

# APPENDIX A: LEGISLATION

# VI. LEGISLATION RELATING TO NATIONAL MEMORIAL PARK

# 1. Theodore Roosevelt National Memorial Park

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An Act To establish the Theodore Roosevelt National Memorial Park; to erect a monument in memory of Theodore Roosevelt in the village of Medora, North Dakota; and for other purposes, approved April 25, 1947 (61 Stat. 52)

Be it exacted by the Senate and House of Representatives of the United States of America in Congress assembled, That all those certain tracts, pieces, or parcels recodore of land, title to which is vested in the United States of Rosercit America, and being in the State of North Dakota, and morial Park within the boundaries particularly described, as follows, to wit: Beginning at the point where the north line of the right-of-way of United States Highway Numbered 10 intersects the east boundary of section 36, township 140 north, range 101 west, fifth principal meridian; thence southwesterly and northwesterly along the north line of said right-of-way through section 1, township 139 north, range 101 west, and sections, 36, 35, 34, 27, 28, and 29, township 140 north, range 101 west, to the west boundary of said section 29; north along section lines to the north-west corner of said section 29; west along section line to the southwest corner of section 19, township 140 north, range 101 west; north along township line to the southeast corner of the northeast quarter of the northeast

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quarter of section 24, township 140 north, range 102 west: west to the southwest corner of the northeast quarter of the northeast quarter of said section 21; north to the northwest corner of the northeast quarter of the northeast quarter of said section 21; westerly along section lines to the southwest corner of section 16, township 110 north, range 102 west; northerly along section lines to the northwest corner of section 4, township 140 north, range 102 west; thence west along township line to the southwest corner of the southeast quarter of section 34, township 141 north, range 102 west; northerly through the center of sections 3: and 27 to the northwest corner of the northeast quarter of section 27 of said township 141 north, range 102 west: easterly along section lines to the northeast corner of rection 28, township 141 north, range 101 west; south along section lines to the southeast corner of said section 28; east along section line to the northeast corner of section 34, township 141 north, range 101 west; south to the northwest corner of the southwest quarter of section 35, township 141 north, range 101 west; easterly through center of sections 35 and 36 to the northeast corner of the southeast quarter of said section 36 of said township 141 north, range 101 west; south to the southeast corner of said section 36; thence east along township line to the northeast corner of lot 3, section 2, township 140 north, range 10! west; southerly through the center of sections 2 and 11 to the southeast corner of the southwest quarter of said section 11, township 140 north, range 101 west; easterly along section lines to the northeast corner of section 13 of said township 140 north, range 101 west; southerly along township line to the northwest corner of section 19, township 140 north, range 100 west; casterly along north line of said section 19 to the northeast corner of the northwest quarter; southerly through center of sections 19, 30, and 31 to the northwest corner of the southeast quarter of section 31; easterly along the center of said section 31 to the northeast corner of the southeast quarter; southerly along the east line of said section 31 to the southeast corner; westerly along the township line to the east line of section 36, township 140 north, range 101 west; northerly along the township line between townships 140 north, range 100 west and 140 north, range 101 west to the north right-of-way line of United States Highway Numbered 10, the place of beginning, containing thirty-live thousand two hundred and seventy acres, more or less, are hereby dedicated and set apart as a public park for the benefit and enjoyment of the people, and shall be known as the Theodore Roosevelt National Memorial Park. The Secretary of the Interior is authorized, in his discretion, to construct and maintain a road or highway through the park connecting with a State or Federal highway. (16 U.S.C. § 241 as amended. See pp. 208-310, 312-313.)

Construction, etc., of highway.

SEC. 2. The Secretary of the Interior is hereby author. Acquisition of ized to cause condemnation proceedings to be instituted etc. in the name of the United States under the provisions of the Act of August 1, 1858, entitled "An Act to authorize the condemnation of lands for sites for public buildings, and other purposes" (25 Stat. 357), to acquire title to the lands, interests therein, or rights pertaining thereto that are privately owned within the boundaries of the said national park, and such property, when acquired, shall become a part thereof: Provided, That when the owner of such lands, interests therein, or rights pertaining thereto shall fix a price for the same, which, in the opinion of the Secretary of the Interior, shall be reasonable, the Secretary may purchase the same without further delay: Provided further, That the Secretary of the Donations. Interior is authorized to accept, on behalf of the United States, donations of land, interests therein, or rights pertaining thereto required for the Theodore Roosevelt National Memorial Park: And provided further, That Titles, etc. title and evidence of title to land and interests therein acquired for said park chall be satisfactory to the Attorney General. (16 U.S.C § 242.)

Sec. 3. That for the purposes of acquiring non-Fed- Exchange of eral lands within the boundaries of said park as established by this Act, the Secretary of the Interior is hereby authorized, in his discretion, to exchange federally owned lands within the Roosevelt recreational demonstration area project, located outside the boundaries of the park for State or privately owned lands of approximately equal value within the boundaries of the park, when in his opinion such action is in the interest of the United States, the title to any lands acquired under this section to be satisfactory to the Attorney General. Upon the vesting of title thereto in the United States, any lands acquired pursuant to this authorization shall become a part of the park and shall be subject to the

laws applicable thereto. (16 U.S.C. § 243.) SEC. 4. The Secretary of the Interior is further authorized to obtain by purchase or condemnation pro-ceedings, as part of said Theodore Roosevelt National Memorial Park, lots 2, 3, 4, and 6 of section 33, township 144, range 102, and to reconstruct thereon the log ranch house thirty by sixty feet, the log blacksmith shop sixteen by twenty feet, one log stable sixteen by twenty feet, one log stable twenty by thirty feet, log dog house, three log rectangular corrals, and one log circular corral, as they existed at the time the premises were occupied by Theodore Roosevelt: Provided, That the total cost of such Cost limitation. land and buildings shall not exceed \$40,000. (16 U.S.C. § 244 as amended. See p. 311.)

SEC. 5. The administration, protection, and develoption, etc., of
ment of the aforesaid park shall be exercised under the
park.

Acquisition of lots for recon-struction of

N. Dak. Erection of Donument

Cost limitation.

Care and JPkecp.

Existing clains, etc.

Appropriations othorized.

direction of the Secretary of the Interior by the National Park Service, subject to the provisions of the Act of U.S.C. 1485; August 25, 1916 (39 Stat. 535), entitled "An Act to establish a National Park Service, and for other purposes", as amended. (16 U.S.C. § 245.)

Sec. 6. The Secretary of the Interior is authorized to erect a monument in memory of Theodore Roosevelt, in the village of Medora, North Dakota, with the advice of the Commission of Fine Arts: Provided, That the cost of the monument shall not exceed \$55,000 and there shall be conveyed to the United States such suitable site as may in the judgment of the Secretary be required for said monument: Provided jurther, That the village of Medora, or other public agency or organization, shall furnish, in writing, assurance satisfactory to the Secretary of its willingness to assume the perpetual care and upkeep of the monument. (Repealed, 16 U.S.C. § 246. Sec p. 311.)

Sec. 7. That nothing herein contained shall affect any valid existing claim, location, or entry under the land laws of the United States, whether for homestead, mineral, right-of-way, or any other purposes whatsoever, or shall affect the right of any such claimant, locator, or entryman to the full use and enjoyment of his land. (16 U.S.C. § 247.)

SEC. 8. There are authorized to be appropriated such sums as may be necessary to carry out the provisions of this Act. (16 U.S.C. § 241 note.)

An Act To amend the Act of April 25, 1917, relating to the establishment of the Theodore Roosevelt National Memorial Park, and for other purposes, approved June 10, 1918 (62 Stat. 352)

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the Act of April 25, 1947, is hereby amended as follows:

Amend section 1 to read "That all those certain tracts, pieces, or parcels of land, title to which is vested in the United States of America, and being in the State of North Dakota, and within the boundaries particularly described, as follows, to wit: Beginning at the point where the north line of the right-of-way of United States Highway Numbered 10 intersects the east boundary of section 36, township 140 north, range 101 west, fifth principal meridian; thence southwesterly and northwesterly along the north line of said right-of-way through section 1, township 139 north, range 101 west, and sections 36, 35, 34, 27, 28, 29, and 30, township 140 north, range 101 west; thence northwesterly and southwesterly along the north line of the right-of-way of said highway to be relocated as shown on the right-of-way plat for project SAFAP 283C(3) filed for record in the office of the register of

Theodore Roosevelt National Me morial Park. 61 Stat. 52. 16 U.S.C., Supp. I, § 241. Post, pp. 384, 1102. deeds, Medora, North Dakota, back numbered 2 of plats, page 68, on June 13, 1912, through section 25 and the east half of the northeast quarter of section 26, township 140 north, range 102 west, to the point of intersection with the east sixteenth section line of said section 26; thence nort!, along the sixteenth section line to the northwest corner of the northeast quarter of the northeast quarter of said section 26; thence northwesterly along a line to the northwest corner of the southwest quarter of the southeast quarter of section 23, township 140 north, range 102 west; thence westerly along the sixteenth section line to the northeast corner of the southeast quarter of the southeast quarter of section 22; township 140 north, range 102 west; thence southerly along the east section line to the southeast corner of said section 22; thence westerly along the south line of said section 22 to the point of intersection with the right bank of the Little Missouri River; thence northerly and westerly along the right bank of said river to the point of intersection with the cast line of section 21, township 140 north, range 102 west; thence southerly along the east line of said section 21, to the intersection with the north line of the right-ofway of the Northern Pacific Railway, which point lies north of said United States Highway Numbered 10; thence westerly along the north line of said right-of-way to the point of interaction with the north line of the right-of-way of said United States Highway Numbered 10; thence westerly along the north line of the right-ofway of said highway through said section 21 to the intersection with the west I'me of said section 21; thence northerly along the west line of said section 21, and sections 16 and 9, thence continuing northerly to the southeast corner of Government lot 9, section 5, township 140 north, range 102 west; thence northwesterly to the northwest corner of Government lot 2 in said section 5; thence westerly to the southwest corner of the southeast quarter of section 34, township 141 north, range 102 west; thence northerly along the quarter section line to the northwest corner of the said southeast quarter of section 34; thence northwesterly along a line to the southwest corner of section 27, township 141 north, range 102 west; thence northerly along the west line of said section 27, to the southwest corner of the northwest quarter of said section 27; thence northeasterly along a line to the southwest corner of the southeast quarter of section 22, township 141 north, range 102 west; thence continuing northeasterly along a line to the southwest corner of the northwest quarter of section 22, township 141 north, range 102 west; thence continuing northeasterly along a line to the northeast corner of said northwest quarter of section 23; thence easterly along the north lines of said section 23, and section 24, township 141 north, range 102 west; to

the northwest corner of section 19, township 141 north range 101 west; thence continuing easterly along the north line of said section 19 to the northwest corner of the northeast quarter of said section 19; thence southeasterly along a line to the north west corner of the southwest quarter of the southwest quarter of the northwest quarter of section 20, townshi ) 141 north, range 101 west; thence southerly along the west line of said section 20 to the northwest corner of the southwest quarter of section 20; thence easterly to the northwest corner of the southeast quarter of section 20: thence southerly to the southwest corner of the southeast quarter of said section 20; thence easterly along the north lines of section 29 and section 28, to the northeast corner of section 28. township 141 north, range 101 west; thence southerly along the west line of section 27, township 141 north, range 101 west, to the south west corner of said section 27; thence easterly along the north lines of sections 34, 35, and 36 to the northeast corner of section 36, township 141 north, range 101 west; thence southerly along the east line of said section 36 to the southwest corner of section 31, township 141 north, range 100 west; thence easterly to the southeast corner of said section 31; thence southeasterly along a line to the northwest corner of Government lot 7 of section 2, township 140 north, range 101 west; thence continuing southeasterly along a line to the northwest corner of the scuthwest quarter of section 1, township 140 north, range 101 west: thence continuing southeasterly along a line to the northwest corner of the northeast quarter of section 12, township 140 north, range 101 west; thence continuing southeasterly along a line to the northwest corner of the southwest quarter of section 7, township 140 north, range 100 west; thence easterly along the quarter section line to the northwest corner of the southeast quarter of said section 7; thence southeasterly along a line to the northwest corner of section 17, township 140 north, range 100 west; thence continuing southeasterly along a line to a point which is 33 feet west of the east line of said section 17, and 33 feet north of the south line of said section 1 thence southerly on a line which lies 33 feet west of and parallel to the east lines of sections 20, 29, and 32 of township 140 north, range 100 west, to the point of intersection with the north right-of-way line of United States Highway Numbered 10; thence westerly along the north line of said right-ofway through said sections 32 and 31, township 140 north, range 100 west, to the point of intersection with the east boundary of section 36, township 140 north, range 101 west, the place of beginning, containing forty-nine thousand one hundred and fifty-three and seventy-nine onehundredths acres more or less." (16 U.S.C. § 241. See pp. 305-306, 312-313.)

Amend section 1 by striking out "lots 2, 3, 4, and 6 of 61 Stat 54 section 33, township 144, range 102," and inserring in lieu thereof "lots 6 and 7, section 33, township 141 north. range 102 west; southeast quarter of southwest quarter, section 32, township 144 north, range 102 west; lots 4 and 5, section 4, township 140, range 102 west; and those parts of lot 1 and the southeast quarter of the northeast quarter, section 5, township 143 north, range 162 west, that lie north and east of a line running diagonally from the northwest corner of said lot 1 to the southeast corner of the southeast quarter of the northeast quarter of said section 5,". (16 U.S.C. § 241. Sec p. 307.)

Strike out all of section 6 and renumber the remaining sections accordingly. (16 U.S.C. § 246. See p. 308.)

SEC. 2. Administrative jurisdiction over any of such Convergance to lands that the Secretary of the Interior finds are not required for exchange purposes as herein provided may be conveyed to other Federal agencies by the Secretary of the Interior without exchange of funds, or if such lands are not required by other Federal agencies they may be conveyed to the State of North Dakota without reimbursement to the United States. (16 U.S.C. § 241 note.)

