and room for development; to meet the increasing demand for group camps; to facilitate site management; and to delineate seperate camping sections. Presently, it is very difficult to effectively seperate different groups using the area simultaneously. Dividing the area into three distinct entries will prevent confusion in camp assignments, and allow groups to maintain some semblance of privacy. Additionally, the Halliday Wells site is being used to near capacity, and does not lend itself to expansion or redevelopment.

2. Site Closure and Rehabilitation: Since Roughrider Group Camp was built and is maintained to satisfy a strong demand, additional use restrictions, or closing of the area does not appear to be a logical alternative. Even though there are several nearby group camping areas, they do not provide the high quality camping opportunities available at Roughrider. Too, it is reasonable to assume that, in the interest of economy, ad hoc groups will form to take advantage of lower camping rates and other benefits associated with cost sharing.

3. Horse Base Camp: Since the facility is very popular with local riding groups and accomodations for stock maintenance is presently available, the possibility of limiting its use to riding groups only should be considered. This action would place an increased burden on the Halliday Wells area, but with careful scheduling, it could possibly be managed. The area could be actively promoted as a base camp, and users would be encouraged to see the park on horseback. Even though future increased use by riding groups may prompt action of this kind, present demand does not merit this alternative. It will probably be desirable, however, to segregate riding and non-riding groups at the facility to avoid any unusual conflicts of interest that might arise.

4. No Action: Maintenance of the area at its present standard is not an unlikely choice. Proposed improvements to the facility are desirable but not a hard necessity. The area in this state should

be advertised as a primitive facility, and users made aware of the limited accomodations. Maintenance and area cleanup would continue at the present level to insure proper sanitation and useability. Even though monetary restrictions may make this alternative a reality, present fund allocations permit the site improvement necessary to develop this area into a high quality group camping facility.

Recommended Course of Action

Present and anticipated demand justifies the need for an expanded, modernized facility. The need for acceptable restroom facilities is apparent, and first priority should be given this improvement. Essentially, the proposal as stated on the current Form 10-238 is recommended to bring this site up to the desired standard.

A program to monitor vegetative loss due to visitor use should be initiated, and consideration should be given to "resting" sections of the area that show heavy impact. A correlative to this is the need to insure compliance with regulations prohibiting the collection of firewood. Shade trees and understory stands would soon be depleted if this were to go unchecked. The use of this area should be encouraged to relieve the demand on the Halliday Wells camp and Environmental Study Area.

Rev.

NATIONAL PARK SERVICE
DEVELOPMENT/STUDY PACKAGE PROPOSAL

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126

Region (or Professional Office)	Park (or Other Originator)	Developed Area
st Region	Theodore Roosevelt NMP	South Unit (Rough Rider)

Devel Area Code	PKG #	PACKAGE TITLE
RR	1118	RECONSTRUCT SADDLE HORSE BASE CAMP

☐ New Package.

☐ Addition to an existing package.

☒ Revision to an existing package.

Complete for Development related Packages only

CAPACITY	Type of Const.	New/ Exist		CRIT-ERIA	State	CONG DIST	COUNTY
0300	9	E		01	38	02	Billings

40

Will additional operating funds and/or additional positions be required upon completion of this package?
YES ☐ NO ☒
If yes, make certain a Form 10-237, Detail of Program Requirements, is prepared for this package.

Package Description

Provide unloading and holding facilities for groups with horses, space for camping and parking of vehicles.

Package Justification

Demand for a saddle horse base camp has increased 500% in the last three years. The impac of more than 2000 horses per year on existing facilities and park values is growing. Existing use and demand for the Halliday Wells Group Campground and NESA far exceeds the [illegible]acity of the resource, resulting in heavy damage to the prairie dog town and other re[illegible]s. In 1973 over 1,800 requests were received for the use of the facility. T[illegible] size of groups varied from four to one party of over 300 riders. The proposed facility will be located in a presently disturbed area. Easily accessible to the backcountry. Under the present system the riders pull horse trailer, up to a six-horse capacity, five to ten mile into the park over the main road which is hazardous when traffic is heavy. The proposed site can be reached without using the main road.

Management's Requirements (See reverse for outline. Use blank sheets for additional space.)

Class A estimate required ☐
Class B estimate required ☐
Class C estimate required ☒ See Attached

Originator Title	Date	Approving Signature (Supt. or other orig.)	Date
Chief, Maint. Supv.	12/14/73	[signature]	12/14/
☐ Approved for estimating by Professional office(s)		Regional Director (Signature)	Date
☐ Disapproved for reasons stated in transmittal memo and returned to originator			

Management Requirements:

I. Planning - Design - Construction

A. Master Plan - Approved 1970
B. Resource Management - Plans Approved
C. Interpretive Prospectus - Approved 1973
D. Development Concept Plan - Required
E. Buildings and Utilities Required: Group sites to handle 3-55 people at one time. Picket lines need to be constructed at these sites to tether the horses, approximately 300 head.
Buildings - Three standard design comfort stations.
Utilities - An existing artesian well is adequate to supply the water needs. A pressure system needs to be designed at the well site and water lines constructed to the comfort stations and water spigots. Sewer Lines and Treatment facilities need to be constructed. Water and sewer lines should be PVC or equal material. Our soil deteriorates galvanized pipe within 2 years time.
An existing underground power line is located ¼ mile to the north of the a
Camp Facilities - Ground level stoves, picnic tables, group fireplaces, garbage cans and holders (buffalo proof) and an unloading ramp for loading horses into large trucks.
Upon completion of the construction work the area should be landscaped and restored to near original condition.
F. Roads &/or Trails Required: One mile of access road needs to be constructe from Interstate 94 to the area. Parking areas should be designed for puckup/horsetrailer units. All signs and marking should be in accordance with MUTCD.

II. Archeology - This proposed area is an abandoned CCC camp site.

III. Historic Architecture - Not Applicable

IV. History - Not Applicable

V. Museum Exhibits and Audiovisuals - Not Required

VI. Natural Science Resource Problems - Not Applicable

VII. Water Resources - Not Applicable

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HALLIDAY WELLS GROUP CAMPGROUND
AND
ENVIRONMENTAL STUDY AREA

Area Description

Halliday Wells, one of the two group camping areas in the South Unit of the park, is located approximately seven miles from the park visitor center in Medora. It is in close proximity to the Peaceful Valley Ranch, the Peaceful Valley Picnic Area, and Cottonwood Campground. Geographically it is situated in terrace level number three which is described in the overview. Typical plant species include boxelder, green ash, and Rocky Mountain juniper. Grasses include blue gamma, needle grass, and side oats gamma. An active well is all that remains of a ranch home-site that was previously located here. Most of the home-site is now covered with bluegrass, and no structure or foundation remain.

The area receives periodic, moderate use during the period from early May through early October. It is not open for use during the winter months. Use figures for Halliday Wells and Roughrider Group Camps are shown below:

1971..... 296

1972..... 1,341

1973..... 1,956

1974..... 1,038

Facilities provided at the area include firegrates, picnic tables, a small unpaved parking area, drinking water, a loading ramp for horses, a dish tank for watering stock, and a horse picket line. Two single pit toilets represent the comfort facilities that are available. The camping area is enclosed by a wire mesh fence to prevent altercations between the buffalo that frequent this section of the park and campers. The access road to the area parallels Paddock Creek east of the main park road, and is constructed of compacted "scoria." An active prairie dog town is adjacent to the north boundary of the parking area, and several of its inhabitants have expanded its perimeter by digging burrows within the camp enclosure. This same need for expansion has also reduced the area that is available for vehicle parking.

Current Management Action

Use of this area is managed on a reservation only basis. Reservations are accepted after March 1 of each year, and the area is available for use from May 1 through October 1. Use of the area by any one group is limited to three nights if the group has horses, and five nights if the group does not have horses. No more than two groups are allowed to use the area at one time, and total overnight use is limited to 20 people. A maximum of ten horses is permitted overnight accomodations in the area.

Its close proximity to the horse concession at Peaceful Valley makes it possible for large riding groups to stable their horses for a small fee at that facility and walk back to the camping area. Similar arrangements can be made by groups who rent their horses on a daily basis from the concessionaire.

This area is a part of the approved environmental study area. Schools from Beach, Belfield and Dickinson occasionally take advantage of environmental study opportunities in the approximately 160 acres that has been set aside. Hopefully, as school districts gear-up for this type of learning experience, the area will be used more extensively in this respect. In anticipation of this demand, all attempts are being made to minimize visitor impact to plant and animal species indigenous to the area. Group size is limited, maximum stays have been shortened, and stock use has been restricted. The area appears to be ideal for an environmental study area, as it has camping conveniences as well as a representative sampling of the park's geologic phenomenon and animal life.

Results of Current Action

Halliday Wells provides a rather isolated, private location for group camps. Several local riding groups use the area regularly, and it has enjoyed yearly increases in popularity. The reservation system appears

to be the only practical method to insure fair, and full utilization of the area, and has generally worked well in this respect. The use period appears to adequately provide for the demand and the few groups desiring winter camping experience are accomodated at Cottonwood Campground. Adverse impact to surrounding vegetation is minimal because of the restricted, periodic use of the area.

One obvious incongruity with the present location of this facility is that of its close proximity to the prairie dog town. Harrassment of these animals by camping groups appears to be sustantial. Vehicles often drive over portions of the town, and it seems likely that the small rodents provide more than their share of entertainment for younger group members. Additionally, as stated previously, prairie dogs in an attempt to expand the town's perimeter, have dug burrows in the parking lot and within the camp enclosure. This further complicates the cohabitation problem.

The present comfort facilities are simple pit toilets that no longer meet EPA standards. Effluent probably percolates into nearby Paddock Creek.

Even though the area size is restrictive to large groups or organizations, the fragile nature of the area, and the fact that it is used as an environmental study area makes expansion an unwise alternative. Demand beyond the area's capacity is currently handled by the Roughrider Group Camping area.

Alternatives

1. Area Expansion: The park Master Plan calls for this area to be expanded into two areas. One area would be available for horse groups, the other for drive-in parties. Unfortunately, this location does not appear to be well suited for expansion. As noted before, enlargement of the area would have an adverse impact not only on the adjacent prairie dog town, but also on the vegetative growth in the vicinity. It is anticipated that the combined facilities of the Halliday Wells and Roughrider area will accomodate the projected need for group camping opportunities.

2. Close to Camping: Maintaining this area as an environmental study area and closing it to other camping groups would probably place an intolerable demand on the Roughrider area. The facilities location is conducive to use by horse groups traveling through the park, and its closure would deny a high quality camping experience to a sizeable use group. In addition, the present use of the area by study groups does not justify their exclusive rights to its facilities.

3. Site Relocation: Relocating this camping area to a location more harmonious with surrounding plant and animal life would resolve the inherent problems of the present location. This area could

be retained as a walk-in study area if the camping facilities were relocated, thereby minimizing human impact on the environment to be studied. Problems associated with relocation appear to outweigh those inherent with the present area. Road construction, site clearing, sewage and water engineering, and associated tasks, cannot be justified at the present demand level. Should demand become more than the two present areas can handle, this alternative might become more practical.

Recommended Course of Action

Retention of the site at its present size and location is the most reasonable alternative at this time. The fragile nature of the environment, and the unique opportunity for its study should continue to be recognized, and emphasis should be placed on maintaining the opportunity for a high quality camping experience here.

Since shade in this area is not abundant, an investigation should be initiated to determine what native shade tree species would adapt to this location. Plantings of the selected species would be nurtured to provide for this need.

The pit toilets need to be replaced with vault-type utilities to prevent the further possiblity of effluent percolation into Paddock Creek.

Research of the prairie dog population to determine methods to discourage their encroachment into visitor use areas is required. It is important that harrassment of the wildlife be kept to a minimum; yet equally as important that the integrity of the campground be maintained.

Increased use of the area as an environmental study area should be encouraged. Completion of the area Inventory and Use Guide would no doubt be helpful in promoting more utilization of the facility in this capacity.

The parking area should be expanded to accomodate a minimum of fifteen single vehicles and five vehicle/trailer combinations. Presently, during times when the facility is at capacity, some vehicles are forced to park off the established parking area because of its small size. The open area immediately to the east or west of the camp enclosure could be effectively used for increased parking.

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SQUAW CREEK CAMPGROUND AND PICNIC AREA

Area Description

Squaw Creek Campground is the only camping and picnicking facility in the North Unit of the park. It is located approximately five miles west of the North District entrance station on the north bank of the Little Missouri River. Geographically it is situated in terrace level two which is predominately lands of the stable flood plain. Typical tree species of this area include plains cottonwood, Rocky Mountain juniper, red oiser dog wood, and ash. Other assorted shrubs and lower vegetation effectively shield the site from the main park road. The paved access road to the area leads south from the main park road approximately 1,000 feet west of the Cannonball Concretion turnout. The drainage pattern of nearby Squaw Creek, altered by this roadway, has resulted in the formation of a marshy area northeast of the access. Water collection in this vicinity has accelerated the rate of plant succession causing the growth of more herbaceous and woody plants than would normally be seen. The present physical layout of this facility is confusing. There are ten campsites designed for tent campers around a loop on the south side of the access road. On the north side are seventeen pull-through trailer sites located around two loopes of unequal size. There is a paved parking area just east of the campsites, to the

north and south of which are accomodations for picnickers. Approximately 30 picnic tables and fire grates and one picnic shelter are available in this location. Group camping and picnicking facilities are located a short distance to the east of the picnic area; on the east side of Squaw Creek. Parking for this site is located adjacent to the access road on the east side. A short unpaved trail leads from here across Squaw Creek to the group area. Physical improvements at this site include one pit toilet, picnic tables, fire grates, and a picnic shelter.

Even though this facility is divided into four different use categories, area definition is not clear. This causes problems with site assignments and space allocation.

Individual campsites are of the traditional design with pull-through parking aprons for trailers and back-in aprons for tent campers. The parking aprons, as well as a substantial portion of the campground roadway, are constructed of compacted scoria and gravel. Physical improvements at each site include a fire grate and a picnic table. There is a standard design comfort station located between the tent and trailer camping loops on the north side of the access road. This facility is not insulated and is therefore closed during the winter months. Pit toilets are provided during this time period. Water faucets are located throughout the facility for convenient access.

A one half mile self-guided nature trail leads to the bluff area just east of the group campsite.

Current Management Action

All facilities at Squaw Creek Campground, with the exception of group camping, are handled on a first-come, first-serve basis. Individual campsite assignments are made and camping fees are collected either at the district entrance station or on-site. Group camping reservations are made through the north district office. Seasonal personnel from the protection division are responsible for site management. Their duties include garbage collection and litter pickup, comfort station cleaning, and visitor protection and law enforcement. This system allows for routine maintenance and upkeep of the area, and also offers the added benefits of readily available law enforcement, information, and visitor assistance. After hours assistance is available at the district residential area. Firewood for the entire facility is supplied by the park. This accomodation is provided in an effort to minimize adverse impact to the vegetative growth that is a part of the site. Nightly evening programs are presented in the amphitheater during the summer season. Campground use can be described as moderate during the summer season and extremely light during the off-season period. Picnicking and group facilities receive periodically heavy use from local visitors

during the summer season, and virtually no use during the winter months. Use figures are shown below.

	Campers	Group Campers
1971	5,354	No Figures
1972	6,386	No Figures
1973	5,777	22
1974	4,943	425

Results of Current Action

Even though this area has the potential of being one of the better camping spots in the region, it falls short of this because of its limited and primative facilities. As stated previously, area delineation is very poor. The problem of picnickers in the camping area and vice versa seems to be perpetual. Group facilities can at best be described as primitive. Roadways and parking aprons are nearly impassable when rain soaked, which on some occasions restricts the use of the facility. The pit toilet in the group area is of the open pit design which is not approved by the EPA. The amphitheater, which is the only facility for formal evening programs in the North Unit, is very basic, and presents a rather shabby appearance. There is no dump station for trailers and pickup campers which increases the possibility of illegal dumping and corresponding site pollution. There is some indication of heavy vegetative impact in the picnic area and around certain campsites. Resting certain sections of the facility to revitalize these areas may be necessary in the future. Even though birds and wildlife are abundant in this area, the buffalo population is

not as great as that of the South Unit, which lessens the possibility of altercations between these animals and campers. A small herd of longhorn cattle are residents of the North Unit, but seldom range into the campground area.

Alternatives

1. Expansion and Modernization: Plans have been approved and funds have been allocated for expansion and modernization of Squaw Creek Campground. This project is to begin the first part of September 1975. Improvements to the facility include positive delineation and separation of each area of the facility (i.e. picnic area, group area, and camping area). This will be accomplished by rerouting the road system so that each area will have a seperate and distinct entrance. To further facilitate site definition, an improved sign system will be employed. Other improvements will be the addition of three standard design comfort stations, one of which will be winterized; a new amphitheater; a checking station and ranger residence at the campground entrance; a camper dump station; a revamped water storage and distribution system; rerouting of the access road; and an approved sewage system. All campsites will be of the "pull-through" type, and all roadways, including parking aprons, will be paved. The total number of individual campsites will be expanded to 54, and the group area will have

a capacity of 50 persons. The picnic area will remain at its present size. Probably the most important improvement that this project will provide is that of site definition, and the redesign of the campsite layout. Hopefully, these inovations will minimize the problems of site and space assignments. An added benefit that will be realized from locating individual campsites in two seperate loops, is that this arrangement allows managers to "rest" areas receiving heavy impact, and rotate the use of campsite groups to allow for the perpetuation of vegetative growth. An environmental assessment was completed on this project in late 1973. It is included as a supportive document. Also attached is a copy of Form 10-238 package number 104 dated 12/27/73. Taken in total, this project will improve Squaw Creek Campground by using the available space more efficiently, defining sites, providing for fee control, improving sanitation and drainage, expanding and improving the amphitheater, and removing the overhead wires.