An Act To add certain lands to the Theodore Rocsevelt National Memorial Park, in the State of North Dakota, and for other purposes, approved June 12, 1945 (62 Stat. 384)

tives of the United States of America in Congress asmade a part of the Theodore Roosevelt National Me- post, p. 110. morial Park, subject to all laws and regulations ap-

plicable thereto:

Beginning at the southwest corner of section 17, township 147 north, range 100 west; thence north along the west boundaries of sections 17, 8, 5, township 147 north, range 100 west, and section 32 to the southwest corner of section 29, township 148 north, range 100 west; thence east to the southwest corner of the southeast quarter of section 29; thence north to the northwest corner of the southwest quarter of the northeast quarter of section 29; thence east to the northeast or rner of the southeast quarter of the northeast quarter of section 29; thence north along west boundary of sections 28 and 21 to the west quarter corner of section 21; thence east to the east quarter corner of section 21; thence north along west boundary of section 22 to the northwest corner of section 22; thence east along the north boundaries of sections 22, 23, 24, township 148 north, range 100 west and sections 19 and 20 to the north quarter corner of section 20, township 148 north, range 99 west; thence south to the northwest corner of the southeast quarter of section 20; thence east to the east quarter corner of section 20; thence south

61 Stat. 54.

to the southeast corner of section 20; thence along the north boundaries of sections 28, 27, and 26, township 148 north, range 99 west, to the northeast corner of section 26; thence south a ong east boundaries of sections 26 and 35 to the cast quarter corner of section 35, township 148 north, range 99 west; thence west to the north bank of Little Missouri R.ver; thence following the north bank of the Little Misseuri River in a generally westerly direction to where the north bank of the river crosses the north boundary of section 4, township 147 north, range 99 west; thence west to the northwest corner of section 4; thence south to the southcast corner of section 5; thence west along the south boundaries of sections 5 and 6, township 147 north, range 99 west, and section 1, township 147 north, range 100 west to the northeast corner of section 11; thence south along east boundaries of sections 11 and 14 to the southeast corner of section 14; thence west along the south boundaries of sections 14, 15, 16, and 17 to the point of beginning, all west of the fifth principal meridian. (16 U.S.C. §241a.)

Acquisition of Bon-Federal land.

Right-of-way

Administrative jurisdiction.

Sec. 2. That for the purposes of acquiring non-Federal lands within the boundaries of said park as established by this Act, the Secretary of the Interior is hereby authorized, in his discretion, to exchange federally owned lands within sections 1, 12, and 13, township 148 north, range 100 west, and sections 6, 7, and 18, township 145 north, range 99 west. Reserving, however, to the stockmen of the surrounding area a perpetual rightof-way through the park for the trailing of livestock, to and from the railroad, along and adjacent to the Little Missouri River, being the same trail or route which has been used by the stockmen for that purpose since the beginning of the livestock industry in the area. Administrative jurisdiction over any of such lands that the Secretary of the Interior finds are not required for exchange purposes as herein provided may be conveyed to other Federal agencies by the Secretary of the Interior without exchange of furds, or if such lands are not required by other Federal agencies they may be conveyed to the State of North Dakota without reimbursement to the United States. (16 U.S.C. § 241b.)

Joint Resolution Correcting Act establishing the Theodore Roosevelt National Memorial Park, as amended, approved June 29, 1948 (62 Stat. 1102)

Theodore Windowski Rossevelt Notional Memorial Park. 61 Stat. 52. Antr., pp. 552. I Stat.

Whereas a clerical or printer's error by omission of words appears in section 1 of Public Law Numbered 620 amending the Act of April 25, 1947, establishing the Theodore Roosevelt National Memorial Park: Therefore be it

Resolved by the Senate and House of Representatives of the United States of America in Congress assembled,

That section 1 of the Act of April 25, 1917, establishing the Theodore Roosevelt National Memorial Park as amended by Public Law Numbered 520 be further amended by striking out the period at the end of section 1 and inserting the following: ", are hereby dedicated and set apart as a public rark for the benefit and enjoyment of the people, and shall be known as the Theodore Roosevelt National Memorial Park. The Secretary Construction of of the Interior is authorized, in his discretion, to construct and maintain a road or highway through the park connecting with a State or Federal highway." (See 16 U.S.C. § 241 note. See pp. 308-310.)

Joint Resolution To establish a commission for the celebration of the one-hundredth anniversary of the birth of Theodore Roosevelt, approved July 25, 1955 (69 Stat. 353)

Resolved by the Senate and House of Representatives of the United States of America in Congress assembled, That there is hereby established a commission to be Theodore known as the Theodore Roosevalt Centennial Commis- Centennial sion (hereinafter referred to as the "Commission") which shall be composed of fifteen Commissioners as follows: The President of the United States, the President of the Senate, and the Speaker of the House of Representatives, all ex officio, and eight persons to be appointed by the President of the United States, two Senators to be appointed by the President of the Senate, and two Representatives to be appointed by the Speaker

of the House of Representatives.

Sec. 2. It shall be the duty of the Commission, after announcement to the American people of its creation and purpose, to prepare plens and a program for signalizing the one hundredth anniversary of the birth of Theodore Roosevelt in the year 1958, including plans for the completion of the development of Theodore Roosevelt Island in the Potomac River in accordance with the Act entitled "An Act to establish a memorial to Theodore Roosevelt in the National Capital," approved May 21, 1932 (47 Stat. 163) as amended by the Act approved 126, 174-February 11, 1933 (47 Stat. 799), and including the completion of the development of Theodore Roosevelt National Memorial Park in North Dakota, created by the Act of April 25, 1947 (61 Stat. 52), as amended. In 16 U.S.C. 211preparing such plans and program, the Commission shall give due consideration to any plan which may be submitted to it, and shall take such steps as may be necessary to coordinate and correlate its plans with those prepared by State or civic bodies. If the participation of other nations in the commemoration is deemed advisable, the Commission may communicate to that end with the governments of such nations through the State Department.

677-347-63-21

Establishn ent

Sec. 3. (a) The Commission shall select a Chairman and a Vice Chairman from among its members, and may employ, without regard to the civil-service laws or the Classification Act of 1949, such employees as may be

necessary in carrying out its functions.

(b) Service of an individual as a member of the Commission shall not be considered as service or employment bringing such individual within the provisions of section 216, 281, 283, 284, 434, or 1914 of title 18 of the United States Code, or section 190 of the Revised Statutes (5 U.S.C. 99) or section 412 of the Mutual Defense Assistance Act of 1949 (22 U.S.C. 1584); nor shall any member of the Commission by reason of his status as such be deemed to be an "officer of the Government" within the meaning of the Act of April 27, 1916 (5 U.S.C. 101.)

89 Stat. 54.

62 Stat. 694.

63 Stat 721

SEC. 4. The Commissioners shall serve without compensation, but may be reimbursed for expenses incurred by them in carrying out the duties of the Commission.

SEC. 5. When the Commission has approved a plan of celebration, it shall submit it, insofar as it relates to the fine arts, to the Commission of Fine Arts for its

approval

Perert to Sec. 6. The Commission shall, on or before March 1, Congress 1956, make a report to the Congress in order that further enabling legislation may be enacted.

Appropriation.

Expiration

Sec. 7. There are hereby authorized to be appropriated such sums as may be necessary to carry out the provisions of this joint resolution, but in no event shall the sums hereby authorized to be appropriated exceed a

total of \$10,000.

SEC. 8. The Commission shall expire upon the completion of its duties, but in no event later than October 27.

An Act To revise the boundaries of the Theodore Roosevelt National Memorial Park, in the State of North Dakota, and for other purposes, approved March 24, 1956 (70 Stat. 55)

Theodore Roosevelt National Me-morial Park Boundaries.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled. That the following-described lands are hereby made a part of the Theodore Roosevelt National Memorial Park, subject to all laws and regulations applicable thereto: Beginning at a point in block 11 of the village of Medora, North Dakota, said point being on the northerly right-of-way line of Third Avenue a distance of 160 feet westerly from the northwest corner of the intersection of Third Avenue and Main Street; thence northerly a distance of 140 feet to a point on a line parallel to and 160 feet westerly of the westerly right-of-way line of Main Street; thence easterly 10 feet along a line parallel to and 140 feet northerly of the northerly right-of-way line of Third Avenue to a point

150 feet westerly of the verterly right-of-way line of Main Street; thence north rly 20 feet along a line parallel to and 150 feet westerly of the westerly right-ofway line of Main Street to a point on a line parallel to and 160 feet northerly of the northerly right-of-way line of Third Avenue; thence casterly along said line a distance of 150 feet to a point on the westerly right-of-way line of Main Street: thence northerly a distance of 40 feet along said westerly right-of-way line of Main Street to a point 200 feet northerly from the northwest corner of the intersection of Third Avenue and Main Street; thence easterly along a line parallel to and 200 feet northerly of the northerly right-of-way line of Third Avenue a distance of 970 feet to the northwesterly corner of lot 3 in block 8; thence southerly along the westerly line of lots 3 to 10, inclusive, in block 8 a distance of 200 feet to a point on the nartherly right-of-way line of Third Avenue; thence along the northerly right-of-way line of Third Avenue extended easterly to a point on the west sixteenth line of section 26; thence northerly along said sixteenth line to a point on the section line common to sections 23 and 26; theme westerly along said section line to a point which is 650 fect easterly of the section corner common to sections 22, 23, 26, and 27; thence northerly along a line parallel to and 600 feet easterly from the section line common to sections 22 and 23 to a point on the south sixteenth line of section 23; thence westerly along said sixteenth line a distance of 600 feet to a point on the section line common to sections 22 and 23; thence southerly along said section line to the section corner common to sections 22, 23, 26, and 27; thence southerly along the section line common to sections 26 and 27 a distance of 390.5 feet; thence westerly a distance of 421.7 feet to a point on a line parallel to and 890.5 feet southerly from the section line common to sections 22 and 27; thence southerly a distance of 360 feet to a point in block 4 on a line parallel to and 150 feet westerly from the westerly right-of-way line of Main Street extended northerly; thence southwesterly on a straight line through the southwesterly corner of block 4 to a point on the southerly right-of-way line of Second Avenue extended westerly; thence westerly along said westerly extension of the southerly right-of-way line of Second Avenue to a point on the northeasterly right-ofway line of United States Highway Numbered 10; thence southeasterly along said northeasterly right-ofway line of United States Highway Numbered 10 to the intersection or juncture of said right-of-way line with the northerly right-of-way line of Third Avenue; thence easterly to the point of beginning; and all of that part of block 12 in the village of Medora that lies westerly of a line parallel to and westerly a distance of 140 feet Riock 6,

from the westerly right-of-way line of Main Street; all in township 140 north, range 102 west, fifth principal meridian: Provided. That the lands and improvements thereon located in block 6 in the village of Medora now administered and used by the United States Forest. Service, Department of Agriculture, shall not become a part of the park pursuant to this section until such time as they are transferred to the Department of the Interior by the Secretary of Agriculture. (16 U.S.C. § 241c.)

Exclusion.

SEC. 2. The following area is hereby excluded from the park: That portion of section 8 lying southwest of a line between the common corner of sections 6, 9, 16, and 17 and the northwest corner of the southwest quarter section 8; that portion of section 16 lying southwest of a line between the southeast corner southwest quarter and the northwest corner southwest quarter section 16; and section 17, township 147 north, range 100 west, fifth principal meridian, North Dakota. (16 U.S.C. § 241a.)

Boundary ad-

SEC. 3. The Secretary of the Interior is authorized to make further adjustments in the boundaries of the park along United States Highways Numbered 10 and 85 as he deems advisable and in the public interest if and when the alinement of these highways is changed: Provided, That not to exceed five hundred acres may be added to the park and not to exceed two thousand acres may be excluded from the park by such adjustments. Boundary adjustments made pursuant to this section shall be effective upon publication thereof in the Federal Register and all Federal land excluded from the park pursuant to this Act shall be transferred to the Secretary of Agriculture for administration or disposition in accordance with title III of the Bankhead-Jones Farm Tenant Acc.

Publication in FR.

(16 U.S.C. § 241e.)
SEC. 4. The land exchange authority relating to Theodore Roosevelt National Memorial Park prescribed by section 3 of the Act of April 25, 1947 (61 Stat. 52), and by section 2 of the Act of June 12, 1948 (62 Stat. 384), shall be applicable also to the lands described in section 1 of this Act. (16 U.S.C. § 241f.)

50 Stat. 525. 7 U.S.C. 1010-1013 Exchange authority.

> Excerpt from "An Act Making supplemental appropriations for the fiscal year ending June 30, 1957, and for other purposes," approved July 31, 1956 (70 Stat. 763, 767)

61 Stat. 84. 16 U.S.C. 243. 211h

> Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the following sums are appropriated, out of any money in the Treasury not otherwise appropriated, to supply supplemental appropriations (this Act may be cited as the "Second Supplemental Appropriation Act, 1957") for the fiscal year ending June 30, 1957, and for other purposes, namely:

Second Supplemental Appropriation Act, 1957.

. . . . .

### THEODORE ROOSEVELT CENTENNIAL COMMISSION

For an additional amount for "Theodore Roosevelt Centennial Commission," \$160,400, to remain available until expended: Provided, That this paragraph shall become effective only upon the enactment into law of S. 33SG, Eighty-fourth Congress.

An Act To amend the joint resolution entitled "Joint Resolution to establish a commission for the celebration of the one hundredth anniversary of the birth of Theodore Roosevelt," approved July 28, 1955, approved August 6, 1956 (70 Stat. 1035)

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That section 7 of the joint resolution entitled Theodore "Joint resolution to establish a commission for the cele- celebration. bration of the one hundredth anniversary of the birth of Theodore Roosevelt", approved July 28, 1955, is amended to read as follows:

"Sec. 7. There is hereby authorized to be appropriated appropriation. not to exceed the sum of \$150,000 to carry out the provisions of this joint resolution."

Joint Resolution To authorize and request the President to" issue a proclamation in connection with the centennial of the birth of Theodore Roosevelt, approved September 4, 1957 (71 Stat 617)

Resolved by the Senate and House of Representatives of the United States of America in Congress assembled, That the joint resolution entitled, "Joint resolution to establish a commission for the celebration of the one hundredth anniversary of the birth of Theodore Roosevolt", approved July 28, 1955 (69 Stat. 348), is amended by adding at the end thereof the following new section:

"Sec. 9. The President is arthorized and requested to issue a proclamation, inviting the people of the United States to observe the centennial anniversary of the birth of Theodore Roosevelt, which will occur in 1958, with appropriate ceremonies and activities during that year."

An Act To authorize the Secretary of the Interior to provide water and sewage disposal facilities to the Medora area adjoin-ing the Theodore Roosevelt National Memorial Park, North Dakota, and for other purposes, approved August 31, 1961 (75 Stat 423)

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled. That in order to afford adequate facilities to persons visiting Theodore Roosevelt National Memorial National Me Park, and to enhance the setting of the park entrance and N. Dak. further the interpretive program of the park through encouraging the preservation and restoration of the pioneer cattle town of Medora, North Dakota, and its associations with Theodore Roosevelt, by non-Federal endeavors in accordance with house concurrent resolutions

Theodore Centennial Commission.

Proclamation.

Theodore Roosevelt

"T" and "U" of the 1959 Session Laws of the State of North Dakota, pages 878 and 879, the Secretary of the Interior is authorized to modernize the water and sewage facilities of the village of Medora adjoining the park, in the manner here nafter provided.

Medora, N. Dak Water and sewage facilities.

SEC. 2. The Secretary of the Interior is authorized to construct, operate, and maintain, on rights-of-way donated for the purpose and in such manner as he shall consider to be in the public interest, water supply and sewage disposal systems to serve Federal and non-Federal propert es in the said Merlora area, and he may make existing Federal systems available to serve such properties: Provided, That non-Federal users of the systems shall comply with standards of use prescribed by the Secretary and shall be charged rates sufficient to recover a pro rata share of depreciation and costs of operation and maintenance of the systems plus interest on the Federal investment in the systems. Funds cotained from such non-Federal users of the systems shall be deposited in the Treasury of the United States as miscellaneous receipts, with the exception that the Secretary may consider as appropriation reimbursements to be credited in the appropriation current at the time received, such amount of the aforesaid collections as may be necessary to reimburse, on a pre rata basis, appropriated operating funds expended for maintenance and operation costs of the systems.

Conditions for

SEC. 3. Construction of the facilities authorized herein shall not be undertaken or use of existing Federal systems authorized until at least 80 per centum of the potential non-Federal users, as defined by the Secretary of the Interior, are committed to connecting to said water and sewage systems and until there shall have been reached an agreement with the duly authorized officials of the village of Medora, by which the village is obligated to adopt and enforce a zoning ordinance which complies with standards prescribed by the Secretary for the purpose of preserving the historic character of Medora and affording a park-like setting in the vicinity of the park and the entrance thereto.

Appropriation.

Sec. 4. There are authorized to be appropriated for the construction of these facilities such sums as may be required therefor, not to exceed \$100,000.

Public Law 95-625 95th Congress

# An Act

To authorize additional appropriations for the acquisition of lands and interests in lands within the Sawtooth National Recreation Area in Idaho.

[S. 791]

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

National Parks and Recreation Act of 1978.

SHORT TITLE AND TABLE OF CONTENTS

Section 1. This Act may be cited as the "National Parks and 16 USC 1 note. Recreation Act of 1978".

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Sec. 1. Short title and table of contents.

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# TITLE I-DEVELOPMENT CEILING INCREASES

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TITLE II-ACQUISITION CEILING INCREASES

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- Sec. 601. Facilities at Yellowstone National Park.
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  Sec. 611. Badlands National Park.

- Sec. 612 Albert Einstein Memorial.
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- Sec. 614. Advisory Council on Historic Preservation.

# TITLE VII-WILD AND SCENIC RIVERS ACT AMENDMENTS

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- Sec. 701. Addition of Pere Marquette Segment.
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### Subtitle B-Studies

- Sec. 721. Designation of the Kern River (North Fork) for study.
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  Sec. 723. Designation of the Ogeechee River for study.
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  Sec. 725. Designation of the Verde River for study.
  Sec. 728. Designation of the San Francisco River for study.

- Sec. 728. Designation of the San Francisco River for Students.
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  Sec. 733. Designation of Soldier Creek for study.
  Sec. 734. Designation of Red River for study.
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- Sec. 751. Eleven Point River.
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- Sec. 753. Saint Croix River.
- Sec. 754. Salmon River.
- Sec. 755. Chattooga River.

### TITLE II—ACQUISITION CEILING INCREASES

### ACQUISITION CELLINGS

SEC. 201. The limitations on appropriations for the acquisition of Appropriation lands and interests therein within certain units of the National Park System are amended as follows:

authorizations.

(1) Big Cypress National Preserve. Florida: Section 8 of the Act of October 11, 1974 (88 Stat. 1258), is amended by changing 16 USC 698m. "\$116,000,000" to "\$156,700.000".

(2) Buffalo National River, Arkansas: Section 7 of the Act of March 1, 1972 (86 Stat. 44), is amended by changing #\$30,071,500" to #\$39,948,000".

16 USC 460m-14.

(3) Cumberland Island National Seashore, Georgia: Section 10 of the Act of October 23, 1972 (86 Stat. 1066), is amended 16 USC 459i-9. by changing "\$10.500,000" to "\$28.500,000".

### SAWTOOTH NATIONAL RECREATION AREA

SEC. 202. Section 13 of the Act of August 22, 1972 (86 Stat. 612), 16 USC is amended by changing "\$19,802,000" to "\$47,802,000".

# TITLE III—BOUNDARY CHANGES

### REVISION OF BOUNDARIES

SEC. 301. The boundaries of the following units of the National Appropriation Park System are revised as follows, and there are authorized to be authorizations. appropriated such sums as may be necessary, but not exceed the amounts specified in the following paragraphs for acquisitions of lands and interests in lands within areas added by reason of such revisions:

- (1) Bent's Old Fort National Historic Site. Colorado: To add approximately six hundred and twenty-two acres as generally depicted on the map entitled "Boundary Map, Bent's Old Fort National Historic Site, Colorado", numbered 417-80,007-A. and dated June 1976: \$342.000.
- (2) Cape Cod National Seashore, Massachusetts: To add approximately thirteen acres and to delete approximately sixteen acres as generally depicted on the map entitled "Cape Cod National Seashore Boundary Map", numbered 609-60.015 and dated February 1978.

(3) Chiricahua National Monument, Arizona: To add approximately four hundred and forty acres as generally depicted on the map entitled "Boundary Map, Chiricahua National Monument, Arizona". numbered 145-80.002. and dated August 1977: \$294.000.

- (4) Coronado National Memorial. Arizona: To add approximately three thousand and forty acres and delete approximately twelve hundred acres as generally depicted on the map entitled "Land Status Map 01, Coronado National Memorial. Cocluse County, Arizona", numbered 8630/80.001. and dated October 1977: \$1,410.000.
- (5) Eisenhower National Historic Site. Pennsylvania: To add approximately one hundred ninety-five and eighty-three onehundredths acres as generally depicted on the map entitled "Boundary Map, Eisenhower National Historic Site. Adams

(15) Salem Maritime National Historic Site, Massachusetts: To add approximately fifteen one-hundredths of an acre as generally depicted on the map entitled "Salem Maritime National Historic Site Boundary Map", numbered 373-80,010, and dated February 1978: \$67.500.

(16) Theodore Roosevelt National Memorial Park, North Dakota: To add approximately one hundred and forty-six acres, and delete approximately one hundred and sixty acres as generally depicted on map entitled "Boundary Map Theodore Roosevelt National Memorial Park-North Unit McKenzie County/North Dakota" numbered 357/80.090, and dated July 1977.

Dakota", numbered 387/80,020, and dated July 1977.

(17) Tumacacori National Monument, Arizona: To add approximately seven acres, and delete approximately elevenhundredths of an acre as generally depicted on the map entitled "Boundary Map, Tumacacori National Monument, Arizona", numbered 311-80,009-A, and dated March 1978: \$24,000.

(18) (A) Tuzigoot National Monument, Arizona: To add approximately seven hundred and ninety-one acres as generally depicted on the map entitled "Master Proposal, Tuzigoot National Monument", numbered 378-30,000D, and dated January 1973: \$1,350,000.

(B) The Secretary is authorized to acquire by donation, purchase with donated or appropriated funds, exchange or otherwise and subject to such terms, reservations, conditions applied to the acquired lands as he may deem satisfactory, the lands and interests in lands that are included within the boundaries of the Tuzigoot National Monument as revised by this paragraph. When so acquired, they shall be administered in accordance with provisions of law generally applicable to units of the National Park System, including the Act of August 25, 1916 (29 Stat. 535).

(C) In exercising his authority to acquire such lands and interests in lands by exchange, the Secretary may accept title to any non-Federal property within the boundaries of the national monument and in exchange therefor he may convey to the grantor of such property any federally owned property under his jurisdiction in the State of Arizona. The values of the properties so exchanged either shall be approximately equal, or if they are not approximately equal the values shall be equalized by the payment of cash to the grantor or to the Secretary as the circumstances

(19) White Sands National Monument, New Mexico: To add approximately three hundred and twenty acres, and delete approximately seven hundred and sixty acres as generally depicted on the map entitled "Boundary Map, White Sands, National Monument, New Mexico", numbered 142/20,010—A, and dated November 1973.

(20) William Howard Taft National Historic Site, Ohio: To add approximately three acres as generally depicted on the map entitled "Boundary Map, William Howard Taft National Historic Site, Ohio", numbered 448-40.021, and dated January 1977.

(21) Wind Cave National Park. South Dakota: To add approximately two hundred and twenty-eight acres as generally depicted on the map entitled "Boundary Map, Wind Cave National Park. South Dakota", numbered 108-80,008, and dated July 1977: \$227,000.

Land acquisitions.

Administration.

Property conveyance. shore and, in addition, the waters surrounding said area to distances of one thousand feet in the Atlantic Ocean and up to four thousand feet in Great South Bay and Moriches Bay and, in addition, mainland terminal and headquarters sites, not to exceed a total of twelve acres, on the Patchogue River within Suffolk County. New York, all as delineated on a map identified as 'Fire Island National Seashore', numbered OGP-0004, dated May 1978. The Secretary shall publish said map in the Federal Register, and it may also be examined in the offices of the Department of the Interior.".

(b) Section 2 of such Act is amended by adding the following new

-ubsection at the end thereof:

"(g) The authority of the Secretary to condemn undeveloped tracts within the Dune District as depicted on map entitled 'Fire Island National Seashore' numbered OGP-0004 dated May, 1978, is suspended so long as the owner or owners of the undeveloped property therein maintain the property in its natural state. Undeveloped property within the Dune District that is acquired by the Secretary shall remain in its natural state."

(c) Section 7(b) of such Act is amended by striking the phrase 16 USC 459e-6. "Brookhaven town park at", and inserting in lieu thereof: "Ocean

Ridge portion of'. (d) Section 10 of such Act is amended by striking "\$18,000,000". 16 550 459e-9. and inserting in lieu thereof "\$23.000,000".

Map. publication in Federal Register. Undeveloped tracts and 16 USC 459e-1.

# CUMBERLAND ISLAND NATIONAL SEASHORE

SEC. 323. Section 1 of the Act of October 23, 1972 (86 Stat. 1066), is 16 USC 459i. amended by changing the phrase "numbered CUIS-10,000B, and dated June 1971,", to read "numbered CUIS 40,000D, and dated January 1978,".

# TITLE IV-WILDERNESS

### DESIGNATION OF AREAS

SEC. 401. The following lands are hereby designated as wilderness in accordance with section 3(c) of the Wilderness Act (78 Stat. 890; 16 U.S.C. 1132(c)), and shall be administered by the Secretary in accordance with the applicable provisions of the Wilderness Act:

(1) Buffalo National River. Arkansas, wilderness comprising approximately ten thousand five hundred and twenty-nine acres and potential wilderness additions comprising approximately twenty-five thousand four hundred and seventy-one acres depicted on a map entitled "Wilderness Plan. Buffalo National River. Arkansas", numbered 173-20,036-B and dated March 1975, to be known as the Buffalo National River Wilderness.

(2) Carlsbad Caverns National Park. New Mexico. wilderness comprising approximately thirty-three thousand one hundred and twenty-five acres and potential wilderness additions comprising approximately three hundred and twenty acres, depicted on a map entitled "Wilderness Plan, Carlsbad Caverns National Park, New Mexico." numbered 130-20.003-B and dated January 1978. to be known as the Carlshad Caverns Wilderness. By January 1. 1980, the Secretary shall review the remainder of the park and shall report to the President, in accordance with section 3 (c) and (d) of the Wilderness Act (78 Stat. 891: 16 U.S.C. 1132 (c) and (d)), his recommendations as to the suitability or nonsuitability of any additional areas within the park for preservation as wilder-

Administration. 16 USC 1132

16 USC 1131 note.

Report to President 16 USC 1131

ness, and any designation of such areas as wilderness shall be accomplished in accordance with said subsections of the Wilderness Act.

(3) Everglades National Park. Florida, wilderness comprising approximately one million two hundred and ninety-six thousand five hundred acres and potential wilderness additions comprising approximately eighty-one thousand nine hundred acres, depicted on a map entitled "Wilderness Plan, Everglades National Park, Florida", numbered 160-20.011 and dated June 1974, to be known as the Everglades Wilderness.

(4) Guadalupe Mountains National Park, Texas, wilderness comprising approximately forty-six thousand eight hundred and fifty acres, depicted on a map entitled "Wilderness Plan, Guadalupe Mountains National Park, Texas", numbered 166-20,006-B and dated July 1972, to be known as the Guadalupe Mountains Wilderness.

(5) Gulf Islands National Seashore. Florida, and Mississippi, wilderness comprising approximately one thousand eight hundred acres and potential wilderness additions comprising approximately two thousand eight hundred acres, depicted on a map entitled "Wilderness Plan, Gulf Islands National Seashore, Mississippi, Florida", numbered 635-20,018-A and dated March 1977, to be known as the Gulf Islands Wilderness.