2. Environmental Assessment: Six separate use alternatives were explored in the previously mentioned Environmental Impact Statement. They include: 1) Day use only; 2) Limited camping; 3) Expansion of the campground to maximum capacity; 4) Limited camping with improved facilities; 5) No action; and 6) Improvement of entrance road drainage. Since these alternatives are discussed thoroughly in the assessment, and conditions at Squaw Creek Campground are essentially the same now as in 1973, review of these options in

this document would be redundant. Alternative number 4, limited camping with improved facilities, is a close approximation of the approved project.

Recommended Course of Action

Expansion and modernization as explained in alternative number one is recommended at this time. These improvements will not only assist this area in achieving its full potential, but will also promote sound management practices. The present facility, in its rundown state, reflects poorly on the ability of the National Park Service to operate an efficient and ecologically fit campground operation. To further take advantage of the physical improvements that will be added to this facility, an active program to encourage winter use of the area should be initiated. Snowmobilers using the nearby park snowmobile trail would no doubt welcome the opportunity to stop over at a campground equipped for winter use. Winter camping is also becoming increasingly popular with certain other groups. Modern comfort facilities, cleared campsites and an available wood supply are strong stimulus for this recreational pursuit to become even more inviting.

As with Cottonwood Campground in the South Unit of the park, Squaw Creek Campground is situated in a grove of mature plains cottonwood. The life expectancy of this species is from 40 to 60 years. Action must be initiated to either perpetuate the present species or introduce a hardier, more prolific species. Research to determine appropriate steps that should be

taken to maintain the present sheltered, well screened site is indicated. Much of the secluded, isolated atmosphere of this area would be lost if this impressive overstory is allowed to degenerate.

A research or monitoring program is also needed to determine whether the Little Missouri River's meander threatens this area. If problems in this respect are indicated, steps might be considered to stablize the river bank in this region.

DEVELOPMENT/STUDY PACKAGE PROPOSAL

$55,000

Region (or Professional Office)	Park (or Other Originator)	Developed Area
Midwest Region	Theodore Roosevelt NMP	North Unit

Region Code	PKG #	PACKAGE TITLE
N	0104	RECONSTRUCT SQUAW CREEK CAMP & PICNIC

☐ New Package.

☐ Addition to an existing package.

☒ Revision to an existing package.

Complete for Development related Packages only

CAPACITY	Yr. of Const.	New/Exist		CRIT-ERIA	State	CONG DIST	COUNTY
0094	85	E		04	38	02	McKenzie

Will additional operating funds and/or additional positions be required upon completion of this package?

YES ☐ NO ☒

If yes, make certain a Form 10-237, Detail of Program Requirements, is prepared for this package.

Package Description

Reconstruct and expand camping and picnicking facilities at Squaw Creek Campground. Construct amphitheater and trailer dump station.

Package Justification

The present campground at Squaw Creek consists of 30 sites. The campsites are filled to capacity more than three days per week. Overflow is into the picnic area which is not separate from the campground. The picnic area is used to capacity two days per week and is always heavily used. The existing roads and parking are confusing and deteriorated. They must be relocated, due to the shifting in the nearby river which threatens to destroy the road and some campsites.

Management's Requirements (See reverse for outline. Use blank sheets for additional space.)

Class A estimate required ☐

Class B estimate required ☐

Class C estimate required ☒ See Attached

Originator-Title	Date	Approving Signature (Supt. or other orig.)	Date
		Claire M. Crane Acting Supt.	12/28/

☐ Approved for estimating by Professional office(s)

☐ Disapproved for reasons stated in transmittal memo and returned to originator

Regional Director (Signature) Date

Form 952

Page 1 of 1 for this package

UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

JAN 23 1975

FY 1976 Line Item

PACKAGE ESTIMATING DETAIL

REGION	PARK
MIDWEST	THEODORE ROOSEVELT NMP
PACKAGE NUMBER	**PACKAGE TITLE**
104	RECONSTRUCT SQUAW CREEK CAMP & PICNIC

(If more space is needed, use plain paper and attach)

ITEM	QUANTITY	COST
BUILDINGS & UTILITIES		
1. Comfort station	2 each	$70,000
2. Amphitheater & projection building	Lump Sum	62,000
3. Checking station	Lump Sum	20,000
4. Sanitary system	Lump Sum	40,000
5. water system	Lump Sum	50,000
6. Camp & picnic sites	Lump Sum	14,000
7. Underground electric & telephone cable	Lump Sum	12,000
8. Seeding	Lump Sum	3,000
9. Miscellaneous material & service	Lump Sum	7,000
TOTAL B & U		$278,000
ROADS & TRAILS		
1. Construct road & parking area	Lump Sum	$281,000
Note: This estimate supersedes and cancels Package #104 dated 10/6/72. This estimate is valid until July 1977.		
R. McNulty, 1/23/75		

SUMMARY OF CONSTRUCTION ESTIMATES

CLASS OF ESTIMATE: ☐ A Working Drawings ☐ B Preliminary Plans ☒ C Similar Facilities

Proj. Type		Totals from Above B & U	R & T
52	Museum Exhibits		XXXXX
55	Wayside Exhibits		XXXXX
62	Audio-Visual		XXXXX
	Ruins Stabilization		XXXXX
	Construction	$278,000	$281,00
92	Utility Contracts		XXXXX

ESTIMATES APPROVED (Signature): William Bleuer

(title) Team Manager, Midwest Team, Denver Service Center

(date) 1-23-75

SCHEDULING OF DEVELOPMENT RELATED PROJECT TYPES

	DEVELOPMENT RELATED PROJECT TYPES (Add on to line item)	C-3 YEARS	C-2 YEARS	C-1 YEAR	C: YEAR OF CONSTRUCTION
07	Construction Drawings B&U				
07	Construction Drawings R&T Print P & S				3,000
36	Historic Structures Const. Drawings				
43	Archeological Salvage B&U				
43	Archeological Salvage R&T				
51	Museum Exhibit Design				
55	Wayside Exhibit Design				
61	Audiovisual Design				
	(Advance Planning)				
05	Surveys				
06	Comprehensive Design (Prel. Design)				
14	Utility Negotiations				
15	Special Studies				
34	Historic Furnishings Report				
35	Historic Structures Report (HIST)				
35	Historic Structures Report (ARCHIT)				
42	Archeological Research				

DISTRIBUTION OF ESTIMATED FUNDING REQUIREMENTS BY YEARS

	ALL OTHER PROJECT TYPES	1st Year	2nd Year	3rd Year	4th Year
01	New Area Study				
02	Existing Area Study				
03	Development Concept Plan				
04	Interpretive Prospectus				
15	Special Studies (Non-Develop. Related)				
16	E.I.S.				
17	Service-wide Projects				
18	Wilderness Studies				
31	Archeological Investigations				
32	Park History Study				
33	Special History Report				
53	Museum Exhibit Operations				
54	Curatorial Services				
63	Audiovisual Maintenance				
71	Free Folder				
72	Sales Folders				
73	Books				
74	Archeological Publication				
75	Gen. Information Booklet				
7	Posters				
	ecial Publications				
	ther				
	Other				

#104

Management's Requirements:

I Planning - Design - Construction

A. Master Plan - Approved 1970
B. Resource Management Plans - Approved
C. Interpretive Prospectus - Approved 1973
D. Development Concept Plan - Not Required
E. Buildings and Utilities Required - The preliminary drawings and plans for the campground have been approved. The drawings were completed under an A & E contract 4970 B 20126.
F. Roads and/or Trails - Construct approximately two miles of roadway in the area. An entrance road to the campground and picnic area, camp sites need to be paved and a parking area for the picnic area.

II Archeology - Not Required for this Project

III Historic Architecture - Not Applicable

IV History - Not Applicable

V Museum Exhibits & Audiovisuals - Not Required

VI Natural Science Resource Problems - Not Applicable

VII Water Resources - Not Applicable

DRAFT
MCOtt:dsb 06/05/75

BUFFALO CORRALS

Resource Description

Both the North and South Units of the park have corrals and holding pens designed to hold and handle buffalo. They are used during the buffalo roundup in the fall when these animals are gathered for the purpose of culling, vaccination, and general examination. The facility in the South Unit is located approximately 13 miles north of park headquarters and is reached via a service access from the primary park roadway. The North Unit's structure is between Squaw Creek Campground and district headquarters and is also accessable via a service road. Both units are constructed of heavy, rough-cut lumber, and are designed to withstand the heavy impact incured by confined buffalo. As corrals, these installations are unique in that fencing is higher than normal (seven to eight feet), walkways are constructed around certain sections of the fence to facilitate handling the animals, all gates are double reinforced, and "escape" towers are placed strategically within the corral for the safety of those attempting to sort and move the animals. Holding pens constructed of seven foot woven wire, squeeze chutes, and loading ramps are also a part of each facility.

Present Management Action

These installations are normally used in the fall of each year during the buffalo roundup. The corral in the North Unit is also used as a part of the longhorn cattle management program. Because of the periodic heavy use that these units receive, they are maintained at a high standard, with prompt attention given to repair needs.

Results of Current Action

Current action provides for an effective, well maintained buffalo management tool. Provisions for personnel safety are build into the structure (e.g. catwalks, escape walks, heavy construction), and no injuries have been recorded since their inception. Most importantly, the corrals provide an efficient means of gathering, culling, and doctoring the resident buffalo herds.

Recommended Course of Action

Since the need for buffalo management appears to be an on-going consideration, the buffalo corrals should be retained and used in their present capacity. The need for expansion or other alterations to the structures is not indicated. Maintenance should continue at a high standards to insure the continued safety and effectiveness of the facilities.

DRAFT
MCOtt:dsb 04/14/75

COTTONWOOD CAMPGROUND

Area Description

Camping and picnicing opportunities in the South Unit of the park are represented by a 108 site campground, two group campgrounds, and a picnic area.

Cottonwood Campground, which is located approximately five miles from park headquarters on the east bank of the Little Missouri River is in terrace level number 2, as described in the park overview. It receives moderate to heavy use during the summer season, and light to no use during the off-season period. Visitor use from 1971 - 1974 is indicated below:

	May - September	October - April
1971	28,624	825
1972	30,271	432
1973	31,177	1,296
1974	30,166	521

The facility is composed of 108 sites, 60 of which have pull-through parking designed for travel trailers up to 35 feet in length. Campsites are of the traditional design with a picnic table, fire grate, and parking apron. An amphitheater is located in the south loop of the campground where evening programs are presented nightly during the summer. There

are four modern comfort stations which are distributed equally between the north and south loops. Since these units are not insulated for winter use, pit toilets are provided during the winter months in the north loop, and the south loop is closed to visitor use. All access roads to the operation are paved and parking aprons are compacted "scoria." Water faucets are in several locations throughout the campground to allow for ready access to all sites. A camptender's residence is located at the entrance to the campground. Site assignment, fee collection and information service are handled from this point.

Current Management Action

During the summer months (approximately Memorial Day through Labor Day), three seasonal employees from the protection division are assigned full time to campground management. Their duties include fee collection, site assignment, visitor protection and law enforcement, garbage collection and litter pickup, and comfort station cleaning. This arrangement provides for routine maintenance and upkeep of the area, and also offers the added benefit of readily available law enforcement, information and visitor assistance. One employee resides in the camptender's residence, and is available for after-hours information and assistance. Fire wood is supplied by the park, which tends to minimize the possibility of impact to the mature cottonwood trees that are typical of the area. Campsites are assigned on a first-come, first-serve basis. The demand for campsites

exceeds the supply on only the busiest summer weekends or holidays.

Results of Current Action

It appears that this facility generally provides an opportunity for a meaningful outdoor experience. Visitors are seldom denied a campsite and most campsites are sufficiently separated to provide some semblance of privacy and isolation. Bird and animal life is abundant in the area, with sightings of buffalo, coyote, eagles, hawks, and badger not uncommon. Current manpower commitments seem adequate, as routine campground maintenance and general visitor services are maintained at a high standard. Deleterious impact on surrounding vegetation is minimal.

Problems experienced with the present system generally include those associated with sewage disposal. The present leach field is percolating into the Little Missouri River which is a violation of EPA standards. In addition, there is no sanitary dump station for trailer and truck camper units. This is not only inconvenient for the camping public but also increases the possibility of pollution from illegal dumping. Other problems posing smaller potential for adverse impact include that of soil compaction and vegetation loss around individual campsites. "Resting" certain areas of the facility so that worn sites are allowed to recover is impractical due to the fact that one loop is designed for trailers (pull-through aprons), and the other loop is designed for tent campers (back-in aprons). Traffic.

flows one way through the campground thus making closing of only part of either loop virtually impossible. During periods of wet weather, the present parking aprons may be impassable. They are constructed of compacted "scoria" which is a clay-like material that becomes characteristically slick and unmanageable when water saturated. This obviously could detract from a satisfactory camping experience. The problem of buffalo/visitor confrontation in this area has been considered, and even though no serious injury or property loss has yet been recorded, the possibility of this occurance is real. A fence around the campground area would keep these animals out, but would also produce a rather artifical camping atmosphere. Hopefully, employees working in the area will be alert to possible hazardous situations in this respect, and solve potential problems before they become a reality.

Alternatives

1. An updated 10-238 was submitted on 02/10/75, to modernize the present facility. Improvements would include a package sewage treatment plant to handle effluent, a sanitary dump station for trailers and truck campers, an expanded and modernized amphitheater, and construction of a new 25,000 gallon water reservoir to update the water system. All campsites would be converted to the pull-through variety, and parking aprons would be a standard 12 feet wide by 60 feet long with a paved surface. Standardization of sites would allow certain sections of the facility to be closed for revitalization and would also eliminate the

confusion of segregating tent and trailer campers. Even though this plan calls for the total site number to be reduced to 98, the facility will nevertheless benefit by realizing larger sites with greater privacy for campers.

2. The present area is condusive to considerable facility expansion. Additional sites could be added either northward or southward from the present location. All added development could be restricted to existing cottonwood groups to insure scenic continuity and integrety. It appears doubtful that current or projected demand would merit expanding the campground at the present time, and on this basis extra sites are not needed. Expansion would, however, enable the manager to use site groups or group combination on a revolving system thereby easing impact to any one area of the facility.

3. The practicality of closing Cottonwood Campground must be considered in terms of alternative camping areas outside the park, and what the loss of National Park Service camping opportunities would mean to the park visitor. Within a ten mile radius of park headquarters there are four campgrounds. The Gold Seal Company operates a modern 140 site facility during the summer season which can accomodate both tents and trailers; Sully Creek, an unimproved campground with approximately 30 sites, is operated by the State Park's system two miles south of Medora; Red Trails, a private concern, offers approximately 30 to 35 sites in Medora; and the U. S. Forest Service operates

Buffalo Gap Campground which has 35 sites and is located approximately ten miles west of Medora on Interstate 94. It is conceivable that should Cottonwood Campground be closed, these facilities could absorb the added demand. The loss to the public would be more than campsites, however, as they would be denied the pleasure of camping in the natural setting of a National Park. Moreover, the campground atmosphere is ideal for park interpretation and education programs. Evening presentations, and impromptu interpretive contacts here make up a significant portion of the entire summer program of interpretation. Quite possibly strong public pressure would make this management option nearly impossible.

Recommended Course of Action

Probably the most logical alternative to follow in the management of this area is that of modernizing the existing facility as indicated on the programmed 10-238, and continue to offer a quality camping experience in the park area. Additional off-season use should be encouraged by appropriate press releases during the winter season, and providing improved facilities for winter users. The later essentially would involve insulating one or more of the comfort stations so that running water and heat would be available, and maintaining a supply of dry wood. Presently, during the winter, campers have no wood supply, and the pit toilets that are available are not a desireable option to the warm, dry facilities maintained during

the summer. Also, effluent from the pit toilets soon finds its way, through percolation, into the water of the Little Missouri River.

The popularity of winter camping is on the upswing, yet few park areas offer the opportunity. Snowmobilers, hikers, cross-country skiers, and other winter sports enthusiasts would all potentially benefit from an expanded camping program.

As the campground is situated in a grove of mature plains cottonwood (Populus sargentii) whose life expectancy is though to be from 40 to 60 years, action must be initiated to either propertuate the present species, or introduce a harder, more prolific species. Another consideration in this problem is the fact that the river appears to be moving back from the campground site, and thereby removing a nearby water supply for this shallow rooted species. Research to determine appropriate steps that should be taken to maintain the present sheltered, well screened site is indicated. Much of the secluded, isolated atmosphere of this area would be lost if this impressive overstory cover is allowed to degenerate.

DRAFT
MCOtt:dsb 05/02/75

PEACEFUL VALLEY PICNIC AREA

Area Description

Peaceful Valley picnic area is located one mile north of the Cottonwood Campground on the stable flood plain of terrace level number two. A few plains cottonwood, green ash, chokecherry and wolf berry represent the typical plant species of this area. Bluegrass provides ground cover, and adds a landscaped atmosphere to the site. Some spring flooding is caused by water collection behind piled earth in the area that remains from a stock dam used during the 1930's. The facility is divided into two seperate sections; each containing: firegrates, picnic tables, trash cans, water faucets, and a small paved parking area. In addition, two standard pit toilets are available in each section of the area. Access to the facility is by a short, paved roadway which leads east from the main park highway. An artesian well is located at the west edge of the east section of the area. Perpetual run-off from this installation has caused a boggy, marshy condition on the north section of the roadway in this immediate vicinity. Buffalo, birds, and other wildlife regularly use this area as a watering spot, which adds to the overall aesthetic quality here.