(6) Hawaii Volcanoes National Park, Hawaii, wilderness comprising approximately one hundred and twenty-three thousand one hundred acres and potential wilderness additions comprising approximately seven thousand eight hundred and fifty acres, depicted on a map entitled "Wilderness Plan. Hawaii Volcanoes National Park, Hawaii", numbered 124-20.020 and dated April 1974, to be known as the Hawaii Volcanoes Wilderness.

(7) Organ Pipe Cactus National Monument, Arizona, wilderness comprising approximately three hundred and twelve thousand six hundred acres and potential wilderness additions comprising approximately one thousand two hundred and forty acres, depicted on a map entitled "Wilderness Plan. Organ Pipe Cactus National Monument, Arizona", numbered 157-20,001-B and dated October 1978, to be known as the Organ Pipe Cactus Wilderness.

1978, to be known as the Organ Pipe Cactus Wilderness.

(8) Theodore Roosevelt National Memorial Park, North Dakota, wilderness comprising approximately twenty-nine thousand nine hundred and twenty acres, depicted on maps entitled "Theodore Roosevelt National Memorial Park, North Dakota" (North Unit and South Unit) numbered 387-20.007-E and dated January 1978, to be known as the Theodore Roosevelt Wilderness.

# MAP AND DESCRIPTION

Public evailability.

Filing with congressional committees. Szc. 402. A map and description of the boundaries of the areas designated in this title shall be on file and available for public inspection in the office of the Director of the National Park Service. Department of the Interior, and in the Office of the Superintendent of each area designated in this title. As soon as practicable after this Act takes effect, maps of the wilderness areas and descriptions of their boundaries shall be filed with the Committee on Interior and Insular Affairs of the House of Representatives and the Committee on Energy and Natural Resources of the United States Senate, and such maps and descriptions shall have the same force and effect as if included in this Act: Provided, That correction of clerical and typographical errors in such maps and descriptions may be made.

# THEODORE ROOSEVELT NATIONAL PARE

SEC. 610. The area formerly known as the "Theodore Roosevelt 16 LSC 241g. National Memorial Park", established by the Act of April 25, 1947 (61 Stat. 52), shall henceforth be known as the "Theodore Roosevelt 10 USC 241 et National Park".

### BADLANDS NATIONAL PARK

SEC. 612. The area formerly known as the "Badlands National Monu- 16 USC 441e-1. ment", established by Presidential Proclamation of January 25, 1939 (53 Stat. 2521), smill henceforth be known as the "Badlands National Park .

### ALKERT E' STEIN MEMORIAL

SEC. 612. The Secretary of the Interior is authorized to convey for Property. nominal consideration to the National Academy of Sciences. United consequence and States Reservation 332A, located on the south side of Square Numbered 88 between 21st Street. 22d Street and Constitution Avenue in the District of Columbia to erect and maintain a Memorial to Albert Einstein. The title to said property shall remain with the National Academy of Sciences so long as the property is used for access. Atsuch time as the property is no longer used for memorial purposes or public access is restricted, title to said property shall revert to the United States.

16 USC 431 note.

### PEARSON-SKUBITZ BIG HILL LAKE

SEC. 613. The project for flood protection on Big Hill Creek, Kansas, Designation. authorized by the Flood Control Act of 1962. Public Law S7-574, shall 76 Sun 1180. hereafter be known and designated as the "Pearson-Skubitz Big Hill Lake". Any reference in a law. map. regulation. document. or record, or other paper of the United States to such project shall be held to be a reference to the "Pearson-Skubitz Big Hill Lake".

### ADVISORY COUNCIL ON HISTORIC PRESERVATION

SEC. 614. Section 212(a) of the Act of October 15, 1966 (80 Stat. Appropriation 915), as amended (16 U.S.C. 470), is further amended by adding the authorization. following at the end thereof:

16 USC 470L

"There are authorized to be appropriated not to exceed \$2,050,000 in fiscal year 1980.".

# TITLE VII-WILD AND SCENIC RIVERS ACT AMENDMENTS

# Subtitle A-Addition of Segments

### ADDITION OF PERE MARQUETTE SEGMENT

Szc. 701. Section 3(a) of the Wild and Scenic Rivers Act is Boundaries. amended by adding the following new paragraph at the end thereof: "(16) PERE MARQUETTE MICHIGAN.—The segment downstream from the junction of the Middle and Little South Branches to its junction with United States Highway 31 as generally depicted on the boundary map entitled 'Proposed Boundary Location. Pere Marquette Wild and Scenic River.': to be administered by the Secretary of Agriculture. After consultation with State and local govern- Consultation. ments and the interested public, the Secretary shall take such action as is provided for under subsection (b) with respect to the segment

description. 16 USC 1274.

the Capitol in the City of Bismarck, on Tuesday, the sixth day of January, one thousand nine hundred and eighty-one.

(Representatives Thompson, Whalen)
(Senator Roen)

- AN ACT to cede to the United States concurrent criminal jurisdiction on lands within the Theodore Roosevelt national park, Fort Union trading post national historic site, and Knife River Indian villages national historic site, and to provide for retrocession of that jurisdiction.
- BE IT ENACTED BY THE LEGISLATIVE ASSEMBLY OF THE STATE OF NORTH DAKOTA:
- SECTION 1. STATE OFFENSES CONCURRENT JURISDICTION CEDED TO THE UNITED STATES. Concurrent jurisdiction is hereby ceded to the United States over offenses, as defined in section 12.1-01-04, when committed within boundaries of the tracts of land designated as:
  - Theodore Roosevelt national park.
  - 2. Fort Union trading post national historic site.
  - 3. Knife River Indian villages national historic site.
- SECTION 2. CONCURRENT JURISDICTION VESTED UPON ACCEPTANCE. The concurrent jurisdiction ceded by section 1 of this Act shall be vested upon acceptance by the United States by and through its appropriate officials and shall continue so long as the lands within the designated areas are dedicated to park or historic site purposes.
- SECTION 3. RETROCESSION OF JURISDICTION ACCEPTANCE FILING.
  - The consent of North Dakota is hereby given to the retrocession by the United States of the jurisdiction granted by section 1 of this Act, either partially or wholly. A partial retrocession may be with respect to particular territory or particular offenses, or both. The governor is authorized to accept any such retrocession of jurisdiction on behalf of North Dakota.

2. When the governor receives written notification from the authorized official or agent of the United States that the United States desires or is willing to retrocede jurisdiction to North Dakota as provided in subsection 1, the governor may accept, and after filing the original acceptance with the secretary of state, the retrocession of jurisdiction will become effective.

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# APPENDIX B: MANAGEMENT OBJECTIVES

These management objectives are taken from the 1985 "Statement for Management" for Theodore Roosevelt National Park.

# MANAGEMENT, ADMINISTRATION, AND SUPPORT

Cooperate with all federal, state, and local agencies and individuals so that the resources of the park will be protected from visual or physical intrusion related to all development on the periphery of the park boundary, in accordance with Executive Order 11593.

Acquire privately owned lands using eminent domain procedures only as necessary to prevent adverse uses.

# INTERPRETATION AND VISITOR SERVICES

Provide opportunities for visitors to be aware of and appreciate Theodore Roosevelt's experiences in the Little Missouri badlands, his associations with the open range cattle ranching industry, and his influences on the conservation movement in the United States.

Provide opportunities for visitors to experience the badlands environment and its resources and to reach an understanding of them, just as Theodore Roosevelt did.

Provide public access, service, and opportunity for use and enjoyment at the Elkhorn ranch.

Provide opportunities for use of school groups, independent scholars, and researchers for the study of western American history and the environment according to the historic, cultural, and natural resources contained in each park unit.

Provide as a corollary, off-site interpretive programs during winter seasons to schools, organizations, and civic groups.

Provide a static interpretive display at the Painted Canyon overlook visitor center regarding the air quality and acid rain research and monitoring programs conducted at that location and throughout the park.

# CULTURAL RESOURCE MANAGEMENT

Specifically identify individually qualified prehistoric/historic sites and structures with appropriate boundaries for nomination to the National Register of Historic Places and take subsequent action to remove all unappropriate lands now listed.

Complete survey and research at the earliest possible time to identify and evaluate historic and cultural resources so that they will be properly preserved and considered on the basis of complete factual knowledge in all related management decisions and subsequent actions.

# NATURAL RESOURCE MANAGEMENT

Restore and maintain, to the extent feasible, the endemic plants and animals and ecological processes of the Little Missouri badlands to a condition symbolic of the scene during Theodore Roosevelt's association with the area.

Complete survey and research at the earliest possible time to identify and evaluate natural resources so that they will be properly preserved and considered on the basis of complete factual knowledge in all related management decisions and subsequent actions.

Maximize public access to these resources.

Protect and enhance the park's class I clean air status and identify, evaluate, and preserve the park's air quality related resources in accordance with existing and future National Park Service and other federal and state legislative and regulatory mandates.

Appendix C: Cost Analysis and Staffing Requirements (As of December 1985)

| Category,<br>Activity,<br>or Place                  | Preferred Alternative                                                                                                                                   | Continuation of Existing Conditions Alternative               | Minimum Requirements<br>Alternative                                                                         | Other<br>Practicable Alternative                                                                                                                                                 | Staffing Rationale                                                                                             |
|-----------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|
| NORTH UNIT                                          |                                                                                                                                                         |                                                               |                                                                                                             |                                                                                                                                                                                  |                                                                                                                |
| Natural<br>Resources<br>Bison corral                | Relocate corral operation to north boundary; maintain present site as NPS horse pasture (area also has potential for new horse camp; see later section) | Corral to remain in present location - no change              | Relocate corral operation<br>to north boundary; main-<br>tain present site as NPS<br>horse pasture          | Relocate corral operation to north boundary; maintain present site as NPS horse pasture                                                                                          | Required to maintain fence, corrals, and access road Relocate to area that is more open so buffalo may be more |
|                                                     | \$ 211,000 new corral<br>13,000 site restoration<br>\$ 224,000                                                                                          | 0                                                             | \$ 211,000 new corral<br>13,000 site restoration<br>\$ 224,000                                              | \$ 211,000 new corral<br>13,000 site restoration<br>\$ 224,000                                                                                                                   | easily captured; in-<br>crease needed for<br>planning and super-<br>vision of construction                     |
|                                                     | .02 (GS-12)/\$2,000<br>.05 (WG-7)/\$2,100                                                                                                               |                                                               | .02 (GS-12)/\$2,000<br>.05 (WG-7)/\$2,100                                                                   | .02 (GS-12)/\$2,000<br>.05 (WG-7)/\$2,100                                                                                                                                        |                                                                                                                |
| Cultural<br>Resources<br>District<br>Headquarters   | Leave CCC camp-tender<br>building in place, reno-<br>vate for residence or<br>storage; add vegetative<br>screening                                      | No change in camptender residence; use as seasonal quarters - | Leave camp-tender build-<br>ing in place, renovate<br>for residence or storage;<br>add vegetative screening | Relocate camp-tender<br>building, renovate for<br>residence or storage                                                                                                           | Required to maintain<br>building and provide<br>ground maintenance                                             |
|                                                     | \$ 32,000 remodel 650 s.f. 2,000 vegetation \$ 34,000                                                                                                   | 0                                                             | \$ 32,000 remodel 650 s.f.<br>2,000 vegetation<br>\$ 34,000                                                 | \$ 10,000 move structure<br>32,000 remodel 650 s.f.<br>\$ 42,000                                                                                                                 |                                                                                                                |
|                                                     | .02 (WG-7)/\$840                                                                                                                                        |                                                               | .02 (WG-7)/\$840                                                                                            | .02 (WG-7)/\$840                                                                                                                                                                 |                                                                                                                |
| Recreation<br>Camping/<br>Picnicking<br>(vehicular) | Redesign Squaw Creek<br>picnic area for additional<br>parking - 15 spaces                                                                               | No change in Squaw<br>Creek picnic area                       | Redesign Squaw Creek<br>picnic area for additional<br>parking - 15 spaces                                   | Relocate Squaw Creek<br>area outside flash-flood<br>zone and provide ade-<br>quate parking. (See<br>Squaw Creek campground<br>for combined campground/<br>picnic area estimates) | Increase required for<br>planning input<br>Required to maintain<br>additional parking.                         |
|                                                     | \$ 39,000                                                                                                                                               | 0                                                             | \$ 39,000                                                                                                   | 0                                                                                                                                                                                |                                                                                                                |
|                                                     | 0.05 (GS-9)/\$1,100<br>0.01 (WG-5)/\$420                                                                                                                |                                                               | 0.05 (GS-9)/\$1,100<br>0.01 (WG-5)/\$420                                                                    | 0.07 (GS-9)/\$1,500<br>0.03 (WG-7)/\$12,600                                                                                                                                      |                                                                                                                |
|                                                     |                                                                                                                                                         |                                                               |                                                                                                             |                                                                                                                                                                                  |                                                                                                                |

| Category,<br>Activity,<br>or Place                      | Preferred Alternative                                                                                                                                                                                                    | Continuation of Existing<br>Conditions Alternative                          | Minimum Requirements<br>Alternative                                                                                              | Other<br>Practicable Alternative                                                                                                             | Staffing Rationale                                                                                                                                                           |
|---------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Camping<br>(horse)                                      | Build group horse camp<br>in park at suitable loca-<br>tion (either at bison cor-<br>ral, Wright/Baye property,<br>or Squaw Creek camp-<br>ground); final site selec-<br>tion to be made during<br>this planning process | No group horse camp in unit - no change, continue to rely on private sector | Cooperate with Forest<br>Service in providing<br>group horse camp south<br>of river                                              | Build group horse camp<br>in park at suitable lo-<br>cation (e.g., bison<br>corral, Wright/Baye pro-<br>perty, or Squaw Creek<br>campground) | Additional campground requires maintenance for grounds, water system and other Public Health Service services Minimum requirements alternative; increase needed for planning |
|                                                         | \$ 726,000                                                                                                                                                                                                               | 0                                                                           | 0                                                                                                                                | \$ 726,000                                                                                                                                   | and coordination. Other<br>practicable alternative;                                                                                                                          |
|                                                         | 0.23 (GS-5)/\$6,000<br>0.3 (WG-7)/\$12,600                                                                                                                                                                               |                                                                             | 0.05 (GS-9)/\$1,000                                                                                                              | 0.23 (GS-5)/\$6,000<br>0.3 (WG-7)/\$12,600                                                                                                   | increase needed for<br>management, adminis-<br>tration, and protection                                                                                                       |
| Camping<br>(canoe)                                      | No designated canoe camps, permit only - no change except monitor canoe camping demand for potential future designation of sites                                                                                         | No designated canoe camps, permit only - no change                          | No designated canoe camps, permit only - no change except monitor canoe camping demand for potential future designation of sites | No canoe camping in<br>park. Coordinate canoe<br>camping outside unit<br>with Forest Service                                                 | Minimum requirements alternative; increase required to conduct monitoring and maintain records                                                                               |
|                                                         | 0                                                                                                                                                                                                                        | 0                                                                           | 0                                                                                                                                | 0                                                                                                                                            |                                                                                                                                                                              |
|                                                         | 0.01 (GS-6)/\$150                                                                                                                                                                                                        |                                                                             | 0.01 (GS-6)/\$150                                                                                                                |                                                                                                                                              |                                                                                                                                                                              |
| Canoe and/or<br>Snowmobile<br>Access                    | Develop canoe access point at Squaw Creek campground and canoe/ snowmobile access point on Wright/Baye property                                                                                                          | No formal canoe or<br>snowmobile access<br>point - no change                | Develop canoe/snow-<br>mobile take-out point<br>(either Squaw Creek<br>campground or site on<br>Wright/Baye property)            | Develop canoe/snow-<br>mobile access points<br>(both Squaw Creek<br>campground and site on<br>Wright/Baye property)                          | Increase required to monitor and document use and provide protection services if access points are developed within the park                                                 |
|                                                         | \$ 208,000                                                                                                                                                                                                               | 0                                                                           | \$ 164,000                                                                                                                       | \$ 208,000                                                                                                                                   | Required to maintain<br>access roads to river                                                                                                                                |
|                                                         | 0.03 (GS-9)/\$600<br>0.03 (WG-5)/\$1,260                                                                                                                                                                                 |                                                                             | 0.02 (GS-9)/\$400<br>0.03 (WG-5)/\$1,260                                                                                         | 0.03 (GS-9)/\$600<br>0.03 (WG-5)/\$1,260                                                                                                     |                                                                                                                                                                              |
| Trails                                                  | Develop handicap-<br>accessible nature trail<br>in suitable location                                                                                                                                                     | Trail system - no change                                                    | Develop handicap-<br>accessible nature trail<br>in suitable location                                                             | Develop handicap-<br>accessible nature trail<br>in suitable location                                                                         | Needed to maintain<br>handicap trail                                                                                                                                         |
|                                                         | \$ 23,000 Pave 1,700 ft.                                                                                                                                                                                                 | 0                                                                           | \$ 23,000 ft.                                                                                                                    | \$ 23,000 Pave 1,700 ft.                                                                                                                     |                                                                                                                                                                              |
|                                                         | 0.05 (WG-5)/\$2,100                                                                                                                                                                                                      |                                                                             | 0.05 (WG-5)/\$2,100                                                                                                              | 0.05 (WG-5)/\$2,100                                                                                                                          |                                                                                                                                                                              |
| Interpretation/<br>Visitor Contact<br>US 85<br>Overlook | Provide state with tech-<br>nical assistance in their<br>production of new way-<br>side exhibit                                                                                                                          | Roadside pullout - no<br>change                                             | Provide state with tech-<br>nical assistance in their<br>production of new way-<br>side exhibit                                  | Provide state with way-<br>side exhibit, per future<br>interpretive prospectus                                                               |                                                                                                                                                                              |
|                                                         | 0                                                                                                                                                                                                                        | 0                                                                           | .0                                                                                                                               |                                                                                                                                              |                                                                                                                                                                              |

| Staffing Rationale                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Operating increase is needed to supplement existing personnel, enabling facility to be open to serve visitors throughout most of year, particularly spring and fall. Without increase, | facility will not be operated to serve visitors' | restrooms, etc.                              | WG-7 would be needed<br>to maintain new facility<br>and provide janitorial<br>services. |                                                   |           |
|----------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------|----------------------------------------------|-----------------------------------------------------------------------------------------|---------------------------------------------------|-----------|
| Other<br>Practicable Alternative                   | Build "split function" facilities:  1) At maintenance area provide interior space for district ranger/ interpreter office, and protection and inter- pretive storage 2) At entrance site provide: - Interior space for public restrooms; fee collection/permit issuance; information/ publication sales - Outdoor space for plaza* with exhibits to be prescribed by fu- ture interpretive pro- spectus, covering themes of wilderness and natural resources, and man in the park environment                                                                                       | \$1,629,000 new building<br>at entrance area<br>(4,400 s.f. includes<br>basement)<br>48,000 new building<br>at maintenance area<br>(1,500 s.f.)                                        | \$1,677,000                                      | 1.3 (GS-4&5)/\$21,735<br>1.0 (WG-7)/\$42,000 |                                                                                         | Add more parking at<br>new entrance facility      | \$ 31,000 |
| Minimum Requirements<br>Alternative                | At entrance site build a new facility for combined functions:  - District ranger/interpreter office, - Protection security - Multipurpose meeting room/library - Storage for supplies and specimens - Oublic restrooms - Public restrooms - Public restrooms - Public restrooms - Information/permit issuance - Information/publication sales - Information/publication sales - Interpretive media to be prescribed by future interpretive prospectus, covering themes of wilderness and natural resources and man in the park environment. Use changeable media to extent possible | \$2,167,000 new building<br>at entrance area<br>(5,850 s.f. includes<br>basement)                                                                                                      | \$2,167,000                                      | 0.55 (GS-5)/\$10,871<br>0.8 (WG-7)/\$33,600  |                                                                                         | Add more parking at<br>new entrance facility      | \$ 31,000 |
| Continuation of Existing<br>Conditions Alternative | Information/trailer/ ranger station - no change at entrance facility                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                        | 0                                                |                                              |                                                                                         | No change in parking at existing entrance station | 0         |
| Preferred Alternative                              | At entrance site build a new facility for combined functions:  - District ranger/interpreter office - Protection security - Multipurpose meeting room/library - Storage for supplies and specimens - No specimens - Public restrooms - Public restrooms - Public restrooms - Information/permit issuance - Information/publication sales - Information/publication sales - Information/publication sales - Interpretive media to be prescribed by future interpretive and man in the park environment. Use changeable media to extent possible                                      | \$2,167,000 new building<br>at entrance area<br>(5,850 s.f. includes<br>basement)                                                                                                      | \$2,167,000                                      | 0.55 (GS-5)/\$10,871<br>0.8 (WG-7)/\$33,600, |                                                                                         | Add more parking at<br>new entrance facility      | \$ 31,000 |
| Activity,<br>or Place                              | District                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                        |                                                  |                                              |                                                                                         |                                                   |           |

| Category,<br>Activity,<br>or Place                           | Preferred Alternative                                                                                        | Continuation of Existing<br>Conditions Alternative          | Minimum Requirements<br>Alternative                                                                          | Other<br>Practicable Alternative                                                              | Staffing Rationale                                              |
|--------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|-----------------------------------------------------------------|
| Administration<br>and Facilities<br>District<br>Headquarters | Provide new and replacement quarters for permanent and seasonal employees (modular or comparable structures) | No change in employee<br>quarters (2 houses; 2<br>trailers) | Provide new and replacement quarters for permanent and seasonal employees (modular or comparable structures) | Build new and replacement quarters for permanent and seasonal employees (onsite construction) |                                                                 |
|                                                              | \$ 177,000 2-1,200 s.f.<br>for permanents<br>\$ 403,000 6-550 s.f.<br>for seasonals                          |                                                             | \$ 177,000 2-1,200 s.f.<br>for permanents<br>\$ 403,000 6-550 s.f.<br>for seasonals                          | \$ 322,000 2-1,200 s.f.<br>for permanents<br>\$ 454,000 6-550 s.f.<br>for seasonals           | Required to maintain<br>new quarters and pro-<br>vide utilities |
|                                                              | \$ 580,000                                                                                                   | 0                                                           | 280,000                                                                                                      | 776,000                                                                                       |                                                                 |
|                                                              | 0.2 (WG-7)/\$8,400                                                                                           |                                                             | 0.2 (WG-7)/\$8,400                                                                                           | 0.3 (WG-7)/\$12,600                                                                           |                                                                 |
|                                                              | Build enclosed cold-<br>storage building for<br>equipment and vehicles                                       | No change in vehicle storage (maintenance area)             | Build enclosed cold-<br>storage building for<br>equipment and vehicles                                       | Build enclosed cold-<br>storage building for<br>equipment and vehicles                        |                                                                 |
|                                                              | 2 bays, 660 s.f. each                                                                                        |                                                             | 2 bays, 660 s.f. each                                                                                        | 2 bays, 660 s.f. each                                                                         | Additional maintenance                                          |
|                                                              | \$ 97,000                                                                                                    | 0                                                           | \$ 97,000                                                                                                    | \$ 97,000                                                                                     | would be required to<br>provide services and                    |
|                                                              | 0.05 (WG-7)/\$2,100                                                                                          |                                                             | 0.05 (WG-7)/\$2,100                                                                                          | 0.05 (WG-7)/\$2,100                                                                           | storage facility                                                |
|                                                              | Enlarge maintenance building for these functions:                                                            | No change in mainte-<br>nance building                      | Enlarge maintenance<br>building for these                                                                    | Provide new building<br>for these functions:                                                  |                                                                 |
|                                                              | First-aid station     Fire cache (related to fire management needs)                                          |                                                             | - Carpenter shop<br>- First-aid station<br>- Fire cache (related to<br>fire management needs)                | - Carpenter shop<br>- First-aid station<br>- Fire cache (related to<br>fire management needs) |                                                                 |
|                                                              | - Small equipment storage                                                                                    |                                                             | - Small equipment storage                                                                                    | - Small equipment storage                                                                     |                                                                 |
|                                                              | add on 1,000 s.f.                                                                                            |                                                             | add on 1,000 s.f.                                                                                            | new building 1,000 s.f.                                                                       | Required to maintain                                            |
|                                                              | \$ 105,000                                                                                                   | 0                                                           | \$ 105,000                                                                                                   | \$ 153,000                                                                                    | vices to expanded                                               |
|                                                              | 0.2 (WG-7)/\$8,400                                                                                           |                                                             | 0.2 (WG-7)/\$8,400                                                                                           | 0.41 (WG-7)/\$17,220                                                                          | maintenance Tacilities                                          |
| Utilities                                                    | Enlarge and line sewage lagoon                                                                               | No change in sewage lagoon                                  | Enlarge and line sewage lagoon                                                                               | Enlarge and line sewage lagoon                                                                |                                                                 |
| Headquarters                                                 | \$ 27,000                                                                                                    | 0                                                           | \$ 27,000                                                                                                    | \$ 27,000                                                                                     |                                                                 |
|                                                              | Underground REC power<br>lines, encourage WAPA<br>to relocate their line                                     | No change in overhead power lines                           | Underground REC power<br>lines, encourage WAPA<br>to relocate their line                                     | Underground REC power<br>lines, encourage WAPA<br>to relocate their line                      |                                                                 |
|                                                              | \$ 350,000 15,500 1.f.                                                                                       | 0                                                           | \$ 350,000                                                                                                   | \$ 350,000                                                                                    |                                                                 |

|    | Category,<br>Activity,<br>or Place                                                  | Preferred Alternative                                                                                                                                            | Continuation of Existing Conditions Alternative                                                                             | Minimum Requirements<br>Alternative                                                                                                                              | Other<br>Practicable Alternative                                                                                                   | Staffing Rationale                                           |
|----|-------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------|
|    |                                                                                     | Construct waterline from storage tank to visitor/ interpretation/protection building                                                                             |                                                                                                                             | Construct waterline from storage tank to visitor/ interpretation/protection building                                                                             | Construct waterline from storage tank to visitor/interpretation/protection building                                                |                                                              |
|    |                                                                                     | \$ 58,000                                                                                                                                                        | 0                                                                                                                           | \$ 58,000 1.f.                                                                                                                                                   | \$ 58,000 1.f.                                                                                                                     |                                                              |
|    | Squaw Creek<br>Campground                                                           | Resize sewage lagoon                                                                                                                                             | No change in sewage lagoon                                                                                                  | Resize sewage lagoon                                                                                                                                             | Obliterate sewage lagoon                                                                                                           |                                                              |
|    |                                                                                     | \$ 56,000                                                                                                                                                        | 0                                                                                                                           | \$ 56,000                                                                                                                                                        | \$ 13,000                                                                                                                          |                                                              |
|    | Radio                                                                               | Renovate and fence tower                                                                                                                                         | No change in radio tower                                                                                                    | Renovate and fence tower                                                                                                                                         | Renovate and fence tower                                                                                                           |                                                              |
|    |                                                                                     | \$ 44,000                                                                                                                                                        | 0                                                                                                                           | \$ 44,000                                                                                                                                                        | \$ 44,000                                                                                                                          |                                                              |
| 10 | Floodplain/<br>Flash-flood<br>Strategy<br>Squaw Creek<br>Campground/<br>Picnic Area | Floodproof structures and utilities to comply with 100-year flood regulations; provide flood-warning systems and evacuation plans for areas with flood potential | Let flood and repair<br>damage; provide flood-<br>warning systems and<br>evacuation plans for<br>areas with flood potential | Floodproof structures and utilities to comply with 100-year flood regulations; provide flood-warning systems and evacuation plans for areas with flood potential | Relocate above 100-year floodplain                                                                                                 |                                                              |
| 1  | Campground<br>Subtotal                                                              | floodproof 3 buildings<br>\$ 163,000                                                                                                                             | damage unpredictable                                                                                                        | floodproof 3 buildings                                                                                                                                           | \$ 942,000 new campground<br>974,000 new utilities<br>275,000 restore site,<br>\$2,191,000 old campground                          |                                                              |
|    |                                                                                     | 0.02 (GS-12)/\$800                                                                                                                                               | 0.02 (GS-12)/\$800                                                                                                          | 0.02 (GS-12)/\$800                                                                                                                                               |                                                                                                                                    | Increase needed to<br>prepare warning and<br>evacuation plan |
|    | Picnic Area<br>Subtotal                                                             | \$ 50,000 floodproof 1 building 0 shelters - no                                                                                                                  | damage 0 unpredictable                                                                                                      | \$ 50,000 floodproof 1 building 0 shelters - no \$ 50,000 floodproofing                                                                                          | \$ 687,000 new picnic area (relocate) historic structure 275,000 new utilities 114,000 restore site of \$1,076,000 old picnic area |                                                              |
|    | Warning System<br>Subtotal                                                          |                                                                                                                                                                  |                                                                                                                             |                                                                                                                                                                  | Above floodplain, none required                                                                                                    |                                                              |
|    |                                                                                     | \$ 24,000*                                                                                                                                                       | \$ 16,000                                                                                                                   | \$ 16,000                                                                                                                                                        | 0                                                                                                                                  |                                                              |
|    |                                                                                     | (Preferred alternative includes \$8,000 for one alternative alternate location of group horse camp in floodplain)                                                |                                                                                                                             |                                                                                                                                                                  |                                                                                                                                    |                                                              |
|    | Total Flood<br>Prevention Costs                                                     | \$ 237,000                                                                                                                                                       | \$ 16,000                                                                                                                   | \$ 229,000                                                                                                                                                       | \$3,267,000                                                                                                                        |                                                              |
|    |                                                                                     |                                                                                                                                                                  |                                                                                                                             |                                                                                                                                                                  |                                                                                                                                    |                                                              |