Current Management Action

This area is managed on a first-come, first-served basis. Primary use is by local area residents who commonly enjoy its facilities several times

during the summer season. Its popularity has increased during the past several years and use on weekends and holidays during the summer can be described as heavy. The average visitor stay at this facility is from one to three hours as overnight camping is not permitted. Those wishing to use the firegrates must furnish their own wood or charcoal as it is not provided by the park. Since the area receives relatively heavy use, frequent patrols are necessary here to insure compliance with appropriate rules and regulations.

Results of Current Action

Generally speaking this facility appears to be of sufficient size to accomodate the present level of demand. Management of the area becomes difficult on only the busiest summer weekends when large crowds tend to crowd the site. Traffic flow is complicated by small, undelineated parking areas which contribute to traffic tie-ups and driver confusion. Heavy, periodic use has, in some cases, adversely effected the vegetative growth of the area, and the success of indigenous tree propagation is low. The comfort facilities are not approved by the EPA, as they are of open pit design and may allow sewage to percolate into the ground water level. The unscheduled nature of picnicking activities make any reservation system in this area prohibitive.

Alternatives

1. Expansion and Modernization: A Form 10-238 was submitted on 02/14/75, to enlarge the Peaceful Valley picnic area as described in the approved

Master Plan. Proposed improvements include expansion of the present facility to effectively double its capacity, installation of six additional water spigots to provide for this expansion, and modernizing and enlarging the parking lots to accomodate the anticipated increase in use. Additionally, approximately one mile of 20 foot wide road would be required for access to the enlarged facility. Modern comfort stations would be constructed to better serve day use groups, and to bring existing facilities up to EPA standards.

2. Site Closure: Even though there are several picnic areas near the park, denial of picnic opportunities within park boundaries would serve no real purpose, and would alienate a major use group. Peaceful Valley has characteristics that make it unique as a picnic area. The opportunity to view native wildlife is high, its scenic attributes are outstanding, and it is in a central location to other activities in the South Unit. With proper management this facility can continue to be a favorite site for park visitors.

3. Additional Facility: Maintenance of the area at its present size, with the addition of a second area, perhaps on the east bank of the Little Missouri River, would have the effect of minimizing congestion at either area. Obvious problems to this approach are those associated with construction of a new area. Site clearing, road construction, sewage disposal, and water supply, and other related preparations make this proposal less attractive.

4. NO ACTION: Retention of this area at its present size and location with no additional physical improvements may be considered in the interest of economy. More intensive on-site management would help relieve problems of traffic flow and heavy impact on vegetation. Overflow on busy summer weekends could possibly be accomodated at Roughrider or Halliday Wells group camping areas to help relieve demand on the area. Since this site is popular and receives substantial use during the summer months, it seems reasonable that it be maintained at a high level of useability. If fund allocations continue at the present level, this alternative would perhaps be an unwise choice.

Recommended Course of Action

Physical improvement and modernization of the present facility is recommended at this time. Delineation of the parking areas and replacement of the pit toilets with vault-type units are high priority needs. Other than local use should be encouraged by placing appropriate signs at the park entrance. Large family groups should be encouraged to use group campground facilities when available. Continued use of this site as a staging area for interpretive walks and talks should be promoted, as birds and wildlife are abundant in this vicinity. Should local and out-of-state use become increasingly heavy during the coming years, expansion of the site as indicated on current package proposal 117 should be seriously considered.

To preserve existing vegetation, and to encourage natural growth of native species, it will be necessary to more closely monitor use in this area to prevent adverse visitor impact to the resource.

It would also be advisable to physically protect (by wire, barricade, etc.), saplings and/or shrubbery that are susceptable to being used as roasting sticks, kindling, etc. Protection of desirable plant species should continue until roots and limbs have developed substantial maturity. Consideration should also be given to resting heavily used areas. This could be accomplished by physical barricades and interpretive signing. Expansion of the area would allow site "resting" on an as-needed basis. Since standing water in this area encourages incubation and growth of the fresh water mosquito, a mosquito eradication program may be desirable. Research on this aspect should be directed to a program that would be ecologically sound. Improved drainage of the area might be a practical solution.

NATIONAL PARK SERVICE
DEVELOPMENT/STUDY PACKAGE PROPOSAL

Region (for Professional Office)	Park (for Other Originator)	Developed Area
Rocky Mountain	Theodore Roosevelt NMP	Peaceful Valley

Area Code	PKG #	PACKAGE TITLE
PV	1117	ENLARGE PICNIC AREA BY 30 SITES

☐ New Package.

☐ Addition to an existing package.

☒ Revision to an existing package.

Complete for Development related Packages only

CAPACITY	Add'l Capacity	New Capacity		CRITERIA	State	CONG DIST	COUNTY
0240	9	E		08	38	02	Billings

39

Will additional operating funds and/or additional positions be required upon completion of this package?
YES ☐ NO ☒
If yes, make certain a Form 10-237, Detail of Program Requirements, is prepared for this package.

Package Description

Expand existing picnic area from 15 sites to 45 sites. Need to extend the utilities, access road and build additional parking.

Package Justification

The existing picnic area is inadequate and needs to be enlarged. We have 15 sites available to the visitor. During the summer months we experience over crowded conditions that destroys the enjoyment of picnicking within the Badlands. To alleviate this problem additional picnic sites are needed to handle the overflow.

Management's Requirements (See reverse for outline. Use blank sheets for additional space.)

Class A estimate required ☐
Class B estimate required ☐
Class C estimate required ☒

SEE ATTACHED.

Requesting Official's Title	Date	Approving Signature (Supt. or other orig.)	Date
Richard H. Bennett, Facility Manager	9-11-75	John O. Lancaster, Superintendent	10/14/75

☐ Approved for estimating by Professional office(s)

Approved for reasons stated in transmittal memo and ... of clarification

Regional Director (Signature) Date

Package No. 117

Management's Requirements:

I. Planning - Design - Construction

A. Master Plan - Approved 1970
B. Resource Management - Plans Approved
C. Interpretive Prospectus - Approved 1973
D. Development Concept Plan - Not required
E. Buildings and Utilities Required - Expand existing picnic area by 30 sites. Each site shall include a table, grill and trash container (buffalo proof). Lateral water lines need to be provided for spigots, approximately six each. All water lines should be PVC material or equal. Our soil deteriorates galvanized pipe within two years. Upon completion of the construction work, the area should be landscaped and restored to near original condition. This expanded facility should be followed by the projects described in 10-238, Package No. 154 which calls for the construction of two modern comfort stations and the updating of water systems and the laying of 1,000 feet of powerline into the area. This project would then only require tying into existing power and water systems.
F. Roads &/or Trails Required: Approximately one mile of 20' wide road would be required with a group parking area large enough for approximately 20 cars and 10 parking spaces large enough for car trailer or bus type vehicles, two trails approximately 100' long and 3' wide from parking area to comfort stations would be required.

II. Archeology - An investigation will not be necessary.

III. Historic Architecture - Not Applicable

IV. History - Not Applicable

V. Museum Exhibits and Audio Visuals - Not Required

VI. Natural Sciences Resource Problems - Not Applicable

VII. Water Resources - Not Applicable.

DRAFT
MCOtt:dsb 06/05/75

DEVELOPED WATER

Resource Description

In the early 1960's a number of 300 to 500 gallon concrete containers called "dish tanks" were installed in both the North and South Units of the park. These units were installed at ground level, and are spring or well fed. The tanks are scattered throughout the park and are appropriately marked on the recently published topographic maps of the area. Since little or no maintenance has been performed on these containers since their installation, they are presently in a poor state of repair.

Current Management Action

Management of the resource has been restricted to periodic checks to insure useability, and very minor maintenance of units receiving heaviest use.

Results of Current Action

Dish tanks were installed as a part of the wildlife management program. They serve as water sources for wildlife, and perhaps most importantly, disperse utilization of the native forage by the bison herd. Too, by providing a readily available water source, buffalo are less likely to

wander to adjacent ranches for this purpose. Unfortunately, several of these containers are in very poor shape, and many others need other than minor repair. Heavy use and severe weather conditions have caused the concrete to crack and break in several instances; drain pipes are clogged causing tank overflow in a large number of cases; and practically all units show an immediate need for replacement of their galvanized pipe systems.

Alternatives

1. No Change: This option would eventually render the tanks unusable. Continued desintegration of the delivery and drainage systems will result in a localized boggy area that could not be used by larger animals as a watering spot. This alternative would essentially be the same as removing the tanks completely. Buffalo and other wildlife would be forced to use the river which would result in over utilization of adjacent vegetation, or migrate to nearby private stock watering tanks thereby raising havoc with boundary fences and domestic cattle herds.

2. Replace Present Tanks (recommended): Since stock watering tanks have shown their usefulness in dispersing utilization of forage, their continued need is apparent. However, considering the condition of the existing tanks, it is recommended that they be replaced with more durable, trouble-free units. The possiblity of installing

fiberglass tanks, with PVC or plastic pipes should be investigated. Tanks and plumbing of this material would not be subject to corrosion, and would very likely withstand temperature changes more satisfactorily than the cement units. Additional management should include periodic inspection to determine relative use and/or maintenance needs.

DRAFT
MCOtt:dsb 05/31/75

BOUNDARY FENCE

Resource Description

In both the North and South Units of the park boundaries are physically delineated by fencing. The purpose of this physical barrier is threefold: 1) To keep the resident buffalo population within the park; 2) To keep domestic cattle outside the park; and 3) Boundary definition. The South Unit of the park was fenced in 1956 and the North Unit was completed in 1962. On all but a short section of the boundary that parallels Interstate 94 the fence is of four strand barbed wire construction with approximately four inch top diameter wooden posts. Height of the fence is from four to five feet. A seven foot woven wire fence using steel posts of the "U" design is used on the interstate section. This portion of the fence was completed shortly before the freeway was opened in the late 1960's.

Present Management Action

The boundary fence is frequently checked for damage by both the protection and maintenance division of the park. The fence line is checked completely in the spring of each year. Normally, except in those areas that are readily accessable, horses are used for all fence maintenance repair.

Results of Present Action

Generally, all park boundary fence is kept in good repair. Unfortunately, it has been found that the present four strand barbed wire is not adequate to prevent buffalo escapes. There is only one documented buffalo escape from the woven wire fencing that runs parallel to Interstate 94, and in this case the animal crawled under the wire. Of added importance is the fact that heavy snow drifts and severe temperature changes have little or no effect on this type of barricade. Conversely, barbed wire fencing required almost constant maintenance to combat the adverse effects of weather and wildlife. Buffalo have no difficulty in jumping a five foot fence, and if they are unusually anxious to get to the opposite side, they simply walk through. Breaks in the fencing not only allow buffalo to escape the park, but also allow domestic stock access to the more inviting grazing land within the park boundaries. The cost of the perpetual repair and maintenance of the barbed wire added to the expenditures for buffalo retrived and domestic stock removal, places an unproportionally heavy load on park funds and manpower. At least two tort claims against the government have been won on the basis that the park has not provided proper facilities for containing bison. The chances of future claims against the government as a result of inadequate management appear to be high.

Alternatives

1. Replace barbed wire fence with seven foot wooven wire and steel posts-

Judging from the favorable experience with the present woven wire fencing, this option appears to answer the problems associated with barbed wire. Animal escapes and stock trespass would be reduced or eliminated, and storm damage and related repairs would virtually become a thing of the past. Form 10-238 packages 110 and 123 dated 12/14/73, propose replacement of the barbed wire with woven wire. Justification for the proposal is based on the historical and anticipated maintenance costs, and the possibility of future tort claims against the United States Government. If this proposal is carried through it will be necessary to immediately determine movement routes of antelope and deer so that provisions can be made for their egress and ingress to the area. It may be found possible to leave "crawl" space along certain sections of the fence to allow passage for these animals.

2. No Action - This alternative cannot be recommended because of the previously mentioned economic considerations. Proper management demands a more adequate provision for containing the buffalo herd. Moreover, it is necessary to keep domestic stock from the park, so that a natural wildlife range can be maintained.

3. Corrective Fencing - Barbed wire could be replaced with woven wire fencing in areas showing a high frequency of escape or trespass. Even though this option would not completely solve the problems associated with the present facility, it would perhaps partially

fill the current needs. This alternative should be viewed as a stop-gap measure that would be followed up with the complete project as funding permits.

Recommended Course of Action

Complete woven wire fencing is recommended at this time. Before this project commences it is imperative to make a determination of the primary ingress/egress routes for herbivores that we do not wish to manage by periodic reduction.

Failure to accomplish this may result in over browsing in certain areas of the park or other unfavorable impact caused by localized wildlife populations. Species that would be affected by this proposal are the pronghorn antelope and mule and whitetail deer. While the resident population of antelope is rather small (75 to 100) migrating winter herds can bring this total to over two hundred. These animals, as well as both species of deer, will readily crawl under a fence enclosure if the opportunity presents itself. This provision may well be the answer for sections of the woven wire fence that transect established movement routes. The space required for these animals would not be sufficient for the passage of buffalo, horses, longhorns, or domestic cattle. An ongoing monitoring program to determine the success of this project should obviously be a part of the proposal.

NATIONAL PARK SERVICE

DEVELOPMENT/STUDY PACKAGE PROPOSAL $24,000 942.66

Region (for Professional Office)	Park (or Other Originator)	Developed Area
West Region	Theodore Roosevelt NMP	South Unit (General)

D(Activity Code	PKG #	PACKAGE TITLE
GE	123	CONSTRUCT BISON PROOF FENCE

☐ New Package.

☐ Addition to an existing package.

☒ Revision to an existing package.

Complete for Development related Packages only							
CAPACITY	Yr. of Const.	New/ Extn.		CRIT-ERIA	State	CONG DIST	COUNTY
0000	7	E		08	38	02	Billings

4f

Will additional operating funds and/or additional positions be required upon completion of this package?

YES ☐ NO ☒

If yes, make certain a Form 10-237, Detail of Program Requirements, is prepared for this package.

Package Description

Replace the existing barbwire wood post fence with a bison proof fence. The new fence should be constructed with 9' woven wire 12' steel post.

Package Justification

The bison break the existing fence and escape from the park lands an average of six times per year. The escapes cost approximately $400 per escape. The cost includes fence repair, horse rental and overtime costs for a minimum of 2-3 employees. The lands bordering the park are private or leased from the US Forest Service for grazing cattle. The stockmen are concerned over the possibility of losing their cows to the attacking bison. We have had to shoot six escaped bison in the last three years. A bison-proof fence needs to be constructed so that the park can stop destroying bison and before the Federal Government is faced with a tort claim from the local ranchers.

Management's Requirements (See reverse for outline. Use blank sheets for additional space.)

Class A estimate required ☐

Class B estimate required ☐

Class C estimate required ☒ See Attached

Originator: Title	Date	Approving Signature (Supt. or other orig.)	Date
Chief Maint. Supv.	12/14/73		12/17/73
☐ Approved for estimating by Professional office(s)		Regional Director (Signature)	Date
☐ Disapproved for reasons stated in transmittal memo and returned to originator			

Management Requirements:

I. Planning - Design - Construction

A. Master Plan - Approved 1970
B. Resource Management Plans - Approved
C. Interpretive Prospectus - Approved 1973
D. Development Concept Plan - Not Required
E. Buildings and Utilities Required: Need to construct approximately 26 mile of fence similar to the one built under contract 14-10-7-971-95, Drawing No. NMP-TR 3310, date 10/66. Our only recommendation is to exclude the wooden flood gates and place barbwire across those areas that call for a flood gate.
F. Roads &/or Trails - Not Required

II. Archeology - Not Applicable

III. Historic Architecture - Not Applicable

IV. History - Not Applicable

V. Museum Exhibits and Audiovisuals - Not Required

VI. Natural Science Resource Problems - Not Applicable.

VII. Water Resources - Not Applicable

NATIONAL PARK SERVICE
DEVELOPMENT/STUDY PACKAGE PROPOSAL 91

1,044,000

for this Package (1,202

Professional Office)	Park (or Other Originator)	Developed Area
est Region	Theodore Roosevelt NMP	North Unit

Area Code	PKG #	PACKAGE TITLE
		NONBISON PROOF FENCE

☐ New Package.

☐ Addition to an existing package.

☒ Revision to an existing package.

Complete for Development related Packages only

CAPACITY	Project	New/Exist		CRITERIA	State	CONG DIST	COUNTY
0000	6	E		08	38	02	McKenzie

3

Will additional operating funds and/or additional positions be required upon completion of this package?

YES ☐ NO ☒

If yes, make certain a Form 10-237, Detail of Program Requirements, is prepared for this package.

Package Description

Replace existing barbwire, wood post fences with a woven wire bison proof fence along the the Park Boundary.

Package Justification

In the last 5 years the operating funds have obligated over $4,000 and 888 man hours in the capture and returning of buffalo back to the Park. Each escape results in damage to the fence that requires additional maintenance. In 1968 a tort claim resulted from an escaped bi and trespass. The solicitor ruled the U.S. negligent in not providing proper facilities for containing bison. The possibility of another tort claim results with every escape to prevent this happening again we need to make the necessary corrections as soon as possible.

Management's Requirements (See reverse for outline. Use blank sheets for additional space.)

Class A estimate required ☐

Class B estimate required ☐

Class C estimate required ☒ See Attached

Title	Date	Approving Signature (Supt. or other orig.)	Date
Unit Maint Supv	12/17/73	John C Rauenhorst	12/26/73
Approved for estimating by Professional office(s)		Regional Director (Signature)	Date
Disapproved for reasons stated in transmittal memo and returned to originator			

Requirements:

I. Planning - Design - Construction

A. Master Plan - Approved 1970
B. Resource Management Plans - Approved
C. Interpretive Prospectus - Approved 1973
D. Development Concept Plan - Not required for this Package
E. Buildings and Utilityies Required - A total of 33 miles of 7 ft. woven wire, steel post fence needs to be constructed around the Park Boundary with an 8 ft. gate every two miles and at old road alignments. Experience has shown that flood gates do not work in this area. Creek crossings need to be fenced with a maximum clearance of 3 ft.
F. Roads &/or Trails - Not Required

II. Archeology - Not Applicable

III. Historic Architecture - Not Applicable

IV. History - Not Applicable

V. Museum Exhibits and Audiovisuals - Not Required

VI. Natural Science Resource Problems - Not Applicable

VII. Water Resources - Not Applicable

DRAFT
MCOtt:dsb 05/22/75

VISITOR CENTER COMPLEX AND MALTESE CROSS CABIN

Area Description

The South Unit visitor center is located adjacent to the Town of Medora, approximately two miles south of Interstate 94. Geographically it is located in terrace level number two which makes up the stable flood plain of the Little Missouri River. Typical plant species in this area are plains cottonwood, chokecherry, ash, and assorted grasses and shrubs. The facility is bounded on the west by a state picnic area, on the east by the park residential area, on the north by typical badland bluffs, and on the south by U. S. Highway 10. The area is defined by appropriate signing, landscaped grounds, and a visitor parking area. The visitor center building is one story and of frame construction. Immediately to the north of this building is the Maltese Cross Cabin, which is an historic log structure that, in effect, is part of the site's landscaping. Immediately to the south of the visitor center on the main park road is the south district entrance station, which is of the traditional kiosk design. The visitor center building is composed of a museum, an information center, an association publications display area, a screened-in porch which temporarily serves as an audio visual room and offices for district and headquarters personnel. Visitor comfort facilities are also provided within the building. An employees parking area is located immediately to the west of the building. The north exit door provides access via a short

paved walk to the Maltese Cross Cabin. This structure was moved to this location from its original site approximately seven miles south of the park. Even though the location of the cabin is historically incorrect, it is the original headquarters building of Roosevelt's Maltese Cross ranch. It contains a bedroom, a living room, a kitchen, and an attic "bunkhouse." Furnishings are representative of the time period, but for the most part, are not original. The cabin is constructed of pine logs, and has finished wooden floors. The roof has been reconstructed and finished with cedar shakes. The cabin is encircled by a rustic pole fence, which adds a certain amount of authenticity to the scene.

Current Management Action

The district entrance station is open for fee collection from approximately May 20 through Labor Day. From middle May until the first part of June it operates on an eight hour per day basis (8:00 a.m. to 5:00 p.m.) and the remainder of the summer season it is open from 8:00 a.m. until 8:00 p.m. The visitor center and Maltese Cross Cabin are open eight hours daily (8:00 a.m. to 5:00 p.m.) except during the summer months when they remain open on a twelve hour basis. Guided tours of the Maltese Cross Cabin are conducted at fifteen minute intervals during the summer season, and on demand during the off season. In addition, a slide program dealing with the historical, geological and natural highlights of the park is available on a continuous basis during the summer. The building, in addition to being a visitor contact point, serves as park headquarters, and in this capacity is open daily for park and district operations.

Results of Current Action

Visitor contacts at this facility are indicated below:

	June - September	Yearly Total
1974	53,162	58,466
1973	67,979	78,596
1972	71,033	80,355
1971	93,317	101,280

Approximately 75 per cent of the June-September totals take advantage of the guided tour of the Maltese Cross Cabin.

This facility, while providing basic informational and educational services for visitors to the park is somewhat limited in its physical capabilities. The audio visual room is a temporary accomodation, and can only be used during the summer months; the museum and information desk need to be reorganized or relocated to provide for a more permanent auditorium; office space for headquarters and district personnel is restrictive; the interpretive storage area for all museum items and specimens is in an unheated, uncooled, unventilated area in a warehouse approximately one-quarter mile east of the visitor center; and the roof over the office wing is leaking. In addition, the heating, ventilating, and air conditioning system, as well as the electrical system, is out of date and inefficient considering todays energy conservation program. Personnel assigned to man this facility and the seasonal hours of operation appear to be adequate to handle the visitor load. Impact to the vegetative growth of the area is minimal due to clearly defined walkways and established flow patterns.

Alternatives

1. Expansion and Modernization - In response to the problem associated with present limited space conditions and a generally outdated facility Form 10-238, package number 103, dated 02/14/74, calls for the construction of an addition to the visitor center and improvements to the overall physical plant. Specifically, construction will include; 1) The remodeling of existing visitor use space and construction of a new adjoining space to provide for increased visitor usage; 2) Providing an audio visual program viewing room with the capacity of 70 seated; 3) Remodeling offices and space for the South Unit District Ranger and the Park Naturalist (Historian); 4) Evaluation of the insulative qualities of the existing roof and walls and 5) Evaluation of existing heating, ventilating, air conditioning and electrical systems in view of current energy problems. A special consideration of this proposal is the necessity of relocating park administrative offices to another location in town. It should be noted that this is not a part of the Form 10-238, but has been approved by the Regional Director. Funds for this proposal have been approved, and construction is tentatively planned to begin in September or October of 1975. When completed, this project will provide for more visitor use space, and better accomodations for the district protection and interpretation programs. Recommendation for this proposal is found in the park Master Plan, and Interpretive Prospectus.

2. No Action: High quality visitor service can be maintained indefinately if this facility is retained in its present condition. Even though expansion and modernization would provide for more efficient and useful work space, and allow for a more complete interpretive offering, it is not necessary for continued operation of the park. Plans for relocating the administrative offices to another building in Medora have been approved, and this will provide the needed extra room for district operations. Since the building and associated utilities are nearly 18 years old, maintenance for their upkeep will naturally become more demanding. Interpretive displays and audio visual devises will also require touchup and increased maintenance as time goes on. Generally, this proposal would mean a slightly lower standard of visitor service, a less efficient work area, and higher costs for facility maintenance.

Recommended Course of Action

The proposal as recommended on Form 10-238, package number 103, is recommended at this time. For long range planning, this alternative appears to be the most sensible, both economically and practically. As a result of this plan, improvements in building insulation will result in fuel savings; a higher standard of visitor service will be realized from museum and audio visual room reorganization; and work areas will be relocated for more efficient use.

A program should be initiated to retain the ranch atmosphere of the Maltese Cross Cabin. Since this site is shaded by several mature plains cottonwood whose life expectancy is between 40 to 60 years, steps must be taken to

determine the probability of natural propagation, or the need for artifical perpetuation measures. It may be found necessary to plant young trees in the near future and protect and nurture their growth until their root system is of sufficient maturity for self preservation.

The probability of flood waters from the Little Missour River reaching the visitor center is not high but the possibility of this occurance must be realized. A contingency plan should be written to deal with this potential problem, so that loss of property and damage to the facility is kept to a minimum.

UNITED STATES DEPARTMENT OF INTERIOR
NATIONAL PARK SERVICE
DEVELOPMENT/STUDY PACKAGE PROPOSAL

(or Professional Office)	Park (or Other Originator)	Developed Area
Rocky Mountain	Theodore Roosevelt NMP	South Unit (Medora)

Dev'l Area Code	PKG #	PACKAGE TITLE
ME	1103	CONSTRUCT AN ADDITION TO VISITOR CENTER

☐ New Package.
☐ Addition to an existing package.
☒ Revision to an existing package.

Complete for Development related Packages only

CAPACITY	PROJ CODE	FUND CODE		CRIT-ERIA	State	CONG DIST	COUNTY
00706	E			10	38	02	Billings

5

Will additional operating funds and/or additional positions be required upon completion of this package?
YES ☐ NO ☒
If yes, make certain a Form 10-237, Detail of Program Requirements, is prepared for this package.

Package Description

Expand Visitor Center to include larger capacity audio visual program room and redesign the existing museum panels.

Package Justification

The existing audio visual room in the South Unit Visitor Center is inadequate for present visitation. The room is presently overfilled during portions of each day during the summer s receiving 150,000 visitors annually. Remodel existing building to provide adequate s for the District Ranger and curatorial services. Repair and update existing insulation, mechanical equipment and electrical system. The present museum panels and disp vs are "Shop worn", with paint missing and contain scratched photographs which lack generally in environmental awareness. These panels and displays should be updated, changed and modernized in accordance with the new interpretive prospectus. Audio visual space seats only 35 and must be doubled.
The Administrative Offices to be moved to another building to provide more room for Administrative Offices and to convert this building, as described in the design directives, for the purpose of a District operation as well as for curatorial services.

Management's Requirements (See reverse for outline. Use blank sheets for additional space.)

Class A estimate required ☐
Class B estimate required ☐
Class C estimate required ☒

Development Concept Plan being developed by Denver Service Center (Larry N. Kilborn, Architect)

See Attached Design Directives.

Originating Office	Date	Approving Signature (Supt. or other orig.)	Date
Richard H. Bennett, Facility Manager	02/14/75	John O. Lancaster, Superintendent	02/14/75

☐ Approved for estimating by Professional office(s)
☐ Returned for reasons stated in transmittal memo and
Regional Director (Signature) Date

DESIGN DIRECTIVE

ADDITION TO MEDORA HEADQUARTERS VISITOR CENTER

THEODORE ROOSEVELT NATIONAL MEMORIAL PARK

DECEMBER 3, 1974

PART I

1. DESCRIPTION: Expand the Medora Visitor Center in order to provide a larger room for the audio-visual program. Remodel existing building to provide adequate space for the district ranger and curatorial services. Repair and update existing insulation, mechanical equipment and electrical system.

2. PRODUCTION TEAM:

Larry N. Kilborn, Architect, Division of Design, DSC

Maurice L. Paul, Structural Engineer, Division of Design, DSC

Milton A. Sklenar, Mechanical Engineer, Division of Design, DSC

D. Ray Johanningsmeier, Electrical Engineer, Division of Design,

Thomas L. Harrington, Utility Engineer, Division of Design, DSC

3. CONSULTANTS:

Park Superintendent, Theodore Roosevelt National Memorial Park

Regional Staff, Rocky Mountain Regional Office

Planning and Design Team, Midwest and Rocky Mountain Region, DSC

Manager and Staff, Harpers Ferry Center

4. FUNDS:

Comprehensive Design (06) - $9,000

Survey - Previously complete

Soils Engineering - Not required

Construction Drawings and Specifications (07) - $21,000

Construction Funds are not currently programmed

5. TARGET DATES:

Comprehensive Design

Start: 20 January 1975

Submit to Region: 17 March 1975

Construction Drawings and Specifications

Start: 7 April 1975

Complete: 30 June 1975

PART II

1. SCOPE: Design considerations will be concerned with, but not necessarily limited to the following:

A. Remodeling of existing visitor use space and construction of new adjoining space to provide for increased visitor usage.

B. Providing an audio-visual program viewing room with capacity of 70 seated.

C. Remodeling offices and space for South Unit District Ranger and Park Naturalist-Historian.

D. Evaluation of the insulative qualities of the existing roof and walls.

E. Evaluation of existing heating, ventilating, air conditioning and electrical systems in view of current energy problems.

2. EXISTING CONDITIONS: (The following conditions were observed during a field trip on 3-4 October 1974.)

The visitor center was built about 17 years ago. Visitations have increased during the ensuing years. The visitor use space is now undersized. Both the Master Plan and the Interpretive Prospectus call for the visitor center to be enlarged and reorganized to accommodate present and future visitor loads. The audio-visual room is temporarily in a screened-in porch area, is usable only in the warmer months, seats only 35, and is over-filled during portions of each day when it is in use. The District Ranger Headquarters has 3 desks, 1 work table and very limited counter space for 1 District Ranger, 2 Technicians, and 20 seasonal Rangers. The Park Naturalist-Historian has 220 square feet that serves as his office, Park library, work room, and a very limited specimen storage room. The main storage room for all museum items and specimens is an unheated, uncooled, unventilated area in a warehouse approximately one-quarter mile east of the visitors center. The roof over the office wing is leaking. Roof insulation is minimal (3" batts) and has compressed over the years. Windows are non-insulated type and leak air quite badly. The heating, ventilating, and air conditioning system, as well as the electrical system,

is out of date and incapable of keeping up with the current loads.

3. PROGRAM REQUIREMENTS:

A. VISITOR USE AREA:

Lobby, Information, Sales Area - 650-700 sq. ft.

Museum - 1500-1600 sq. ft.

Audio-visual Viewing & Projection - approximately 900 sq.

Visitors' toilets - existing modified for use by handicap

B. District Ranger Headquarters:

District Ranger Office - 80-100 sq. ft.

Technician Office - 140-150 sq. ft.

Work Room (for 20 seasonals) - 400-500 sq. ft.

Storage - 50-75 sq. ft.

C. Naturalist-Historian:

Naturalist-Historian Office - 100-150 sq. ft.

Library - 40-50 sq. ft..

Work Room with lavatory (should be "darkenable" for occasional photographic work) - 150 sq. ft.

Curatorial storage - 200 sq. ft.

D. Modify building to provide access to handicapped individual .

E. Replace existing roofing: insulate building in accordance with current industry standards: Replace existing windows with double glazed or storm sash type.

F. Redesign walk to the Maltese Cross Cabin as recommended in the Interpretive Prospectus.

G. Existing employee toilet facilities, janitor's closet, and kitchenette are adequately sized and any change to them is not contemplated.

PART III

1. BASIC DATA: Master Plan - 1973

Interpretive Prospectus - May 1973

Environmental Assessment - Not required

10-238, Package No. 103, 6 June 1974

2. SPECIAL CONSIDERATIONS:

A. Park administrative offices are to be removed from the visitor center to another location. This portion of the project, although not included in the 10-238, was agreed to in a meeting on 11 October 1974 in the Rocky Mountain Regional Office by Acting Regional Director Glen Bean, Theodore Roosevelt National Memorial Park Superintendent John Lancaster, Midwest/Rocky Mountain Team Manager Don Purse, and others. It was understood that the decision was subject to Regional Director Lynn Thompson's approval, which was subsequently given. Although completion of this project is contingent on the moving of the administrative offices, the details are not discussed in this Design Directive as they will be handled in the Rocky Mountain Regional Office.

B. The design and the reorganization of the visitor use space will be coordinated with the Harpers Ferry Center. In addition to

coordinating with this design element, Harpers Ferry Center will be responsible for redesigning and/or refurbishing the museum exhibits as well as developing and producing a new 10 minute motion picture both as detailed in the 10-238.

C. The Interpretive Prospectus is definitive as to proposed visitor circulation within the proposed remodeled visitor center. The existing configuration of the visitor center may not be conducive to the proposed circulation pattern. The circulation in any event is to be informal and gently structured to allow the visitors to move at their own pace.

DRAFT
MCOTT:dsb 05/22/75

PAINTED CANYON

Area Description

The Painted Canyon Overlook and interpretive contact point is located approximately six miles east of headquarters at Medora on the north side of Interstate 94. Access to the area is provided at both the east and west interstate travel routes. Visitor accomodations at this point include four "sailing ship" picnic shelters each containing one picnic table, two flat-topped shelters with two picnic tables each, four fire grates, two seperate pairs of vault type comfort stations, two seperate parking areas (one for the picnic and rest area, one for the contact station and unpaved walk to the overlook) and a small interpretive contact station. This facility is unique in that it serves as an interstate rest area, and at the same time offers travelers an introduction to the park and an opportunity to view an impressive example of badlands scenery. There is adequate room both near the picnic area and the information station, for vehicles with trailers, or large tractor-trailer rigs to park. Geographically this site is located in terrace level number four which includes the higher plateaus of the park. Typical plant species here are grasses such as saltgrass, and bluebrush, wheatgrass, and other assorted grasses and shrubs. Even though a water well was drilled in recent years, the only delivery system is a hand operated pump that is located in the vicinity of the picnic area. It hooks into a cistern

and is available for use only during the summer months. Site aesthetics are marred somewhat by the presence of oil derricks, and well pumps that dot the surrounding grasslands outside the park boundaries. Some imagination is required to visualize the prairie scene that was typical of the 1880's.

Current Management Action

This facility is managed with the idea of introducing Theodore Roosevelt National Memorial Park to the interstate traveler who would not normally have the time to see typical badland scenery and learn of the reasons for its formation. A low power AM station (880 AM) broadcasts automatically by tape during the daylight hours and serves to: 1) Explain the geology of the badlands; 2) Orient the traveler to surrounding points of interest; and 3) Invite the traveler to visit the South Unit of the park and to take advantage of the opportunity to view the area in more detail. During the summer months, approximately Memorial Day through Labor Day, the information booth is operated on an eight hour schedule (9:00 a.m. to 6:00 p.m.). This facility offers free informational handouts, and a small selection of Natural History Association sales items. On weekends, when visitation is heaviest, a roving horse patrol is assigned to this area for four hour periods each day. The park maintenance division collects garbage at this site, and maintains all buildings and exhibits at the accepted standard.

Results of Current Action

Presently, this facility receives over half of the visitation recorded for the park. Use figures for the years 1971 to 1974 are indicated below:

1971	441,967
1972	734,020
1973	516,625
1974	431,166

Considering this number of visitors, it appears that the National Park Service is not adequately taking advantage of the opportunity for a more comprehensive interpretive offering. The current facility is rather basic, and is even shabby when compared to other rest areas on the interstate system. A more concentrated effort at this spot would encourage travelers to visit other sections of the park. The access to this area on the east bound lane is confusing as it enters the picnic area, which complicates efficient traffic flow. The roadway and parking area at this site could be reorganized to not only remedy this problem but also to tie the area's accomodations closer together and give them a more cohesive grouping. There is only one marked trail that leads from the information station to the edge of the overlook. A sign inscribed with a quotation from Theodore Roosevelt is the only interpretive device that is offered at this point. It would be helpful, both from the manager's standpoint, and that of the visitor's to place several permanent displays or interpretive signs in this vicinity to further explain the formation of the badlands, and the historic significance of this region.