| Staffing Rationale                                 |                                                                           |                                         |                                                          |              |               |
|----------------------------------------------------|---------------------------------------------------------------------------|-----------------------------------------|----------------------------------------------------------|--------------|---------------|
| Other<br>Practicable Alternative                   | 7,716,000                                                                 | 14.40                                   | \$7,716,000                                              | \$11,571,000 | \$3.74        |
| Minimum Requirements<br>Alternative                | \$4,228,000                                                               | 12.35<br>\$ 386,506                     | \$4,228,000                                              | \$7,739,000  | \$2.50        |
| Continuation of Existing<br>Conditions Alternative | \$ 16,000                                                                 | \$ 307,765                              | \$ 16,000                                                | \$3,094,000  | \$1.00        |
| Preferred Alternative                              | \$5,006,000                                                               | 12.86<br>\$ 405,106                     | \$5,006,000                                              | \$8,619,000  | \$2.79        |
| Category,<br>Activity,<br>or Place                 | North Unit<br>Subtotals<br>Capital<br>Investment-<br>Development<br>Cost: | Staffing/<br>Operations:<br>FTE<br>Cost | 10-Year Costs:<br>Development<br>Staffing/<br>Operations | Grand Total  | Relative Cost |

| Preferred Alternative | Continuation of Existing<br>Conditions Alternative                                        | Minimum Requirements<br>Alternative                                                                                                                                    | Other<br>Practicable Alternative                                                                                                                                                             | Staffing Rationale                                                                                                                                     |
|-----------------------|-------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|
|                       | NPS does not promote use of unit, whether new county road is built or not - no change     | Counties select southern route for new road, and NPS connects to unit with short access road and small parking area (rights-of-way from landowners would be necessary) | Counties select northern route for new road, and NPS connects to unit from west and south with long access road and small parking area (rights-of-way from landowners would be necessary     | Increase needed to develop and implement visitor protection and resource management plan with projected increased use brought about by improved access |
|                       |                                                                                           | ½ mile of gravel entrance road                                                                                                                                         | 3-mile gravel entrance road                                                                                                                                                                  | Provide maintenance for access road and parking                                                                                                        |
| 0                     |                                                                                           | \$ 122,000                                                                                                                                                             | \$1,005,000                                                                                                                                                                                  | bage removal                                                                                                                                           |
|                       |                                                                                           | 0.1 (GS-9&12)/\$6,000<br>0.2 (WG-7)/\$8,400                                                                                                                            | 0.1 (GS-9&12)/\$6,000<br>0.5 (WG-7)/\$21,000                                                                                                                                                 |                                                                                                                                                        |
| for the No.           | No change, no vegeta-<br>tive management; conti-<br>nue special use permit<br>for grazing | Zone most of unit cultural; emphasize natural scene (prescribed grazing and fire through resource management planning)                                                 | Zone most of unit cultural; determine historic scene and manage ranch site accordingly (prescribed grazing and fire for ranch grounds and rest of unit through resource management planning) | 4                                                                                                                                                      |
| 0                     | 1                                                                                         | 0                                                                                                                                                                      | 0                                                                                                                                                                                            | Increase need to prepare<br>and carry out natural                                                                                                      |
|                       |                                                                                           | 0.03 (GS-9)/\$3,000                                                                                                                                                    | 0.04 (GS-9)/\$4,000                                                                                                                                                                          | scene management plan                                                                                                                                  |
| No<br>Fee             | No change in existing remains                                                             | Delineate foundations of selected structures                                                                                                                           | Reconstruct exterior 2 selected structures (e.g., ranch house and stable); increase legislative ceiling on construction                                                                      | Required to keep foundation delineations in place and provide area cleanup                                                                             |
| 0                     |                                                                                           | \$ 13,000                                                                                                                                                              | \$ 56,000                                                                                                                                                                                    | Increase to provide protection patrols for                                                                                                             |
|                       |                                                                                           | 0.02 (WG-7)/\$840                                                                                                                                                      | 0.02 (GS-6)/\$1,200<br>0.5 (WG-7)/\$21,000                                                                                                                                                   | בברתוצוניתרופת צוניתרותנפצ                                                                                                                             |
| No rear or            | No designated camps<br>for hikers, horses, and<br>cances; permit only -<br>no change      | Designate campsite for backcountry use; permit only                                                                                                                    | No camping in unit - day use only. Coor- dinate camping outside unit with Forest Service                                                                                                     |                                                                                                                                                        |
| 0                     | L                                                                                         | 0                                                                                                                                                                      | 0                                                                                                                                                                                            | C. Donald Control                                                                                                                                      |
|                       |                                                                                           | 0.01 (GS-6)/\$150                                                                                                                                                      |                                                                                                                                                                                              | control and monitor                                                                                                                                    |

| Recreation Picnicking area 5 sites \$ 15,000 Trails Stabilize access trails for minimum handia access    Trails   Stabilize access trails for minimum handia access | Preferred Alternative<br>Provide small picnic<br>area                               | Conditions Alternative                                                                 | Altomotive                                                                            | Practicable Alternative                                                                                     | Staffing Rationale                                                                                              |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|
|                                                                                                                                                                     | nall picnic                                                                         |                                                                                        | Aileriduve                                                                            |                                                                                                             |                                                                                                                 |
|                                                                                                                                                                     | 5 sites                                                                             | No picnicking - no<br>change                                                           | No picnicking                                                                         | Provide small picnic area 5 sites                                                                           |                                                                                                                 |
|                                                                                                                                                                     | Stabilize access trail<br>for minimum handicap<br>access                            | Existing road used for foot access - no change                                         | Stabilize access trail<br>for minimum handicap<br>access                              | Pave access trail for<br>handicap access                                                                    |                                                                                                                 |
|                                                                                                                                                                     | stabilized<br>)                                                                     |                                                                                        | new trail, stabilized (3,700 ft.)                                                     | new trail, paved (3,700 ft.)                                                                                | Maintain minimum access<br>handicap trail; provide                                                              |
|                                                                                                                                                                     |                                                                                     | 0                                                                                      | \$ 27,000                                                                             | \$ 40,000                                                                                                   | area cleanup                                                                                                    |
|                                                                                                                                                                     | )/\$4,200                                                                           |                                                                                        | 0.01 (WG-7)/\$4,200                                                                   | 0.05 (WG-7)/\$21,000                                                                                        |                                                                                                                 |
| \$ 13,000<br>0.02 (WG-)<br>Provide to<br>wayside e>                                                                                                                 | ghway and igning                                                                    | No signs - no change                                                                   | Provide highway and entrance signing                                                  | Provide highway and entrance signing                                                                        |                                                                                                                 |
| 0.02 (WG-                                                                                                                                                           |                                                                                     | 0                                                                                      | \$ 13,000                                                                             | \$ 13,000                                                                                                   | Provide upkeep on signs<br>and area cleanup, pur-                                                               |
| Provide to wayside ex                                                                                                                                               | 7)/\$840                                                                            |                                                                                        | 0.02 (WG-7)/\$840                                                                     | 0.02 (WG-7)/\$840                                                                                           | chase sign repair mate-<br>rials                                                                                |
| *                                                                                                                                                                   | Provide tour folder and wayside exhibits for site                                   | Provide informational<br>handout and map - no<br>change                                | Provide tour folder<br>and wayside exhibits<br>for site                               | Provide tour folder<br>and wayside exhibits<br>for site                                                     |                                                                                                                 |
| 0.05 (0.5-                                                                                                                                                          |                                                                                     | 0                                                                                      | *                                                                                     |                                                                                                             | Increase is needed for implementing/maintenance                                                                 |
|                                                                                                                                                                     | 0.05 (GS-4)/ <b>\$</b> 989                                                          |                                                                                        | 0.05 (GS-4)/\$989                                                                     | 0.05 (GS-4)/\$989                                                                                           | of folders and waysides; without it, visitors will be deprived of basic site information                        |
| Offer personal servi<br>only during times of<br>high visitation**                                                                                                   | Offer personal services only during times of high visitation**                      | Personal services by<br>special appointment<br>(minimal existing staff)<br>- no change | Offer personal services only during times of high visitation                          | Provide significantly more personal services for interpretation in combination with larger protection staff | Without accompanying increase, few visitors will receive interpretation of site and its significance; site pro- |
| 0                                                                                                                                                                   |                                                                                     | 0                                                                                      | 0                                                                                     | 0                                                                                                           | ened by increased                                                                                               |
| 0.35 (GS-5)/\$6,958                                                                                                                                                 | 856,958                                                                             | 0.01 (GS-9)/\$500                                                                      | 0.35 (GS-5)/\$6,958                                                                   | 0.7 (GS-5)/\$9,957                                                                                          | visitation and accom-<br>panying vandalism                                                                      |
| Administration Build small storage and Facilities building for mainter Trailhead and protection near Parking and trailhead                                          | Build small storage<br>building for maintenance<br>and protection near<br>trailhead | No onsite facilities - no<br>change                                                    | Build small storage<br>building for mainte-<br>nance and protection<br>near trailhead | Build combination<br>interpretive shelter/<br>contact station/sto-<br>rage building near<br>trailhead       |                                                                                                                 |
| 160 s.f. se<br>only                                                                                                                                                 | 160 s.f. seasonal use<br>only                                                       |                                                                                        | 160 s.f. seasonal use only                                                            | 600 s.f. seasonal use only                                                                                  | Minimum requirements<br>alternative; increase<br>needed to provide pro-                                         |
| \$ 16,000                                                                                                                                                           |                                                                                     | 0                                                                                      | \$ 16,000                                                                             | \$ 48,000                                                                                                   | tection patrol for the development                                                                              |

| Category,<br>Activity,<br>or Place                                         | Preferred Alternative                                                                                   | Continuation of Existing Conditions Alternative | Minimum Requirements<br>Alternative                                               | Other<br>Practicable Alternative                                                                       | Staffing Rationale                                                                                                |
|----------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|-------------------------------------------------|-----------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|
|                                                                            | Build tent platforms,<br>small vault toilets, and<br>primitive, cold water<br>shower for seasonal staff |                                                 |                                                                                   | Build tent platforms,<br>small vault toilet, and<br>primitive, cold water<br>shower for seasonal staff | Other practicable alte native; increase level of protection patrols in line with value of                         |
|                                                                            | 120 s.f., wood (2)                                                                                      |                                                 |                                                                                   | 120 s.f., wood (2)                                                                                     | developments                                                                                                      |
|                                                                            | \$ 5,000                                                                                                | 0                                               | 0                                                                                 | \$ 5,000                                                                                               | for small building, se                                                                                            |
|                                                                            | 0.01 (GS-7)/\$150<br>0.7 (WG-7)/\$29,400                                                                |                                                 | 0.01 (GS-7)/\$150<br>0.5 (WG-7)/\$21,000                                          | 0.15 (GS-5)/\$1,995<br>0.04 (GS-7)/\$600<br>1.0 (WG-7)/\$42,000                                        | sonal tent pratroms, floodproof vault toiled and well to provide sanitary services and utilities to meet PHS laws |
| Utilities                                                                  | Build floodproof vault toilet                                                                           | No utilities - no change                        | Build floodproof vault toilet                                                     | Build floodproof vault toilet                                                                          |                                                                                                                   |
| Parking and<br>Ranch Areas                                                 | \$ 45,000                                                                                               | 0                                               | \$ 45,000                                                                         | \$ 45,000                                                                                              |                                                                                                                   |
|                                                                            | Drill well for drinking water; floodproof                                                               |                                                 | Haul in drinking water                                                            | Drill well for drinking water; floodproof                                                              | ٠                                                                                                                 |
|                                                                            | \$ 66,000                                                                                               | 0                                               | 0                                                                                 | \$ 66,000                                                                                              |                                                                                                                   |
|                                                                            | 0.5 (WG-7)/\$21,000                                                                                     |                                                 | 0.5 (WG-7)/\$21,000                                                               | 0.32 (WG-7)/\$13,440                                                                                   |                                                                                                                   |
| Floodplain/<br>Flash-Flood<br>Strategy<br>Access and                       | Provide flood-warning<br>systems and evacuation<br>plans for areas with<br>flood potential              | Let flood - no change                           | Provide flood-warning systems and evacuation plans for areas with flood potential | Provide flood-warning<br>systems and evacuation<br>plans for areas with<br>flood potential             |                                                                                                                   |
| Ranch                                                                      | \$ 8,000                                                                                                | 0                                               | \$ 8,000                                                                          | \$ 8,000                                                                                               |                                                                                                                   |
| Elkhorn Unit<br>Subtotals<br>Capital<br>Investment-<br>Development<br>Cost | \$ 330,000                                                                                              | 0                                               | \$ 244,000                                                                        | \$1,301,000                                                                                            |                                                                                                                   |
| Staffing/<br>Operations:<br>FTE<br>Cost:                                   | 3.14<br>\$ 99,727                                                                                       | 1.05                                            | 3.04                                                                              | 4.99                                                                                                   |                                                                                                                   |
| 10-Year Costs:<br>Development                                              | \$ 330,000                                                                                              | 0                                               | \$ 244,000                                                                        | \$1,301,000                                                                                            |                                                                                                                   |
| Operations                                                                 | \$ 629,000                                                                                              | \$ 178,000                                      | \$ 606,000                                                                        | \$ 970,000                                                                                             |                                                                                                                   |
| Grand Total                                                                | 000'656 \$                                                                                              | \$ 178,000                                      | \$ 850,000                                                                        | \$2,271,000                                                                                            |                                                                                                                   |
| Relative Cost                                                              | \$5.39                                                                                                  | \$1.00                                          | \$4.78                                                                            | \$12.76                                                                                                |                                                                                                                   |
|                                                                            |                                                                                                         |                                                 |                                                                                   |                                                                                                        |                                                                                                                   |