Alternatives

1. Reconstruction and Modernization - The park Master Plan and Interpretive Prospectus recommend major alterations to this facility.

These recommendations are based on the high visitation here and the corresponding opportunities for interpretation. Accordingly, Form 10-238 package number 125, updated 02/19/75, calls for reconstruction and modernization of this facility. Work proposed includes the construction of a visitor contact station which will provide interpretive displays, an information counter, a sales table, office space for seasonal personnel, a storage area, adjacent heated comfort stations, and a visitors lounge area with benches and a view of the badlands scenery.

A unique innovation to be employed in this structure is a wind generated power plant and a solar heating unit. This will not only reduce energy costs at this facility, but will also reflect favorably on the National Park Service as an energy conservation agency.

In addition, the picnic sites will be redesigned and constructed to provide maximum protection from the sun and wind. A sewage collection and treatment facility will be added, and water will be made available at conveniently placed faucets. All electrical power cables and telephone services will be underground. An access road will be constructed close to the present overpass to replace the present east entrance road which runs along an area of unstable soil conditions. The present access road and certain portions of the parking area will be restored to a natural setting. A parking area will be constructed to accommodate approximately 55 cars, 25 car - trailer combinations and six trailer trucks. A surfaced trail will be constructed from the visitor center to and along the plateau rim.

Three displays will be erected along its length to interpret the badlands scenery. Generally, this proposal will provide a facility that offers more to the traveling public, and promotes more efficient site management.

2. No Action: Retention of this facility in its present state would be a stop gap measure. The area has a run down appearance and is obviously in need of major restoration. This alternative cannot be recommended because of the justified need for a more modern facility.

3. Comfort Facilities and Interpretive Displays Only: Use of this site as only a rest stop with limited interpretation of the badlands scenery and surrounding area would deny travelers the opportunity to grasp the atmosphere of this region. The idea of the area is to give travelers something extra. The tension and anxieties that come as a result of long distance driving can be substantially eased by a leisurely picnic or a short nature walk. Restricting the use of the area by further limiting the accomodations here would be of benefit to no one.

Recommended Course of Action

Reconstruction and modernization of this area as indicated on the previously mentioned Form 10-238 package is recommended at this time. It is necessary to "go the extra mile" at this point to insure that a quality interpretive point and rest area is available to the traveling public.

Restoration of abandoned roadways and parking areas that will result from this project should allow for a natural drainage system to be reestablished. In this same respect, reseeding or replanting in these areas should be in keeping with the typical vegetative growth of the geologic region. Landscape planting will be limited to screening of the visitor contact facility.

Interpretation and explanation of the visitor center's power sources should be recognized as a high priority need. Alternate energy sources are of high interest to most people at this time, and practical use of the energy from the wind and the sun would be an excellent demonstration of the National Park Service's concern with the energy crisis, and its attempts to conserve energy by using other available sources. Action should also be taken to interpret the oil well drilling and pumping operation to the south of the site particularly since oil is being taken from beneath the park through issuance of protective leases.

The feasibility of the visitor contact station remaining open during off-season months must be considered. Since this station has much higher visitation than that of the South District visitor center, year around service seems logical.

UNITED STATES DEPARTMENT OF INTERIOR
NATIONAL PARK SERVICE
DEVELOPMENT/STUDY PACKAGE PROPOSAL

91
304,000

Page 1 of ... for this Package
362,250

Region (or Professional Office)	Park (or Other Originator)	Developed Area
Rocky Mountain	Theodore Roosevelt NMP	Painted Canyon

Level Area Code	PKG #	PACKAGE TITLE
PC	125	RECONSTRUCT INFORMATION & REST AREA

☐ New Package.

☐ Addition to an existing package.

☒ Revision to an existing package.

Complete for Development related Packages only

CAPACITY	Total Cost	New/Exist		CRIT-ERIA	State	CONG DIST	COUNTY
0500	7	E		10	38	02	Billings

2

Will additional operating funds and/or additional positions be required upon completion of this package?

YES ☐ NO ☒

If yes, make certain a Form 10-237, Detail of Program Requirements, is prepared for this package.

Package Description

Interstate rest area to be developed as a visitor contact information station and scenic overlook with picnicking and heated restrooms. Dismantle the old east entrance structure and utilize the rock to veneer the new building at the rest area. Underground all utilities

Package Justification

T inted Canyon Rest Area located adjacent to Interstate 94 receives over 50% of the p as visitation. Present facilities include one informational sign, two unheated vault toilets, four picnic sites and one plywood information structure. Over 735,000 visitors enter this area per year. This is the first contact point with the park for most visitors and information and interpretation is vital.

Management's Requirements (See reverse for outline. Use blank sheets for additional space.)

Class A estimate required ☐

Class B estimate required ☐

Class C estimate required ☒

SEE ATTACHED

Originator-Title	Date	Approving Signature (Supt. or other orig.)	Date
Facility Manager	02/19/75	Act. Supt.	02/19/75

☐ Approved for estimating by Professional office(s)

Regional Director (Signature)

Date

Management's Requirements

I. Planning - Design - Construction

A. Master Plan - Approved 1970
B. Resource Management Plans - Approved
C. Interpretive Prospectus - Approved 1973
D. Development Concept Plan - Denver Service Center
E. Buildings and Utilities Required - Visitor contact area which will provide space for a manned information desk with association sales display racks for brochures, books and pamphlets. A public lounge area with information and interpretive display, benches and a large window overlooking the Badlands. Office space will be provided for information personnel, storage space for supplies and an employee washroom. Space will be required for a mechanical and utility room for heating and cooling equipment, plumbing and maintenance tools and supplies. A comfort station for visitors will be either incorporated into the building or adjacent to the visitor contact station one stall in each side and all other facilities in the area will be designed to allow access and use by handicapped persons. It is estimated that from 1600 to 2500 square feet of floor space will be required for these buildings. Approximately eight structures in the picnic area will be required, designed and constructed to provide maximum protection from the sun and wind. Picnic tables, trash cans and water will be provided to this area.

Utilities required will be a sewage collection and treatment facility to Federal and State standards and will be designed as to not contribute to the unstable soil of the area. Percolation of waste water will be held to a minimum. The source of water for the area will be supplied by an existing well. Elect. power cables and telephone service will be underground and connected to existing cables in the area.

F. Roads &/or Trails Required - An access road will be constructed close to the present overpass to bypass the present east entrance ramp which runs along an area of unstable soil conditions with slide area. A parking lot will be constructed to accommodate approximately 55 cars, 25 car trailer combinations and six trailer trucks. Where existing roads and parking areas are abandoned, the pavement and

embankments will be removed and natural drainage reestablished. A surfaced trail will be constructed from the visitor center to and along the plateau rim to provide the best view of the Badlands, other trails and sidewalks will be provided around the visitor center, parking lot and the picnic area. Exact sizes, width and lengths of parking area, access roads and trails will be established by later designs of the area. Landscaping of the area will be extensive to establish native grasses in disturbed areas.

II. Archeology - Investigation not required with this package.

III. Historic Architecture - Not Required.

IV. History - Not Applicable.

V. Museum Exhibits and Audiovisuals - Approximately three audiovisual exhibits will be designed for the contact station.

A. Museum Exhibits - 2 to 4 modest exhibits covering the general park themes.
B. Curatorial Services - Not Required.
C. Wayside Exhibits - The present masonry Theodore Roosevelt exhibit will be moved to a better location near the visitor center.
D. Audiovisuals - A short (3 minute) self-contained program for standup viewing.

VI. Natural Science Resource Problems - Not Applicable.

VII. Water Resources - Not Applicable.

DRAFT
MCOtt:dsb 06/05/75

EXOTIC -- PHEASANTS

Resource Description

The ring-necked pheasant which is a gallinaceous Asian bird is an introduced species to the United States. It is difficult to say accurately when this bird was first seen in the badlands of North Dakota, but most likely it was in the late 1880's. Presently, this bird is numerous locally in both units of the park. Favorite habitat for this specie is the moderate to heavily vegetated flood plain areas of the Little Missouri River. As these birds are diurnal they are often seen by park visitors.

Current Management Action

Even though this animal is classified as an exotic, it is protected and managed as though it were a native species. The code of Federal Regulations Title 36, Section 2.32, paragraph 1 through 3 makes it illegal to"...hunt, kill, wound, frighten, capture, or attempt to kill, wound, frighten, or capture at any time of any wildlife" (underline added). No other specific management is directed at this bird.

Results of Current Action

The pheasant exists in a favorable habitat with no more than normal pressure from natural predators. Competition with other gallinaceous species (i.e. sharptail grouse, wild turkey, chukas) does not appear to be a problem at this time. This bird, because of its size, natural beauty, and high conspicuity is a favorite of park visitors. This bird

and its place in the natural environment is frequently interpreted during evening slide programs and guided nature walks.

Recommended Course of Action

Since the pheasant fits in well with natural park species, and does not appear to pose a serious problem of competition, retention of the species using present management action is recommended. Research to determine the "niche" held in the badlands environment by this bird and its competive relation to other species is needed but should not be considered a high priority requirement. Full cooperation should be given other agencies, individuals or groups who may wish to conduct this study, however.

DRAFT
MCOtt:dsb 05/31/75

WILDLIFE -- AMPHIBIANS

Resource Description

Amphibians found within the park are the painted turtle, spadefoot toad, leopard frog, and the tiger salamander. Habitat for these animals is typified by areas in the flood plain and along the banks of the Little Missouri River, around running wells or stock tanks, and near natural water holes filled by rain or runoff. They are seen only during the warmer months of late spring through early autumn, and then only infrequently.

Current Management Action

No specific management is directed at these species. They are protected within the park boundaries by virtue of Title 36, of the Code of Federal Regulations, Section 2.32, Paragraph 1 through 3.

Results of Current Action

There appears to be no unusual impact, natural or man-caused, to these animals. There are no indications that population numbers have changed appreciably during the past decade.

Recommended Course of Action

Continued management at the present level is recommended at this time. Even though it is important to monitor the population levels of these species, formal research to determine their relation to this specific

environment is a low priority need. Full cooperation should be given college level or graduate students who wish to study this segment of the park's animal life. A copy of the results of any such study should be retained by the park and used as a tool for more complete and professional management. Should there be an indication of any drastic change to the populations of these species, immediate steps should be taken to determine the cause and possible implications of the alteration.

DRAFT
MCOtt:dsb 05/31/75

WILDLIFE -- CARNIVORES

Resource Description

Both the North and South Units of the park have resident populations of the following species: 1) coyote; 2) bobcat; 3) fox; 4) badger; 5) weasel; 6) lynx and 7) cougar. These animals range freely throughout the park, but are not restricted to its confines. Totally accurate population counts on these species are not available, but all excepting the lynx, cougar, and weasel appear to be fairly numerous. Yearly animal estimated census reports show fairly stable population levels, with no dramatic changes noted over the past decade.

Current Management Action

Primary management for these species is the continued maintenance of a habitat that is as near natural as possible. This includes, but is not limited to, monitoring and encouraging the perpetuation of other indigenous plant and animal life; protection from hunting; and continuing observation and study for the purpose of increasing management knowledge and expertise.

No specific management is directed at any of the subject species. Interpretive programs (i.e. slide shows, informal wlaks and talks, etc.), often consider these animals as subject matter and a substantial file of reference material to include slides and observation records, is maintained in their

behalf. Visitors are encouraged to view all animals within the park from a distance. The area minifolder, as well as roadway signing, help enforce this practice.

Results of Current Action

Observation and informal study seems to indicate that these animal species are maintaining relatively static populations at this time. No unusual increases or decreases in numbers have been noted in recent years. Visitors occasionally observe one or more of these animals during their stay in the park, but due to their generally secretive and elusive nature, these sightings cannot be termed common. Adverse influence from man's presence is thought to be minimal. However, since these animals are free to enter and exit the park at will, they often fall prey to trappers or hunters outside the park boundary. It has not been determined what influence this might have on population levels. Most likely, considering animal census reports over the past fifteen years, impact in this respect is very light.

Recommended Course of Action

The present management of the resource would seem to be the only logical alternative. In addition to the annual census of wildlife within the park, it is important to remain alert to any changes in the population levels of these species. An alteration of this nature would warrant immediate study and/or research to determine its cause and possible solution. In the case of the cougar which is currently on the list of threatened species, extra effort should be directed to determine present population levels, and the rate of reproduction. An ongoing program to determine the influence of

hunting and trapping near the park boundary should also be considered. Interpretation of these animals should continue, with increased emphasis placed on the importance of the predator in "the web of life." Visitors, as well as park personnel, should be encouraged to properly record sightings of these animals for use as reference and comparative analysis.

DRAFT
MCOtt:dsb 06/05/75

WILDLIFE -- BIGHORN SHEEP
(Ovis Canadensis Californiana)

Resource Description

Bighorn sheep (Ovis canadensis californiana), are found in only the South Unit of the park. The latest census (summer of 1974) shows the population as follows: 15 ewes, 2 lambs, 10 rams - for a total of 27 sheep. There may be more that are roaming in smaller bands, but this number indicates a positive minimum total. This herd is descendant of sheep that were oridinally brought from British Columbia by the North Dakota Game and Fish. A sheep enclosure was established near Grassy Butte, North Dakota, and partly on the basis of the success shown by this venture, and partly because of the National Park Service desire to reintroduce a bighorn subspecies to the park, five rams were released in the South Unit in 1958. These sheep were donated by the state, and secured from the Grassy Butte enclosure. After it was determined that these animals had adapted to their new environment, plans for a larger herd were made. A 250 acre enclosure was constructed on the Petrified Forest Plateau and all animals were originally to be confined in this area. An agreement between the state and Federal government provided that one-half the normal herd reproduction would be trapped, tagged, and removed from the park herd until the

original number of animals equivalent to the nucleaus herd was removed. It was discovered however that the enclosure was not sufficient to contain the herd, and as a result, the animals became free roaming in the South Unit and all plans for trapping, tagging, etc. were shelved. Attempts to introduce these animals to the North Unit of the park were successful as they tended to migrate back to the enclosure in Grassy Butte (approximately 20 miles to the south).

The present South Unit herd restricts itself to the plateaus and bluffs on the west side of the Little Missouri across from Wind Canyon. Sheep have also been observed in the Jones Creek drainage--but none recently.

Current Management Action

These animals are protected under the appropriate section of Title 36 of the Code of Federal Regulations. Even though no specific management action is directed at this species, they are monitored closely, and frequent population census are taken.

Results of Current Action

The bighorn population has adapted well to the badlands of the park. From all indications they are healthy, show normal patterns of reproduction, and exist in favorable proportion to natural predators. Because of their elusive nature and preference for range away from visitor use areas, these animals are not commonly observed by park visitors. Canoists occasionally see a few scattered rams in the Wind Canyon area, but ewes and lambs seem to be more aloof.

Recommended Course of Action

In addition to current action, it is recommended that an attempt be made to reintroduce sheep to the North Unit of the park. As trapping sheep from the South Unit may be nearly impossible, when the rough terrain of the badlands and natural wildness of the animal are considered, donations should be solicited from the North Dakota Game and Fish. Close observation should continue, with any abrupt change in population immediately investigated. A study to determine a more exact census, nutritional needs, and travel patterns of these animals is presently being conducted by a graduate student working on a Masters Degree. A copy of the results of this research will be retained by the park and used to help determine future management action. The park's population of bighorns closely approximates the Audubon Mountain Sheep (ovis canadensis auduboni) that once roamed this area. Unfortunately, they became extinct in the late 1800's--the result of competition with domestic grazing stock and unregulated hunting. The relationship of the Audubon sub-species and animals that are now endangered or threatened is good subject material for interpretation, and should be regularly referred to in this respect.

DRAFT
MCOTT;dsb 06/05/75

WILDLIFE -- BIRDS

Resource Description

A checklist of birds found within the park, and their relative rate of frequency is attached. The badlands and adjacent grasslands provide a widely varying habitat for bird life. Shore birds are found along the Little Missouri River and nearby ponds and stock tanks; predatory birds are active in areas of sparse vegetation where visibility is high; and gallinaceous and other seed-eating species are common in the prairie and wooded areas. The more common birds are seen frequently by summer visitors because of their high level of diurnal activity.

Current Management Action

With the exception of the Sharptail Grouse, which is covered in a seperate plan, no specific management is directed at these animals. An active Golden Eagle nest which is located a short distance from the scenic drive in the South Unit is monitored closely. Because of its sensitive location and susceptibility to tampering, it is not interpreted, and the knowledge of its existence is restricted. All wildlife within the park boundaries is, of course, protected by Title 36 of the Code of Federal Regulations, Section 2.32, paragraph 1 through 3. Interpretation of the park's bird life is rather extensive. They are frequently the subject of evening slide programs

and guided nature walks, and the Theodore Roosevelt Nature and History Association offers for sale four separate books dealing with North American bird life, including a check list of the birds of the grasslands.

Results of Current Action

Current management provides a favorable opportunity for visitors of the park to see and learn about bird life. Basically, these animals are allowed to exist in an environment that allows natural specie survival and perpetuation. There is no indication that unnatural influence (i.e. man, artifical habitat alterations, etc.) cause adverse effects. Since birds are not restricted to the park, some impact may occur in other areas, but this is felt to be light, and in any respect would be difficult to measure.

Recommended Course of Action

As no real problems are foreseen in the management of this group, no change to the present management action is recommended. Studies by other agencies, groups, or individuals should be encouraged, and a copy of the results kept in the wildlife management files for future reference and comparison purposes. An example of this type of research, is the U. S. Forest Service study of the peregrine falcon that is currently in progress. Rare or endangered species such as the Golden Eagle should continue to be closely

watched for any abnormal change in either their population numbers or natural habitat. A study to determine the relationship of predatory birds to the prairie dog population of the park is needed, as research on the subject is limited, and the added knowledge would facilitate the wise management of this resource.

BIRD CHECK LIST

THEODORE ROOSEVELT NATIONAL MEMORIAL PARK

MEDORA, NORTH DAKOTA

ds seen	Name of bird	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
	Yellowthroat N-c												
	Chat, Yellowbreasted N-c												
	Redstart, American N-u												
	Sparrow, House N-a												
	Meadowlark, Western N-a												
	Blackbird, Yellow-headed o												
	Blackbird, Redwinged N-u												
	Oriole, Orchard N-r												
	Oriole, Baltimore N-r												
	Oriole, Bullock's N-u												
	Blackbird, Rusty r												
	Blackbird, Brewer's N-c												
	Grackle, Common N-c												
	Cowbird, Brown-headed N-c												
	Grosbeak, Black-headed N-u												
	Bunting, Indigo o												
	Bunting, Lazuli N-c												
	Grosbeak, Evening o												
	Goldfinch, American N-c												
	Towhee, Rufous-sided N-c												
	Bunting, Lark N-c												
	Sparrow, Savannah, N-r												
	arrow, Grasshopper, N-c												
	parrow, Baird's N-u												
	Sparrow, Vesper N-c												
	Sparrow, Lark N-c												
	Junco, Slate-colored r												
	Sparrow, Tree o												
	Sparrow, Chipping N-c												
	Sparrow, Clay-colored N-a												
	Sparrow, Brewer's N-c												
	Sparrow, Field N-c												
	Sparrow, White-crowned u												
	Sparrow, Song, N-c												
	Longspur, McCown's N-u												
	Longspur, Lapland o												
	Longspur, Chestnut-collared N-u												
	Bunting, Snow u												

Date: .....

Time: .....

Weather: .....

Observer: .....

Terms and abbreviations used as follows:

N - nests
a - abundant, occurs in large numbers.
c - common, occurs regularly in moderate numbers.
u - uncommon, occurs regularly in small numbers.
r - rare, a few noted every year.
o - occasional, a few noted, but not every year.

Horizontal lines show which months birds may be seen.

Abundance is relative to the habitat of the species and not to the area as a whole.

Published by The Theodore Roosevelt Nature and History Association
in cooperation with National Park Service
U. S. Department of the Interior

Dickinson Press Print - Dickinson, N. D.

Check birds soon	Name of bird	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
	Heron, Great Blue o												
	Duck, Mallard N-u												
	Duck, Pintail r												
	Teal, Blue-wing N-u												
	Duck, Shoveller o												
	Duck, Canvas-back o												
	Vulture, Turkey N-u												
	Hawk, Sharp-shinned N-u												
	Hawk, Cooper's N-r												
	Hawk, Red-tailed N-o												
	Hawk, Swainson's N-u												
	Hawk, Rough-legged u												
	Hawk, Ferruginous N-u												
	Eagle, Golden N-o												
	Eagle, Bald o												
	Hawk, Marsh N-o												
	Falcon, Prairie N-r												
	Hawk, Sparrow N-o												
	Grouse, Sharptail N-o												
	Pheasant, Ring-necked N-o												
	Partridge, Gray (Hun.) N-o												
	Crane, Sandhill a												
	Rail, Sora N-r												
	Killdeer N-o												
	Plover, Upland N-r												
	Sandpiper, Spotted N-u												
	Dove, Mourning N-o												
	Cuckoo, Black-billed N-r												
	Owl, Great Horned N-o												
	Owl, Snowy o												
	Owl, Burrowing N-r												
	Owl, Barred N-o												
	Owl, Boreal o												
	Nighthawk, Common N-u												
	Kingfisher, Belted r												
	Flicker, Yellow-shafted N-o												
	Flicker, Red-shafted N-o												
	Woodpecker, Red-headed N-u												
	Woodpecker, Hairy N-u												

Check birds soon	Name of bird	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
	Woodpecker, Downy N-o												
	Kingbird, Eastern N-o												
	Kingbird, Western N-o												
	Phoebe, Says N-o												
	Flycatcher, Great Crested o												
	Flycatcher, Traill's N-u												
	Flycatcher, Least N-r												
	Lark, Prairie Horned N-a												
	Swallow, Tree N-r												
	Swallow, Bank N-o												
	Swallow, Rough-winged N-r												
	Swallow, Barn N-r												
	Swallow, Cliff N-o												
	Jay, Blue N-o												
	Magpie, Black-billed N-a												
	Crow, Common N-o												
	Chickadee, Black-capped N-o												
	Nuthatch, White-breasted N-u												
	Creeper, Brown o												
	Wren, House N-c												
	Wren, Rock N-o												
	Catbird N-o												
	Thrasher, Brown N-o												
	Robin N-o												
	Veery N-r												
	Bluebird, Eastern o												
	Bluebird, Mountain N-o												
	Solitaire, Townsend's o												
	Pipit, Sprague's N-r												
	Waxwing, Bohemian o												
	Cedar, Waxwing r												
	Shrike, Loggerhead N-c												
	Starling N-o												
	Vireo, Red-eyed N-o												
	Vireo, Warbling N-o												
	Warbler, Black & White N-o												
	Warbler, Yellow N-o												
	Warbler, Myrtle o												
	Ovenbird N-u												

DRAFT
MCOtt:dsb 06/05/75

WILDLIFE -- DEER, ANTELOPE

Resource Description

Whitetail and mule deer as well as pronghorn antelope are found within the boundaries of the park. The antelope population is variable. The total resident population of the South Unit is between 60 to 70; in the North Unit 10 to 20. During the winter, migratory herds may at times bring this total to nearly 150 in the South Unit and approximately 50 in the North Unit. Because the deer population is not stable and moves freely in and out of the park, an accurate count of their numbers is extremely difficult. From trend studies conducted during the 1960's and early 1970's the estimated population of mule deer in the South Unit is 600 to 700; in the North Unit 400 to 500. The estimated whitetail population in the South Unit is 150 to 225 and in the North Unit 75 to 200. The bottom lands of the Little Missouri River which are typified by relatively heavy vegetation and cover is the favorite habitat of the whitetail. Mule deer frequent the higher areas of the park, and seem to prefer a more open environment. The pronghorns are most often seen on the plateaus and upper grasslands of the park. A portion of the present population of antelope are no doubt the decendants of a herd that was released in the park in

January of 1951. This herd, which was procured from Yellowstone National Park, was composed of 17 mature bucks, 39 mature does, 10 buck kids, and 9 doe kids. The group moved to the big and petrified forest plateaus and remained in that general area.

Current Management Action

No specific management is directed at these species. Trend counts are used to determine the annual animal census. These counts seem to indicate that the park has reached what appears to be a point of equilibium in the populations of these species. Counts taken as long as twenty years ago show an increase in the numbers of these animals, while recent counts (within the last decade), show a static situation. These animals are protected within the park boundaries by virtue of the appropriate section of Title 36 of the Code of Federal Regulations. Extra protection is afforded this group during the hunting season when outside pressure from area hunters is high. Any abnormal mortality rates are immediately investigated, and in this respect, assistance from the North Dakota Game and Fish is normally solicitated.

Results of Current Action

The present program of protection and observation allows for the maintenance of a natural herd situation with ideal habitat conditions. Annual census counts help determine trends that can be used in management analysis. Both species of deer are seen frequently by park visitors, but, as the antelope are more timid and elusive by nature, they are seldom observed in visitor use areas. No mortality or fecundity trends have been noted within the past decade.

Recommended Course of Action

No change to present action is recommended. The importance of continued close observation of these species should be reemphasized. The whitetail is especially susceptable to a hemorrhagic disease that became epizootic in the early 1960's. Since much study has been done on this virus, it should not be too difficult to identify a renewed outbreak. Trend counts should continue on an annual basis and any abrupt change in population should be immediately investigated. Even though loss from poachers or hunters on the park's property is considered very light, it would be desirable to determine a closer approximation of this impact. Browse studies are also important to determine relative animal pressure.

DRAFT
MCOtt:dsb 06/05/75

WILDLIFE -- FERAL HORSES

Resource Description

There are approximately 42 to 46 feral horses presently in the South Unit of the park. These horses are thought to be decendants of two mares that escaped from the Barnhart ranch, and a white stud of unknown ancestry. With the exception of three geldings that escaped from a local rancher as yearlings in 1952 or 1953, all of the present horses in the park were probably born within its boundaries. For the most part, the horses restrict themselves to the eastern section of the South Unit. They can occasionally be seen from Interstate 94 in this area, and are often mistakenly identified as domestic horses in an open range situation. It is thought that the horses are divided into two separate herds of approximately equal size. There are also several young studs that are not really a part of either herd but still range in the same general area. The exact number of mares, colts and studs is not known as these animals are wary and cannot be approached too closely for purposes of census.

Present Management Action

These animals are protected by virtue of Title 36 of the Code of Federal Regulations. No other management plan is currently in effect.

for this herd. Interpretation of this resource is limited to infrequent coverage during evening programs.

Results of Current Action

Problems with current management are those associated with genetic trends of a small enclosed population. Several colts have been observed as being unusually small and with crooked legs which is probably a result of inbreeding. The severe winters that are typical of North Dakota appear to be the limiting factor of population growth in this group. Winter deaths among colts are high, which has kept the total herd size nearly static. Predators which include cougars, lynx, coyote and bobcat appear to have little effect on these animals. The opportunity for visitors to view the horses is not ideal as they are seldom near main travel routes. Additionally, when they are observed, they are usually mistaken for domestic stock.

Alternatives

1. Herd Removal: In 1964-65 plans were made to remove feral horses from the park. It was thought that they were not appropriate to the park scene. However, due to strong local pressure and unfavorable publicity against the proposal, the decision was made to maintain a maximum 40 horse herd. Because of this precedent, herd removal at this time is not recommended. Perhaps the main reason for managing a feral horse herd, however, is that wild horses were

part of the badlands scene during Theodore Roosevelt's time here. Roosevelt wrote in Ranch Life and the Hunting Trail, "In a great many--indeed, in most--localities there are wild horses to be found, which although invariably of domestic descent, being either themselves runaways from some ranch or Indian outfit, or else claiming such for their sites and dams, yet are quite as wild as the antelope on whose domain they have intruded....." Thus, the present herd adds authenticity to the historical interpretation of the park.

2. No Change: Present management does not provide for the problems associated with inbreeding. In addition, no determination has been made of the method that should be used to keep the herd at the maximum 40 head.

3. Introduction of Outside Breeding Stock: To prevent the herd from becoming inbred, it may be desirable to introduce one or more studs procured from an outside source. Local research is needed in this respect to determine how best new horses can be introduced, and the old studs can be dispatched. Too, investigation of the best method to remove excess horses should be initiated. Trapping, roundup, tranquilizer gun and direct reduction should be considered. Form 10-238 package number 168 dated 12/13/74, calls for the construction

of six horse traps near watering holes in the eastern portion of the park. Apparently, this method has been proved effective by other agencies managing wild horses. The traps will be one-half to one acre in size and constructed of seven foot woven wire fence. The enclosures will also have two quick closing trap gates.

Recommended Course of Action

Since an inbred herd would not be aesthetically pleasing, and would reflect poor management jundgement, it is recommended that, after a determination of how best to introduce new breeding stock is made, one or more studs be introduced to the existing herd. At this time, old studs or animals displaying noticeable physical deformation should be removed. Any new stock that is introduced should be of the same general domestic variety that is now present. In addition, an attempt should be made to interpret these animals more effectively. Visitor center exhibits or an exhibit at Painted Canyon would be helpful in this respect. A continued effort should be made to closely monitor the year to year success of this animal population. Any noticeable changes to the herd number should be immediately investigated.

10-236
Rev. 11/71

UNITED STATES DEPARTMENT OF INTERIOR
NATIONAL PARK SERVICE
DEVELOPMENT/STUDY PACKAGE PROPOSAL EST 29,200 Day Labor

Region (or Professional Office)	Park (or Other Originator)	Developed Area
Rocky Mountain Region	Theodore Roosevelt NMP	South Unit

Devel Area Code	PKG #	PACKAGE TITLE
GE	1683	CONSTRUCT 6 WILD HORSE TRAPS SOUTH UNIT

☒ New Package.

☐ Addition to an existing package.

☐ Revision to an existing package.

Complete for Development related Packages only

CAPACITY	Yr. of Cost	New/Exist		CRIT-ERIA	State	CONG DIST	COUNTY
0000	7	N		02	38	02	Billings

23

Will additional operating funds and/or additional positions be required upon completion of this package?
YES ☐ NO ☒
If yes, make certain a Form 10-237, Detail of Program Requirements, is prepared for this package.

Package Description

Construct 6 wild horse traps at watering holes on the eastern portion of the South Unit.

Package Justification

The Resource Management Plan calls for maintaining the wild horse herd at 40 head. The number has now been reached. From experience in this park plus contact with other agencies managing wild horses, it is suggested that the most economical way to reduce the herd other than destroying them, is by trapping at watering sources. The only other traps in the park are the buffalo pens located in the northwest corner of the park some 8 to 10 miles across very rough country which makes it impossible to control or herd the wild horses for that distance.

Management's Requirements (See reverse for outline. Use blank sheets for additional space.)

Class A estimate required ☐
Class B estimate required ☒
Class C estimate required ☐

Originator-Title	Date	Approving Signature (Supt. or other orig.)	Date
Richard A. Bennett Facilities Manager	12-2-74	John O. Lancaster Superintendent	12/13/74

☐ Approved for estimating by Professional office(s)

Regional Director (Signature) Date

Package 168

Management Requirements:

I. Planning - Design - Construction
   A. Master Plan approved 1970
   B. Resource Management Plan - The traps require 7 ft. woven wire fences of approximately ½ to 1 acre in size and would be constructed with dividers and two quick closing trap gates. The traps would be open to allow the herd to come and go freely and becoming accustomed to the presence. When the gates were closed the animals could be removed and transplanted to other herds to reduce and/or improve the herd and prevent inbreeding.
   C. Development Concept Plan - Not Required
   D. Interpretive Prospcetus approved 1973
   E. Roads and/or Trails - Not Required
   F. Buildings and Utilities - Not Required

II. Archeology - Archeology Investigation - Not Required for this Package

III. Historic Architecture - Not Applicable

IV. History - Not Applicable

V. Museum Exhibits and Audiovisuals - Not Required

VI. Natural Science Resource Problems - Not Applicable

VII. Water Resources - Not Applicable

Form No. 10-802
(11-71)

for this package

UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

PACKAGE ESTIMATING DETAIL

REGION	PARK
Rocky Mountain Region	Theodore Roosevelt National Memorial Park
PACKAGE NUMBER	**PACKAGE TITLE**
168	Construct 6 Wild Horse Traps in South Unit

(If more space is needed, use plain paper and attach)

ITEM	QUANTITY	COST
7' woven wire fence @ 4.50 per foot	6,000 feet	27,000
Quick closing trap gates	12 each	1,200
Miscellaneous hardware and lumber	Lump Sum	1,000
	TOTAL	29,200

REMAINING PORTION FOR DEVELOPMENT PROJECTS ONLY:

SUMMARY OF CONSTRUCTION ESTIMATES		CLASS OF ESTIMATE: A ☐ Working Drawings; B ☐ Preliminary Plans; C ☐ Similar Facilities	
STANDARD PERCENTAGE (____ %)	% OF NET	TOTALS FROM ABOVE	
		B & U	R & T
NPS Layout and Supervision			
FHA Layout and Supervision			
Follow-through maintenance and as built drawings			
Contingencies			
Other			
		Net Construction	29,200
TOTAL ADD ON (if other than standard percentage)		Working Drawings and Specifications (PP)	4,000

ESTIMATE APPROVED (Signature): John O Lawson | (title): Superintendent | (date): 12/13/74

DRAFT
MCOTT:dsb 06/05/75

WILDLIFE -- PORCUPINE, BEAVER

Resource Description

The number of porcupine and beaver found within both units of the park is relatively high. However, because of a limited habitat and restrictive dietary requirements, they are not commonly seen by park visitors. Both of these species eat the cambium matter of trees, thus one of their habitat requirements is a wooded or heavily vegetated area. Additionally, the beaver prefer a nearby water supply (e.g. Little Missouri River, Jones Creek, Knutson Creek, etc.), to build their unique living quarters. Porcupines are often found on north facing slopes or in heavily wooded ravines.

Current Management Action

Both species are monitored closely to determine their impact to the groves of cottonwood and green ash that are adjacent to the river and streams of the area. Historically, the beaver population has taken an inordinately heavy toll on the trees that surround heavy visitor use areas, such as the campgrounds, picnic area, and Peaceful Valley Ranch. This deleterious influence has prompted several reduction programs in the past. The latest of these efforts was accomplished in 1972 when it was found that beaver were cutting a great number of the cottonwoods in Cottonwood Campground.

It appears that in protecting the beaver and porcupine, their main predator, man, has been excluded, thereby allowing almost unchecked propagation. The animals continue to be protected by virtue of the appropriate section of Title 36 of the Code of Federal Regulations, and any reduction of their numbers is officially handled by the Bureau of Sports, Fisheries and Wildlife. Damage from porcupines has not been so widespread, but they have similar potential for mischief and therefore are watched closely.

Results of Current Action

Since these animals have few natural predators and at the same time live in a favorable habitat, their perpetuation poses no apparent problem. Instead, concern is directed at the damage or potential damage that they can inflict within areas that have a need to be preserved. The present method of reacting to the problem as it occurs has worked well. No irrepairable damage has been done by these animals because reduction has been accomplished before this was allowed to happen. Research to determine the optinum population levels of these animals is indicated, and perhaps should be viewed as a high priority management need.