| Staffing Rationale                                 |            | Existing conditions and minimum requirements alternatives; increases required to maintain existing facility to standard     | Other practicable alter- | native; increase re-<br>quired to make improve- | ments and then properly maintain Maintenance required to repair fence corral shutes and additional corral will increase cost of maintenance |                                                              |          |                                                                |           |                                                                                                                                                     | Adaptive use will require maintenance to structures as well as other support services such as utilities and PHS compliance | Increase needed to<br>monitor use and pro- |
|----------------------------------------------------|------------|-----------------------------------------------------------------------------------------------------------------------------|--------------------------|-------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------|----------|----------------------------------------------------------------|-----------|-----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|
| Other<br>Practicable Alternative                   |            | Keep in present location; upgrade existing horse corral in northeastern corner of unit as a second facility to handle bison | upgrade horse corral     | \$ 240,000                                      | 0.08 (GS-6&9)/\$6,000<br>0.2 (WG-7)/\$8,400                                                                                                 | Install fire suppression<br>system in Maltese Cross<br>cabin | \$ 8,000 | Provide fire suppression system in visitor center              | \$ 27,000 | Move station; use<br>adaptively elsewhere                                                                                                           | \$ 19,000 move struc.<br>48,000 adapt. restor.<br>\$ 67,000                                                                | 0.02 (GS-6)/\$300<br>0.2 (WG-7)/\$8,400    |
| Minimum Requirements<br>Alternative                |            | Keep in present location                                                                                                    |                          | 0                                               | 0.03 (GS-6)/\$3,000                                                                                                                         | Maltese Cross cabin -<br>no change                           |          | Provide fire suppression system in visitor center              | \$ 27,000 | Use station adaptively in place (researcher or seasonal quarters); provide gravel road for access; haul in water; adapt stone privy as vault toilet | \$ 121,000 ½ mi. gravel<br>48,000 adapt. restor.<br>\$ 169,000 (exist. util. &<br>vault adapt.)                            | 0.02 (GS-6)/\$300<br>0.2 (WG-7/\$8,400     |
| Continuation of Existing<br>Conditions Alternative |            | Keep in present location                                                                                                    |                          | 0                                               | 0.03 (GS-6)/\$3,000                                                                                                                         | Maitese Cross cabin -<br>no change                           | 0        | Museum collections/<br>library (visitor center)<br>- no change | 0         | Periodic maintenance -<br>no change                                                                                                                 | 0                                                                                                                          |                                            |
| Preferred Alternative                              |            | Keep in present location; upgrade existing horse corral in northeastern corner of unit as a second facility to handle bison | upgrade horse corral     | \$ 240,000                                      | 0.08 (GS-6&9)/\$6,000<br>0.2 (WG-7)/\$8,400                                                                                                 | Install fire suppression<br>system in Maltese Cross<br>cabin | \$ 8,000 | Provide fire suppression<br>system in visitor center           | \$ 27,000 | Move station; use<br>adaptively elsewhere                                                                                                           | \$ 19,000 move structures 48,000 adapt. restor.                                                                            | 0.02 (GS-6)/\$300<br>0.2 (WG-7)/\$8,400    |
| Category,<br>Activity,<br>or Place                 | SOUTH UNIT | Natural<br>Resources<br>Bison Corral                                                                                        |                          |                                                 |                                                                                                                                             | Cultural<br>Resources<br>Headquarters                        | Area     |                                                                |           | East Entrance<br>Station                                                                                                                            |                                                                                                                            |                                            |

| Category,<br>Activity,<br>or Place Preferre        | Recreation Redesign Camping In Cotto (vehicular)                             | \$ 174,000                                     | 0.1 (65                                                        | Manage<br>0.08 (G                              | Camping No designation camps - camps - no chan monitor for pote designation                                                 | 0                                            | 0.01 (G           | Canoe/ Develop ca<br>Snowmobile mobile acce<br>Access (cooperate<br>Historical (<br>providing at Medora)                            | \$ 20 000          | 0.01 (G               | Trails Develop<br>of river<br>Cottonw                                       | \$ 193,000                                           | 0.14 (G                  | Develop<br>trail bel<br>Painted                              | \$ 26,0                                                                                   |                     |
|----------------------------------------------------|------------------------------------------------------------------------------|------------------------------------------------|----------------------------------------------------------------|------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|----------------------------------------------|-------------------|-------------------------------------------------------------------------------------------------------------------------------------|--------------------|-----------------------|-----------------------------------------------------------------------------|------------------------------------------------------|--------------------------|--------------------------------------------------------------|-------------------------------------------------------------------------------------------|---------------------|
| Preferred Alternative                              | Redesign spur campsites<br>In Cottonwood camp-<br>ground to puil-through     | 000                                            | 0.1 (GS-12,9,6)/\$2,900                                        | Manage horse/group camp<br>0.08 (GS-9)/\$2,000 | No designated canoe camps - permit only; no change, except monitor camping demand for potential future designation of sites |                                              | 0.01 (GS-5)/\$150 | Develop canoe/snow-<br>mobile access point<br>(cooperate with State<br>Historical Society in<br>providing launch site<br>at Medora) | 100                | 0.01 (GS-9)/\$150     | Develop 6-mile loop west<br>of river, beginning at<br>Cottonwood campground | 000                                                  | 0.14 (GS-9&12)/\$5,800   | Develop interpretive<br>trail below rim at<br>Painted Canyon | 26,000 trail (4,000 ft)<br>16,000 retaining walls<br>42,000                               |                     |
| Continuation of Existing<br>Conditions Alternative | Cottonwood campground<br>- no change                                         | 0                                              |                                                                | Manage horse/group camp<br>0.08 (GS-9)/\$2,000 | No designated canoe<br>camps - permit only;<br>no change                                                                    | 0                                            |                   | No formal canoe/snow-<br>mobile access point -<br>no change                                                                         |                    |                       | Trail system - no.<br>change                                                | 0                                                    |                          |                                                              | 0                                                                                         |                     |
| Minimum Requirements<br>Alternative                | Redesign spur campsites<br>in Cottonwood camp-<br>ground to pull-through     | \$ 174,000                                     | 0.1 (GS-12,9,6)/\$2,900                                        | Manage horse/group camp<br>0.08 (GS-9)/\$2,000 | Canoe camping in designated sites                                                                                           | 0                                            | 0.01 (GS-5)/\$150 | Develop canoe/snow-<br>mobile access point<br>(cooperate with State<br>Historical Society in<br>providing launch site<br>at Medora) | 38 000             | 0                     | Develop 6-mile loop west<br>of river, beginning at<br>Cottonwood Campground | \$ 193,000                                           | 0.14 (GS-9&12)/\$5,800   | Develop interpretive<br>trail below rim at<br>Painted Canyon | \$ 26,000 trail (4,000 ft)<br>16,000 retaining walls<br>\$ 42,000                         |                     |
| Other<br>Practicable Alternative                   | Redesign spur campsites<br>in Cottonwood camp-<br>ground to pull-through     | \$ 174,000                                     | 0.1 (GS-12,9,6)/\$2,900                                        | Manage horse/group camp<br>0.08 (GS-9)/\$2,000 | No canoe camping in<br>park; coordinate canoe<br>camping outside unit<br>with Forest Service                                | 0                                            |                   | Develop canoe/snow-<br>mobile access point<br>(cooperate with State<br>Historical Society in<br>providing launch site<br>at Medora) | 30 000             | - 0                   | Develop 6-mile loop west<br>of river, beginning at<br>Cottonwood Campground | \$ 193,000                                           | 0.14 (GS-9&12)/\$5,800   | Develop interpretive<br>trail below rim at<br>Painted Canyon | \$ 26,000 trail (4,000 ft)<br>16,000 retaining walls<br>\$ 42,000                         | A                   |
| Staffing Rationale                                 | Increase for management<br>and protection of the<br>facility during use sea- | son; construcion of the<br>Rough Riders horse/ | group camp has been programmed and is not included in this GMD |                                                |                                                                                                                             | Increase required to<br>manage, monitor, and | document use      |                                                                                                                                     | Increase needed to | setup of access point | Increase needed to lay                                                      | out trail and to super-<br>vise construction; there- | vide maintenance support |                                                              | proposed trail. Without it, visitor safety will be threatened, and visitors will not gain | an understanding of |

| Provide Medica overflook   Provide Medica   Provide Personal   Provide Medica   Provide Personal   Provide Pers                                                                                                                                                                                          | Activity,<br>or Place                          | Preferred Alternative                                                 | Continuation of Existing<br>Conditions Alternative | Minimum Requirements<br>Alternative                  | Other<br>Practicable Alternative                                               | Staffing Rationale                                                                                                           |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------|-----------------------------------------------------------------------|----------------------------------------------------|------------------------------------------------------|--------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|
| \$ 151,000 (18]  \$ 151,000 (18]  \$ 2000 (18]  \$ 163,000 (18]  \$ 163,000 (18]  \$ 163,000 (18]  \$ 163,000 (18]  \$ 163,000 (18]  \$ 163,000 (18]  \$ 163,000 (18]  \$ 163,000 (18]  \$ 163,000 (18]  \$ 163,000 (18]  Develop low-standard trial is to real into a partial canyon and a former and at former at f                                                                                                                                                                           |                                                | Develop Medora overlook<br>trail, loop about 3 mi.                    |                                                    |                                                      | Develop Medora overlook<br>trail, loop about 3 mi.                             | Increase required to pro-<br>vide interpretive patrols                                                                       |
| 0.2 (GS-4)/\$2,660 0.1 (GS-9)/\$150 0.2 (GS-9)/\$150 0.3 (GS-9)/\$                                                        |                                                |                                                                       | 0                                                  | 0                                                    | The second second                                                              | and guided warks on<br>proposed trail, thereby<br>enhancing visitor safety<br>and understanding of<br>the park               |
| Develop low-standard trail - Buck Hill to Painted Canyon   Frail - Buck Hill to Painted Canyon   Frail - Buck Hill to Painted Canyon   State - B                                                                                                                                                                                          |                                                | 0.2 (GS-4)/\$2,660<br>0.1 (GS-9)/\$150                                |                                                    |                                                      | 0.2 (GS-4)/\$2,660<br>0.1 (GS-9/\$150                                          | Increase needed to assist<br>in plan and layout of<br>trail                                                                  |
| 21,000 ft                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                | Develop low-standard<br>trail - Buck Hill to<br>Painted Canyon        |                                                    |                                                      | Develop low-standard<br>trail - Buck Hill to<br>Painted Canyon                 | Increase needed to plan<br>and layout trail for<br>maintenance; assistance                                                   |
| 0.03 (GS-9)/\$600 Improve Skyline trail to make handicap accessible make handicap accessible pave 1,000 ft.  \$ 11,000 \$ 400  \$ 400  Build new parking and trailhead at former harse camp west of river harse camp west of river harse camp west of river for parking, 15 vehicles  for 0.02 (GS-986)/\$400  dirt parking, 15 vehicles  for 0.58 (WG-7)/\$24,300  s 37,000  for 0.58 (WG-7)/\$24,300  s 37,000  for 0.58 (WG-7)/\$29,400  for 0.58 (WG-7)/\$24,300  s 37,000                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                | 10,000                                                                | 0                                                  | 0                                                    | 10,000                                                                         | thereatter                                                                                                                   |
| Improve Skyline trail to make handicap accessible pave 1,000 ft. \$ 11,000 \$ 400 \$ \$ 400 \$ \$ 400 \$ \$ \$ 400 \$ \$ \$ \$                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                | 0.03 (GS-9)/\$600                                                     |                                                    |                                                      | 0.03 (GS-9)/\$600                                                              |                                                                                                                              |
| \$ 11,000 ft. \$ 1000 |                                                | Improve Skyline trail to<br>make handicap accessible                  |                                                    | Improve Skyline trail to<br>make handicap accessible | Improve Skyline trail to<br>make handicap accessible                           | ٠                                                                                                                            |
| \$ 400                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                | 11,000                                                                | 0                                                  | 11,000                                               | 100                                                                            |                                                                                                                              |
| Build new parking and trailhead at former.  Build new parking and trailhead at former.  Build new parking and trailhead at former.  borse camp west of river  0.02 (GS-9&6)/\$400  dirt parking, 15 vehicles  \$ 37,000  for 0.58 (WG-7)/\$24,300  0.02 (WG-7)/\$8,400  0.02 (WG-7)/\$29,400  \$ 37,000  0.03 (WG-7)/\$29,400  1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                |                                                                       |                                                    |                                                      |                                                                                |                                                                                                                              |
| Build new parking and trailhead at former horse camp west of river  0.02 (GS-9&6)/\$400  dirt parking, 15 vehicles  for 0.58 (WG-7)/\$24,300  s 145,000  Build new parking and trailhead at former horse camp west of river  0.02 (GS-9&6)/\$400  dirt parking, 15 vehicles  \$ 37,000  0.2 (WG-7)/\$8,400  0.7 (WG-7)/\$29,400                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                |                                                                       |                                                    |                                                      | Build footbridge across<br>river at Peaceful Valley<br>(for horses and hikers) | Increase needed to<br>fund interpretive trail<br>leaflet; without it, visi-                                                  |
| Build new parking and trailhead at former trailhead at former horse camp west of river 0.02 (GS-9&6)/\$400 dirt parking, 15 vehicles \$ 37,000 for 0.58 (WG-7)/\$24,300 . 0.2 (WG-7)/\$8,400 for 0.58 (WG-7)/\$29,400 e.7 (WG-7)/\$29,400 for 0.58 (WG-7)/\$29,400 for 0.58 (WG-7)/\$24,300 for 0.58 (WG-7)/\$29,400 for 0.58 (WG-7)/\$20,400 for 0.58 (WG-7)/\$2                                                                                                      |                                                | 0                                                                     | 0                                                  | 0                                                    |                                                                                | tors will not have access to basic information about park resources                                                          |
| 0.02 (GS-9&6)/\$400 dirt parking, 15 vehicles dirt parking, 15 vehicles \$\frac{1}{3}\frac{3000}{300}\$ \$\frac{1}{3}\frac{3000}{3}\$ \$\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\frac{1}{3}\f                                                                                                                                                                                  |                                                | Build new parking and trailhead at former in horse camp west of river |                                                    |                                                      | Build new parking and<br>trailhead at former<br>horse camp west of<br>river    | Increase required to<br>monitor use and provide<br>protection and incidental<br>maintenance after con-                       |
| dirt parking, 15 vehicles dirt parking, 15 vehicles \$ 37,000 \$ 37,000 \$ 0.7 (WG-7)/\$24,300 . 0.2 (WG-7)/\$8,400 0.7 (WG-7)/\$29,400                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                | 0.02 (GS-9&6)/\$400                                                   |                                                    |                                                      | 0.02 (GS-9&6)/\$400                                                            | struction                                                                                                                    |
| \$ 37,000<br>for 0.58 (WG-7)/\$24,300                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                | dirt parking, 15 vehicles                                             |                                                    |                                                      | dirt parking, 15 vehicles                                                      | Provide personal service                                                                                                     |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | tenance for<br>ew trails<br>osed in<br>natives | \$ 37,000<br>0.58 (WG-7)/\$24,300                                     |                                                    | 0.2 (WG-7)/\$8,400                                   | \$ 37,000<br>0.7 (WG-7)/\$29,400                                               | and supplies to maintain<br>all new or ungraded<br>trails; cyclic maintenance<br>required to keep visitor<br>use trails open |