Recommended Course of Action

In addition to frequent site inspections to ascertain the activity level of these species, steps should be taken to find an acceptable repellant that could be used in areas where damage cannot be tolerated. There

has been considerable study in this respect, and several repellants have been shown to be nearly 100% effective for three to four month periods. If the need for population reduction is apparent, live trapping and subsequent relocation should be considered. Independent study of these animals should be encouraged and possibly subsidized so that present knowledge of specie survival patterns can be broadened. It would also be helpful to determine, through historical documents, the comparative number of beaver in this area in the 1880's, and the extent of trapping and hunting pressure during that period.

DRAFT
MCOtt:dsb 05/31/75

WILDLIFE -- REPTILES

Resource Description

Reptiles found within the park are the prairie rattlesnake, bull snake, yellow-bellied racer, garter snake, hog-nosed snake, short-horned lizard, and the sagebrush lizard. These animals are found in most areas of the park, with heaviest concentration for most species being noted in areas with moderate to heavy vegetative cover such as the sagebrush flats of the stabilized flood plain. Members of this group appear to be quite numerous, and are commonly seen during the warmer summer months.

Current Management Action

These animals, like all others within the park boundary, are protected by virtue of Title 36, Code of Federal Regulations, Section 2.32, Paragraph 1 through 3. No other specific management action is currently directed at this group.

Results of Current Action

Deleterious impact to those animals from natural or man-caused action is minimal to non-existant. Normal predation from eagles, hawks, foxes, and coyotes exists, but seems to be in a healthy proportion to the reptile population. Food supply for the species is considered to be normal. Reptiles and their "niche" in the badlands environment are often discussed and explained as a part of the park's interpretive program.

Recommended Course of Action

No change to the present management action is proposed. The park's reptile population should continue to be monitored on an informal basis. Research proposals connected with these animals should be supported and the results of any study or research should be used to help formulate future management decisions.

DRAFT
MCOtt:dsb 05/22/75

WILDLIFE -- MISCELLANEOUS

Resource Description

Other mammals found within the boundaries of the park are the cottontail rabbit, pocket gopher, chipmunk, racoon, and bat. These animals are found in fairly large numbers in both units of the park, but pose no unique management problem. Species habitat is acceptable, and there appears to be no external influence that reacts negatively with the resource. Natural enemies (predators), including coyotes, hawks, eagles, snakes and weasels, are found in healthy proportion to these animals.

Current Management Action

These animals, similarly to all species within the park, are protected by virtue of Title 36 of the Code of Federal Regulations, Section 2.32, paragraphs 1 through 3. No other specific management action is concerned with this group.

Results of Current Action

A relatively stable, natural environment is currently maintained for this group, with a resultant level of equilibrium in population numbers. No substantial increases or decreases in population have been noted during the past decade.

Recommended Course of Action

There is no indication that current management of these species should be altered at this time. Continued monitoring of these animals as with all resident wildlife, should continue to be a part of this program. Research or study of these species by outside groups or individuals should be encouraged, and a copy of the results of these efforts should be added to the park files for reference and comparison purposes. Sudden or dramatic changes to either animal population numbers, or habitat should be immediately investigated to determine the cause and effect of the change.

DRAFT
MCOtt:dsb 06/19/75

WILDLIFE - SHARPTAIL GROUSE

Resource Description

Prairie sharp-tailed grouse are found throughout the North Dakota badlands. They are frequently observed in the plateau regions of the park as well as the lower lying hills typical of terrace level number three. It is impossible to say exactly how many of these birds are permanent residents of the park, but judging from the number of known "dancing hills" and the high frequency of sightings, they are quite numerous. In the spring of the year the courtship dance of this species can be witnessed at several locations in the park. Perhaps the most obvious of these is a small knoll that is within the Johnson Plateau Prairie dog town.

Current Management Action

Even though no specific management is directed at this species, efforts are currently being made to locate and mark all dancing grounds. This will be helpful in determining an approximate census, and also will be of assistance in possible future studies of this gallinaceous bird. Grouse, of course, are protected within the boundaries of the park by virtue of the appropriate section of Title 36 of the Code of Federal Regulations.

Results of Current Action

This species appears to be well established within the park, and because of its diurnal activities, is very popular with park visitors. Habitat is

favorable and there is no more than normal pressure from natural predators. Most of the grouse dancing grounds that are near visitor use areas have been identified, and, as stated previously, efforts to locate other courting areas are currently being made. The presence of the prairie sharp-tail in the badlands, and the unique courting ritual of the species are often interpreted during evening programs and guided nature walks.

Recommended Course of Action

In addition to determining dancing grounds, research should be initiated locally to ascertain the ability of this species to maintain traditional courting areas. Some experts are of the opinion that these areas were maintained in part by grazing herbivores (cattle, buffalo, etc.), and that the birds alone may be unable to keep grasses and shrubs at the low level required for dancing. If this is found to be the case, artifical methods may be needed to encourage the perpetuation of grouse courtship rites within the park. Mr. Frank C. Farley in Life Histories of North American Gallinaceous Birds states ". . .These dances take place every April and May, and often the grain, when up, is tramped entirely away." This observation indicates that grouse do have the ability to maintain their dancing grounds but since other opinions differ, research in this respect is indicated. Any study relating to this species should be supported, and used in future management of this bird.

DRAFT
MCOtt:dsb 06/05/75

WILDLIFE -- LONGHORN CATTLE

Resource Description

There are presently 18 longhorn steers that are located in the North Unit of the park. They were obtained in three separate shipments from the Fort Niobrara National Wildlife Refuge in Valentine, Nebraska. The first shipment of six steers was received on April 13, 1967; the second shipment of six was received on October 25, 1969; and the last shipment was received in the fall of 1974. At the time of delivery, the steers ranged in age from one to five years. Even though the steers are allowed to roam freely throughout the North Unit, they restrict themselves to a sagebrush flat area of approximately 750 acres which is located a short distance (two to three miles) west of the district entrance station. This area apparently provides adequate food, water and shade to satisfy their habitat requirements. The animals occasionally roam westward toward the Squaw Creek Campground but seldom, if ever range further than this.

Present Management Action

These animals are displayed to allow visitors to see and photograph this famous, historically significant type of cattle. Of added relevance in this respect is the fact that the old Long X Trail which was once used

for longhorn cattle drives, passed through what is now the park's North Unit. In their present location, these animals are commonly observed by park visitors. Because of this, they have become a favorite attraction. During the warm summer months the steers require little or no management. They feed on the new growth of green grass, and water from the river or from undeveloped springs in the area. Salt blocks are provided for additional mineral supplement. During the winter when prolonged cold spells are common, the cattle often need to be fed hay as conditions prevent their fending for themselves. In addition, a water supply must also be maintained during this period. Other management includes innocalations as required and periodic health checkups. The buffalo corral in the North Unit is used to hold these animals when this work is performed.

Results of Current Action

Current action has resulted in a healthy herd that adds authenticity and color to the badlands scene. The exhibit is perhaps not meeting its full potential because many visitors are not sufficiently alerted to its existence. A short sentence in the park mini-folder mentions the herd, but very little else is available that interprets this resource. The animals, as stated previously, have never strayed beyond the campground, thus, problems with them escaping from the park have not been encountered. Predators and harsh weather elements seem to have a minimal effect on the herd, in fact, only two of the older animals have died since they were introduced.

Alternatives

1. No Change: This alternative will presumably provide for a healthy herd, that is only minimally interpreted. To get the full benefit of the resource, more emphasis should be placed on interpretation, and providing visitors with an opportunity to view these animals.

2. Herd Removal: As the herd is effective in its contribution to the historical scene of the North Unit, its removal would serve no purpose. Care of these animals is not a great problem, and the overall benefit realized from their existance far outweighs the small amount budgeted for their upkeep.

3. Introduction of Breeding Stock: Upkeep and management would increase abruptly if breeding stock were introduced. As bulls tend to wander more than cows or steers, a fence enclosure would need to be erected to prevent their migration to neighboring ranches. Furthermore, the historical significance of the herd would not be enhanced by the addition of breeding stock, as interpretation of the animals centers around their ancestor's presence on the cattle drives of the 1800's. Basically, the cost of upkeep and maintenance of a reproducing herd make this option prohibitive.

Recommended Course of Action

Retention of the herd in its present state is recommended for future management of this resource. To further interpret this herd it is recommended that an appropriate marker be erected along the primary

park road adjacent to the longhorn pasture. Along with this, should be parking space for a limited number of vehicles. As individual steers die off they should be replaced with animals from the source herd at the Fort Niobrara Refuge. Efforts should be made to secure animals with different color variations as this, along with the distinctive horns of the group, promotes the overall quality of the exhibit. A local study should be made to determine the desirable carrying capacity of the longhorn pasture in the event that herd expansion is justified. Periodic checks of these animals should continue to assure the continued maintenance of a healthy herd.

DRAFT
MCOtt:dsb 07/24/75

PRAIRIE DOG

Resource Description

Perhaps the most popular attraction at Theodore Roosevelt National Memorial Park is the black-tailed prairie dog. In both the North and South Units of the park visitors have the opportunity to view these interesting mammals living in their natural habitat. Black-tailed prairie dogs can be distinguished from the other six subspecies of this animal by their short ears, muscular legs, and short black-tipped tail. The length of the adult prairie dog varies from 11 to 14 inches and weight ranges from one and three-fourths to three pounds. Prairie dogs live in areas of varying size that are known as towns. Their characteristically social tendencies and group interdependance make this living arrangement ideal. Based on a survey conducted in 1973, prairie dog towns comprise a total of 433.75 acres in both units of the park. Of this total, approximately 75% is located in the South Unit. Town sizes range from the Beef Corral Town (119 acres) to the Martinson Town (2 acres). Even though several of the larger towns are located adjacent to the main park roadway, the greater number are found in backcountry areas of the park and are observed by only a small percentage of visitors. A detailed list of towns, which includes location and acreage is attached.

Present Management Action

Prairie dogs are among the most closely managed species within the park. Park files contain innumerable research papers, professional reports and

published documents that directly relate to this unique animal. This material is ready reference for most questions or problems that might arise concerning this rodent. As stated previously, all dog towns were surveyed in 1973 to determine location and size by acreage. At this time a standard method of measurement was documented so that meaningful comparision could be made with subsequent surveys. In addition, a plan to survey and measure the towns at three year intervals was established to further monitor population levels. Interpretation of this species is extensive. They are frequently discussed at evening programs; the Nature and History Association offers, as a sales item, an informative pamphlet devoted to the subject; interpretive displays and parking areas have been constructed at the Johnson Plateau, Beef Corral and Peaceful Valley dog towns (all adjacent to the roadway), and frequent impromptu "discussions" of these animals are conducted by rangers at public contact points.

At the park's inception, there was some amount of fear held by local ranchers that the National Park Service policy of maintaining a natural environment would result in uncontrolled spread of existing dog towns, with an accompanying dramatic upsurge in rodent population. Since that time however, these thoughts have been proved unfounded and demands for prairie dog control within the park are presently non-existent. Measures are taken, however, to discourage prairie dogs from establishing burrows in heavy public use areas. Some difficulty with town expansion can be seen at the Halliday Wells group camping area. Efforts to keep the

animals from the camp enclosure have ranged from direct reduction to a method using water and liquid soap that literally "bubbles" the dogs from their burrows. Poisons have not been considered for control purposes. Other areas where control has been necessary are the Peaceful Valley Ranch area and occasionally on the roadways that bisect the Beef Corral, Peaceful Valley and Johnson Plateau dog towns. With references to the latter areas, simple patching of the road surface disturbed by the burrow normally, albeit temporarily, resolves the problem. Due to the fact that these animals are potential carriers of disease (bubonic plague), and can also inflict a painful bite, "Do Not Feed The Prairie Dog" signs have been placed in appropriate locations, and a section has been devoted to this potential hazard in the safety "warning" handout. In addition, a short blurb concerning the prairie dog is included in the park mini-folder.

Results of Current Action

Current management action provides for a well interpreted, closely monitored resource. Prairie dogs are a favorite attraction in the park and continued conscientious effort to encourage their perpetuation and interpret their niche in the badlands environment is of significant importance. In addition, current action provides for continued research on the species and on-going inspections of town dynamics and population levels.

Recommended Course of Action

Current management action is recommended with additional emphasis placed on continued literature research. Specifically, studies are needed to clarify the relationship referred to in much of the literature between prairie dogs

and grazing animals (i.e. buffalo). According to Lendell, Mammals of Kansas, University of Kansas Publications, Museum of Natural History, Vol. 7, No. 1, Page 120. "Prairie dogs cannot live in soft ground or tall grass. Overgrazing of pastures and the packing of the soil by cattle directly contribute to the increase of prairie dogs by improving their habitat. A striking example of this was pointed out by Mead (1885 Notes on two Kansas mammals, Bull Washburn College Labortory National History, 1:91-92): "The great Chisholm Texas cattle-trail through the Indian territory, a hundred yards wide, became a Dogtown almost its entire distance." Furthermore, according to Mead 1899, the natural history notes of 1855 Trans Kansas Acadamy Science, 16: page 281, "Prairie dogs were innumerable. The divide between Saline and Solomon (Rivers) in Ellsworth County and west was a continuous dog town for miles; and, as a considerable portion of this locality was underlaid with horizontal beds of shale or limestone near the surface, it was a mystery where they got water. . . . . Prairie dogs, except a few remnants disappeared. The foot of the buffalo was necessary for their existence. As soon as the ground ceased to be tramped hard and the grass and weeds grew they perished." These excerpts would seem to indicate that the prairie dogs need help from grazing animals to maintain vegetation at low levels and soil at the required state of compaction.

A comparison of the total acreage recorded in 1965 and the total acreage shown in 1973 indicates a decrease of approximately 35% (1965-670 acres; 1973-433.75 acres). One explanation for this difference may be the fact that the 1965 survey measured an area of influence acreage, while the 1973 survey reflects

acreage containing active holes. Whatever the reason for the suspected drop, additional periodic measurement of town size is indicated and should be viewed as a high priority need. If, in fact, a definite dependance or interdependance is shown between grazing animals and the prairie dog, steps should be taken to either increase the park buffalo herd or take artificial measures (i.e. mowing, swathing) to insure required vegetative heights in dog towns. Investigation should continue to find an acceptable method of discouraging prairie dogs from expanding their domain to areas of high visitor use. Repellants or artificial barriers may provide an answer in this respect. Any abnormal change in town populations should be immediately studied for cause. Close observation should be continued for any sign of the black-footed ferret. This animal, once an important prairie dog predator, is believed extinct in the park. Observation of this animal should be immediately documented and reported to appropriate Fish & Wildlife agencies. Similarly, natural prairie dog predators should be closely monitored to insure that the present healthy relationships remain.

THEODORE ROOSEVELT NATIONAL MEMORIAL PARK

PRAIRIE DOG TOWNS

Name	Location	1965	1973	Increase
Beef Corral	Sec. 1,33 T140N R101W	136	74.8	
North of Creek	Sec. 32,33 T140N R101W		13.2	
Wind Canyon	Sec. 33 T141N R101W		30.53	
Total Beef Corral Area			118.53	-13.0%
Goens	Sec. 29 T140N R100W	105	104.3	- 0.7%
Mike Auney Bottom	Sec. 29,32 T141N R101W	37	36.2	- 2.0%
Halliday Wells	Sec. 12 T140N R101W	36	34.94	- 3.0%
Johnson Plateau	Sec. 14,23 T139, 140W	18	11.5	-36.0%
East Entrance	Sec. 28 T140N R101W	25	9.49	-62.0%
Peaceful Valley	Sec. 11 T140N R101W	5	9.09	82.0%
Big Plateau	Sec. 2 T140N R101W	20	7.58	-62.0%
Knudsoh Creek	Sec. 33 T141N R101W	1	5.02	402.0%
(North Unit)				
Hagan	Sec. 28,29,33 T148N R100W	156	40.47	-74.0%
~~Gorr~~ CORRAL CRK.	Sec. 16 T147N R100W	27	24.66	- 8.3%
Squaw Creek	Sec. 19 T148N R99W	69	21.72	-68.5%
TOTAL		635	423.50	-33.3%

Areas Surveyed Only in 1973

Name	Location	1965	1973	Increase
Martinson	Sec. 18 T140N R101W		1.72	
Smith	Sec. 6 T140N R101W		8.53	
TOTAL			10.25	

Areas Surveyed Only in 1965

Boicourt	Sec. 2 T140N R100W	19		
(North Unit) Oxbow	Sec. 34 T148N R100W	14		
Mandall	Sec. 5 T147N R100W	2		
TOTAL		35		

TOTAL (all areas surveyed)	670	433.75	-35%

Number of towns surveyed 1965 - 15
1973 - 14

Note: The 1965 survey reflects an area of influence acreage while the 1973 survey reflects only the acreage containing active holes.

PRAIRIE DOG TOWNS

INSTRUCTIONS FOR MAPPING

For resource management purposes it would be well to know the location, size and size flucuation of dog towns within the Park. The most accurate and convenient method to accomplish this is to locate and map each town. Towns can be located by flying, hiking and riding the area. Some small towns may be hidden in out of the way drainages and hard to find. To ensure finding each town it may be well to check with maintenance or outside people who frequent the Park.

Once a town is found and ready for locating and mapping the following procedure should be undertaken:

1. The man doing the mapping determines his pace. The length of pace is the distance covered in two steps. Right foot, left foot and stop on the right foot. To get an accurate average pace length, walk over varying terrain; grass, gravel and brush. Measure the distance covered in 50 paces or so and divide the distance by paces and you have the measurement of you pace. It would be best if one person did all the pacing in measuring and mapping.

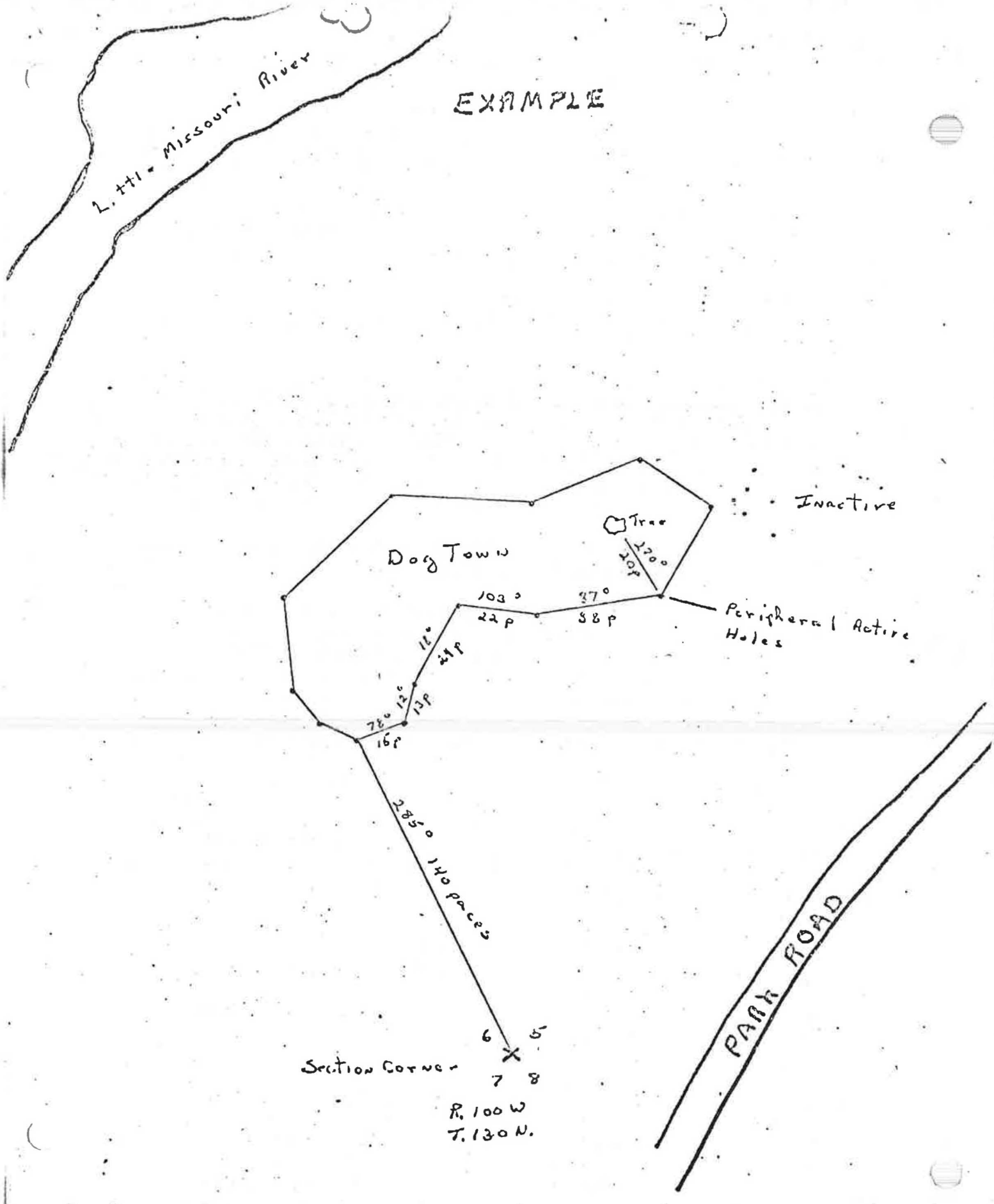
2. Head into the field with the following equipment: Survey compass, Jacob's staff, note book and pencil.

3. Locate some fixed point relatively close to the dog town. A section or quarter corner would be the best. Run a line, on bearing from this fixed point to the closest active dog hole. Pace the distance along this line logging the bearing and distance in the book. In measuring and mapping the dog town concern yourself only with the active holes. An active hole will have disturbed earth and fresh droppings around it. Inactive holes may be plugged or have spider webs across the entrance. Using this method of measurement we should arrive at a true measure of dog town acreage.

4. The man doing the mapping will now circumscribe the town taking bearings and pacing from active hole to active hole around the entire parimeter of the town. It may be well to locate some fixed reference point in or adjacent to the town for future reference. A large rock or lone tree would do nicely.

5. All the bearings and distances are now brought to the office and transcribed to scale on graph paper. With accurate field figures; bearings and distances, the map line on the graph paper should close nicely. The only remaining chore is counting the squares on the graph paper and using the scale determine the acreage. All maps will be kept in the District Office file.

Once all the dog towns have been located and mapped density figures may be assigned to establish the Park's dog population. Approximately every three years thereafter the towns should again be mapped to determine whether they are growing or shrinking. A watchful eye should be kept by all employees to locate new towns as they spring up and should new towns arise they should be located and mapped that year.


EXAMPLE
Little Missouri River
Inactive
Tree
Dog Town
120°
10p
103°
22p
37°
58p
Peripheral Active Holes
18°
24p
78°
16p
12°
13p
285° 140 paces
6
5
7
8
Section Corner
R. 100 W
T. 130 N.
PARK ROAD

DRAFT
MCOtt:plt 09/30/75

BUFFALO-BISON

Resource Description

The buffalo herds in the North and South Units of the park are, when considering wildlife resources, the areas most notable attraction. Presently, the estimated number of buffalo in the South Unit is 200; in the North Unit 85. In both units these animals are free roaming within the park boundaries. Bison were reintroduced into the South Unit of the park on December 14, 1956. This small herd which was made up of 12 mature cows, 12 yearling heifers, and 5 yearling bulls, was obtained from Fort Niobrara Wildlife Refuge in Nebraska. Before shipment, these animals were tested for brucellosis and no reactors were found. It is thought that the species of animals found within the park is most likely a cross between the American bison (bison bison bison) and the Wood bison (bison bison athabascae). It is interesting to note that the park herd is one of the only brucellosis free herds in existence. For this reason, demand from other agencies for breeding animals from this stock is high.

Present Management Action

Present management action provides for maintenance of the North Unit herd at 75 animals and the South Unit herd at 200 animals. Even though these figures are somewhat arbitrary, as no carrying capacity study has yet been accomplished, they were set to minimize the possibility of range depletion and also to reduce the possibility of escape

to private rangelands. Roundups are programmed on an every-other-year basis. At this time the excess animals are culled from the main herd and marked and loaded for shipment. Surplus animals are provided to other agencies: Indian tribes working through the Bureau of Indian Affairs, other Federal agencies, State agencies, county and local agencies. An ongoing management problem with this resource is that of escape and trespass onto the lands of neighboring ranchers. The four strand barbed wire fence that marks the boundaries of the park is not sufficient to hold bison. Even though incidents of escape usually involve a lone bull or perhaps several bulls traveling together, retrieval costs, fence repair, and other associated expenses are substantial. The frequency of escapes is, for some reason, higher in the North Unit than the South Unit. Several incidents of 30 to 50 buffalo leaving the park have been documented in recent years.

Results of Current Action

Current action provides for a free roaming, brucellosis-free herd. Not only do buffalo provide authenticity to the badlands scene, but their interrelationship with other typically plains animals could likely be termed essential. The fact that not all park visitors get the opportunity to view the buffalo in their natural surroundings may be considered unfortunate, but it is felt that attempts to restrain the animals to one specific area for viewing purposes would not only be contrary to National Park Service mandates but would detract from the resource integrity. Perhaps the single largest management problem relating to bison is their previously mentioned propensity to escape.

Associated costs of this problem, especially when taken over the long run, reflect a disproportionate percentage of the resource management budget.

Alternatives

It is recommended that until a range carrying capacity study is completed no change to current management action be initiated. It is felt the range in both the North and the South Units would easily accommodate a greater number of bison. However, until a scientific base is established considering range competitors (sheep, deer, antelope, wild horses, etc.) and other pertinent criteria, an increase in herd size would be unwise. Additionally, until acceptable fencing is constructed (seven foot woven wire), it is felt that maintaining a smaller herd size will minimize the frequency of escape. Buffalo roundups for the purpose of culling excess animals, vaccinating calves, and other research needs should continue on an every-other-year basis. Studies should be initiated and encouraged to determine the relationship of the prairie dog and bison. Testing should continue on a regular basis for brucellosis reactors within the herd. Not directly related to herd management, but an interesting follow-up, would be a continuing study to follow success rate of animals transported from this herd.

DRAFT
MCOtt:plt 09/30/75

EXOTIC PLANTS - NOXIOUS WEEDS

Resource Description

Notable exotic plant species within the park include yellow sweet-clover (Melilotus officinalis), Canada thistle (Circium aruense), field bindweed (Convolumlus arvensis), and leafy spurge (Euphorbia esula). Of these, the most widespread and certainly the plant with the greatest potential for damage to native plant life is leafy spurge. This plant is presently generally restricted to the west side of the Little Missouri River in the South Unit of the park. It has not yet been noted in any quantity in the North Unit. Spread of this weed west of the river in the South Unit has been rapid. At the end of the summer in 1970, it was estimated that the park contained approximately 32 acres of spurge. This was divided into 103 separate patches ranging in size from a few square feet up to three acres. At the present time an estimate of over 400 acres of infestation is most likely conservative. Areas with heaviest concentration are the entire Knutson Creek drainage, wooded draws and minor drainages leading to Knutson Creek, occasional patches on the Petrified Forest and Big Plateau, and the flood plain areas on each side of Knutson Creek. Spurge grows up to three feet high and bears numerous linear leaves. It blooms in late May and early June and bears a flat-topped cluster of small yellowish-green blossoms. It forms dense patches which usually crowd out other plants by shading and competition for

moisture. This plant has the capacity to quickly spread to other areas, as it reproduces by seeds and roots (an average stand produces between 200 and 400 pounds per acre), and its early, rapid and rank growth gives it a great competitive advantage over spring seeded crops and pasture plants.

Field bindweed is found thorughout the park but is generally restricted to road shoulders. It is a long-lived perennial vine that has an extensive root system. The plant has small white blossoms, and in areas of concentration produces a dense ground cover. Generally, this plant does not produce seeds freely under North Dakota conditions, and for this reason has not proved a real problem within the park. Similar to field bindweed, the rate of occurence of Canada thistle is not high. This plant is found in open fields, and waste areas in both districts of the park. It grows in patches, and is from one to three feet high. Thistle is a perennial plant with reddish-purple blossoms. The plant reproduces by underground root stocks.

Yellow sweet-clover is found along the road sides and in field areas in other areas of the park. The plant is two to five feet high, an annual or biennial and has small yellow blossoms. It is not classified as a noxious weed, and poses no management problems at this time, but since it is not native should be considered for management.

Present Management Action

At the present time, efforts are directed primarily at controlling leafy spurge. Beginning in late spring (usually the end of May) two employees are assigned the duty of spraying leafy spurge concentrations with the herbicide Tordon 22K at the rate of ½ gallon per acre. This treatment normally continues through July, or until the plants cease blossoming.

Other weed control action includes road and trail-side mowing during the summer months aimed primarily at keeping sweet clover and other grasses at a low level. This serves the two fold purpose of minimizing the chance of fire caused by a thrown cigarette, etc., and improves visibility along these travel routes.

Results of Current Action

Current management action is unacceptable for control of noxious weed species within the park. This is primarily the result of a termination of the weed control program in the park at the end of the summer of 1970. The reason for the discontinuance was apparently due to Tordon 22K being placed on the restricted list and the non-availability of alternate control chemicals. At the time of termination in 1970, it was estimated that the park contained approximately 32 acres of leafy spurge scattered in some 103 patches ranging in size from a few square feet to three acres. All but eleven of these patches were treated in 1970. In September of 1974 clearance was again received to use Tordon 22K, and in early June

a control program was initiated. Nearly $6,000 was programmed for chemicals, horse rental, hand sprayers, miscellaneous equipment, and personal services for the 1975 season. Similar to the previous program, work was to be accomplished by a two person team. A total of 144 person-days was scheduled for the summer project. The results of the coverage of this summer's labor was disappointing. At the present time it is estimated that there is still over 400 acres of spurge infested land in the South Unit. It was just too big a project for our programmed capabilities.

This acreage is broken up into innumerable patches of varying sizes. The preponderance on the new growth is in the Knutson Creek drainage on the west side of the Little Missouri River, but the plant has proliferated to other areas as well. The end result is that the present manpower and equipment allocations programmed to deal with this problem are inadequate. The work crew is able to make only a token effort towards the weed's eradication and practical control of the weed's spread is not being approached. Control of field bindweed and Canada thistle is not as pressing a need, and the concentration and spread of these plants is not as great as that of the spurge. Some eradication of Canada thistle patches is accomplished, however, by the spurge eradication crew. Since field bindweed is found primarily along road shoulders, roadside mowing is used to keep the creeping vine-like plant in check. Sweet clover has not been classified a noxious weed and therefore no program has been considered at the present time for its control.

DRAFT
MCOtt:plt 10/14/75

ALTERNATIVES

1. No Action - This alternative does not consider the North Dakota state law requiring landowners to control the spread of noxious weeds on lands under their control. It does, however, provide for the perpetuation of natural biological processes. Even though the subject noxious weed species cannot be termed natural as that phrase relates to this area during Theodore Roosevelt's time, they can be viewed as part of the total picture of plant survival and competition. This option, in effect, will treat noxious weeds as part of a natural system and any management action will be restricted to monitoring plant spread and growth patterns..

2. Study and Research - This alternative would be an immediate and perhaps only temporary measure, used to further investigate and determine the best possible route to take in noxious weed control and/or eradication. A number of approaches could be experimented with in this respect. Exclosures using rodent and bird proof fine mesh fencing to exclude outside influence could be constructed to determine spurge growth and tolerance levels on a long term basis. Alternate methods of control including natural measures could be further studied. The long-term effects of Tordon 22K on other plants and animal species could certainly be further researched. The effects of grassland range fire in areas of heavy plant concentration might well be monitored as a corollary to

to natural control measures. This option would be one of information gathering and an expanded program of study and research that would hopefully provide the resource manager with a number of viable methods of weed control, or perhaps the alternative of no control. Even though the possibility of soliciting the assistance of graduate students for study purposes would appear high, it is anticipated that extra costs incurred in this program would be substantial. Fencing for exclosures, transportation costs, supplies and materials, and other associated expenses would result in funding over programmed amounts.

3. Expanded Control Program - A memorandum dated July 23, 1975, to the Regional Director of Rocky Mountain Region signed by the park Superintendent outlines an expanded program of noxious weed control. Basically, this plan calls for control of leafy spurge as a total eradication program is not practical in terms of funds and person power. An accelerated program for 1976 would call for funding in the neighborhood of $32,000. This amount would provide three teams of three people in the field for two and a half months during the summer. It would also include horse rental, chemicals and associated equipment. It is estimated that each team could cover two acres of spurge per day and thus all three teams could treat approximately 300 acres over the course of the summer. The following year, depending upon the success of the 1976 treatment, two three person teams should be able to control the regrowth and new infestations. In 1978, if all goes as planned, one three-person team would be sufficient to control any new infesta-

tions. After the summer of 1978 a team for monitoring and spot spraying should be all that is necessary to hold and control the spread of spurge within the park boundaries.

RECOMMENDED COURSE OF ACTION

Based on present knowledge of leafy spurge and considering the demonstrated speed with which the plant can spread, it is recommended that an accelerated program of eradication be undertaken. An important consideration in this respect is the fact that both districts of the park are surrounded by private ranches and National Grasslands where control efforts are being maintained. By ignoring the spread of spurge and other noxious weed within the park lands and allowing the seed source to go unchecked would be harmful not only to park grazing lands but also to those bordering the park. The only animal that has been observed to graze on spurge is domestic sheep. If the plant is allowed to crowd out areas of grass and browse, the usable range of certain park wildlife will correspondingly be reduced. Simultaneous efforts should also be directed to alternate control methods. Active solicitation of graduate students interested in research of this type should continue. A study plot of spurge infestation should be immediately isolated for research purposes i.e. fire management, insect control, etc.

In this same area, alternate chemical controls should be investigated. Essentially, the combination of alternative #1 and #2 is recommended for effective weed management. It is recognized that for the present some

control efforts should be maintained, but it also clear that exotic weed control research is lacking and the manager's understanding of this subject is far from complete. If funding levels prohibit a plan of this nature, it is recommended that the present program be continued with emphasis placed on heavy use areas and other locations where weed encroachment cannot be tolerated. Monitoring of other noxious weed species should be continued and large concentrations should be treated by spurge crews.

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WILDLIFE - CARNIVORES Section

Resource Description

Both the North and South Units of the park have resident populations of the following species: 1) coyote; 2) bobcat; 3) fox; 4) badger; 5) weasel. The lynx is an infrequent visitor and the cougar is occasionally reported. These animals range freely throughout the park, but are not restricted to its confines. Totally accurate population counts on these species are not available, but all excepting the lynx, cougar, and weasel appear to be fairly numerous. Yearly animal estimated census reports show fairly stable population levels, with no dramatic changes noted over the past decade.

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DEVELOPED WATER Section

Alternatives

2. Replace Present Tanks (recommended): Since stock watering tanks have shown their usefulness in dispersing utilization of forage, their continued need is apparent. However, considering the condition of the existing tanks, it is recommended that they be replaced with more durable, trouble-free units. The possibility of installing fiberglass tanks, with PVC or plastic pipes should be investigated. Tanks and plumbing of this material would not be subject to corrosion, and would very likely withstand temperature changes more satisfactorily than the cement units. In any program to replace the deteriorating cement tanks, every effort will be made to keep the new devices as unobtrusive as possible. Additional management should include periodic inspection to determine relative use and/or maintenance needs.

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Theodore Roosevelt National Memorial Park

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