| Staffing Rationale                              |                                                                                                                  |                                                                                              |   |                                              |   | Increase required to fund informal interpretation at Buck Hill during hours of beak | visitation, thereby en-<br>hancing visitor safety | and understanding of park |                                                                                        |            |                                                                           | WG-7 required to keep | gravel road to Buck<br>Hill graded and safe | וסן עופותו וומעפו  |
|-------------------------------------------------|------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|---|----------------------------------------------|---|-------------------------------------------------------------------------------------|---------------------------------------------------|---------------------------|----------------------------------------------------------------------------------------|------------|---------------------------------------------------------------------------|-----------------------|---------------------------------------------|--------------------|
| Other<br>Practicable Alternative                | Redesign interior of visitor center. New interpretive prospectus will prescribe media to interpret these themes: | -Significance of park as<br>a whole<br>-Geological origin of the<br>badlands<br>-Air quality |   | New exhibits per new<br>wayside exhibit plan |   | Place stronger interpre-<br>tive emphasis on this<br>major viewpoint                |                                                   | 0.35 (GS-4)/\$6,654       | (See later section for road removal cost due to relocation above 100-year floodplain.) | 0          | Keep replacing pavement on Buck Hill spur road; improve base and drainage | ½ mile                | \$ 335,000                                  | 0.2 (WG-7)/\$8,400 |
| Minimum Requirements<br>Alternative             | Redesign interior of visitor center. New interpretive prospectus will prescribe media to interpret these themes: | -Significance of park as<br>a whole<br>-Geological origin of the<br>badlands<br>-Air quality | * | New exhibits per new<br>wayside exhibit plan |   | Place stronger interpre-<br>tive emphasis on this<br>major viewpoint                |                                                   | 0.35 (GS-4)/\$6,654       | Provide additional parking and improve circulation at picnic area                      | \$ 172,000 | Convert Buck Hill spur<br>road to gravel as base<br>deteriorates          | ½ mile                | \$ 47,000                                   | 0.2 (WG-7)/\$8,400 |
| Continuation of Existing Conditions Alternative | Existing exhibits and audiovisual - no change                                                                    |                                                                                              | 0 | Existing tour guide<br>leaflet - no change   | 0 | Leave Buck Hill as is<br>- no change                                                | 0                                                 |                           | Picnic area - no change                                                                | 0          | Convert Buck Hill spur<br>road to gravel as base<br>deteriorates          | ½ mile                | \$ 6,000                                    |                    |
| Preferred Alternative                           | Redesign interior of visitor center. New interpretive prospectus will prescribe media to interpret these themes: | -Significance of park as<br>a whole<br>-Geological origin of the<br>badlands<br>-Air quality |   | New exhibits per new<br>wayside exhibit plan | - | Place stronger interpre-<br>tive emphasis on this<br>major viewpoint                |                                                   | 0.35 (GS-4)/\$6,654       | Provide additional parking and improve circulation at picnic area                      | \$ 172,000 | Convert Buck Hill spur<br>road to gravel as base<br>deteriorates          | ½ mile                | \$ 47,000                                   | 9.2 (WG-7)/\$8,400 |
| Category,<br>Activity,<br>or Place              | Interpretation/<br>Visitor Contact<br>Painted Canyon                                                             |                                                                                              |   | Loop Road                                    |   |                                                                                     |                                                   |                           | Roads/Parking<br>Peaceful Valley                                                       |            |                                                                           |                       |                                             |                    |

| Painted 1/ Canyon re Canyon re Canyon Road Bu                                | Reduce largest cell to                                                                                                                                                     |                                                                                                                                                   |                                                                                                                                                            |                                                                                                                       |                                                                                                                   |
|------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|
|                                                                              | replace lining                                                                                                                                                             | Sewage lagoons - no<br>change                                                                                                                     | Reduce largest cell to 1/3 existing size and replace lining                                                                                                | Reduce largest cell to 1/3 existing size and replace lining                                                           |                                                                                                                   |
|                                                                              | 26,000                                                                                                                                                                     | 0                                                                                                                                                 | \$ 56,000                                                                                                                                                  | \$ 56,000                                                                                                             |                                                                                                                   |
|                                                                              | Completely redesign and replace heating system for extended season of operation                                                                                            | Solar heating/cooling<br>system (visitor center)<br>- no change                                                                                   | Completely redesign and replace heating system for extended season of operation                                                                            | Completely redesign and replace heating system for extended season of operation                                       | Current funding/staffing levels do not allow NPS to operate facility in the spring and fall; without an increase, |
|                                                                              | 242,000                                                                                                                                                                    | 0                                                                                                                                                 | \$ 242,000                                                                                                                                                 | \$ 242,000                                                                                                            | times when visitation de-                                                                                         |
|                                                                              | 0.35 (GS-4)/\$6,374                                                                                                                                                        |                                                                                                                                                   | 0.35 (GS-4)/\$6,374                                                                                                                                        | 0.85 (GS-4)/\$15,292                                                                                                  | mands it to be operated                                                                                           |
|                                                                              | Build vault toilets at<br>Buck Hill and two<br>other suitable locations                                                                                                    | No toilets - no change                                                                                                                            | Build vault toilet at<br>Buck Hill                                                                                                                         | Build vault toilets at<br>Buck Hill and two<br>other suitable locations                                               | WG-7 required to main-<br>tain vault toilets on<br>loop road to meet PHS                                          |
| sin.                                                                         | 135,000                                                                                                                                                                    | 0                                                                                                                                                 | \$ 45,000                                                                                                                                                  | \$ 135,000                                                                                                            | iaws                                                                                                              |
| 0                                                                            | 0.4 (WG-7)/\$16,800                                                                                                                                                        |                                                                                                                                                   | 0.2 (WG-7)/\$8,400                                                                                                                                         | 0.4 (WG-7)/\$16,800                                                                                                   |                                                                                                                   |
| Floodplain/ Bu<br>Flash-Flood be<br>Strategy M<br>Headquarters pr<br>Area ar | Build permanent dike<br>behind visitor center/<br>Maltese Cross cabin);<br>provide warning system<br>and evacuation plan for<br>areas with flood potential                 | Building temporary dike<br>on receiving flood<br>warnings; provide warn-<br>ing system and evacua-<br>tion plan for areas<br>with flood potential | Build permanent dike<br>behind visitor center/<br>Maitese Cross cabin);<br>provide warning system<br>and evacuation plan for<br>areas with flood potential | Build permanent dike (riverbank location); provide warning system and evacuation plan for areas with flood potential. | Maintenance worker<br>required to perform<br>grounds work                                                         |
| or los                                                                       | \$ 8,000 warning sys.<br>451,000 dike (1,700'<br>\$ 459,000 long, 7' high<br>avg.)                                                                                         | \$ 8,000                                                                                                                                          | \$ 8,000 warning sys.<br>451,000 dike (1,700'<br>\$ 459,000 long, 7' high<br>avg.)                                                                         | \$ 8,000 warning sys.<br>839,000 dike (2,200'<br>\$ 847,000 long, 12' high<br>avg.)                                   |                                                                                                                   |
| 6                                                                            | 0.2 (WG-7)/\$8,400                                                                                                                                                         |                                                                                                                                                   | 0.2 (WG-7)/\$8,400                                                                                                                                         |                                                                                                                       |                                                                                                                   |
| Cottonwood ar<br>Campground wi                                               | Floodproof structures<br>and utilities to comply<br>with 100-year flood<br>regulations; provide<br>warning system and<br>evacuation plan for<br>areas with flood potential | Let flood and repair<br>damage; provide warn-<br>ing system and evacua-<br>tion plan for areas with<br>flood potential                            | Flood proof structures and utilities to comply with 100-year flood regulations; provide warning system and evacuation plan for areas with flood potential  | Relocate above 100-<br>year floodplain                                                                                |                                                                                                                   |
| ur lan                                                                       | 8,000 warning sys.<br>184,000 reloc. sew.trmt.<br>267,000 waterproof/elev.<br>459,000 cmpd. struct.                                                                        | damage unpredictable                                                                                                                              | \$,000 warning sys. 184,000 reloc. sew.trmt. 267,000 waterproof/elev. \$ 459,000 cmpd. struct.                                                             | New campground; new utilities; restore site of old campground \$2,104,000                                             |                                                                                                                   |
| 0                                                                            | 0.04 (GS-12)/\$1,600                                                                                                                                                       | 0.04 (GS-12)/\$1,600                                                                                                                              | 0.04 (GS-12)/\$1,600                                                                                                                                       | 0.02 (GS-12)/\$800                                                                                                    | Increase required to<br>prepare evacuation plan<br>and provide warning<br>system                                  |

|                      | Preferred Alternative                                                                                                                                                                                | Continuation of Existing<br>Conditions Alternative                                                                                           | Minimum Requirements<br>Alternative                                                                                                                                                                  | Other<br>Practicable Alternative                                                       | Staffing Rationale         |
|----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|----------------------------|
| 2000 444 4000        | Let flood and repair damage; provide warning systems and evacuation plans for areas with flood potential; provide floodproof comfort station and relocate sewage treatment above 100-year floodplain | Let flood and repair<br>damage; provide warn-<br>ing systems and evacua-<br>tion plans for areas<br>with flood potential                     | Let flood and repair damage; provide warning systems and evacuation plans for areas with flood potential; provide floodproof comfort station and relocate sewage treatment above 100-year floodplain | Relocate above 100-<br>year floodplain                                                 |                            |
| LES                  | relocate sewage treat-<br>ment; build new comfort station                                                                                                                                            |                                                                                                                                              | relocate sewage treat-<br>ment; build new comfort<br>station                                                                                                                                         | move hist. struct; new road, parking; and util. incl. comfort station site restoration |                            |
|                      |                                                                                                                                                                                                      | damage unpredictable                                                                                                                         |                                                                                                                                                                                                      |                                                                                        | WG-7 required to main-     |
| 1967                 | \$ 293,000                                                                                                                                                                                           | 0                                                                                                                                            | \$ 293,000                                                                                                                                                                                           | \$1,087,000                                                                            | and operate sewage         |
| -                    | 0.2 (WG-7)/\$8,400                                                                                                                                                                                   |                                                                                                                                              | 0.2 (WG-7)/\$8,400                                                                                                                                                                                   | 0.34 (WG-7)/\$14,280                                                                   | treatment to meet PHS laws |
|                      | Let flood and repair damage; provide warning systems and evacuation plans for areas with flood potential; provide 2 floodproof vault toilets                                                         | Let flood and repair<br>damage; provide warning<br>systems and evacuation<br>plans for areas with<br>flood potential<br>damage unpredictable | Let flood and repair<br>damage; provide warning<br>systems and evacuation<br>plans for areas with<br>flood potential; provide<br>2 floodproof vault toilets                                          | Relocate above 100-year<br>floodplain                                                  |                            |
| 101                  | \$ 81,000                                                                                                                                                                                            | 0                                                                                                                                            | \$ 81,000                                                                                                                                                                                            | \$ 320,000                                                                             |                            |
|                      |                                                                                                                                                                                                      |                                                                                                                                              |                                                                                                                                                                                                      | 0.2 (WG-7)/\$8,400                                                                     |                            |
| 1.00                 | \$ 16,000                                                                                                                                                                                            | \$ 16,000                                                                                                                                    | \$ 15,000                                                                                                                                                                                            | Above floodplain, none required                                                        |                            |
| South Unit Subtotals | \$2                                                                                                                                                                                                  |                                                                                                                                              |                                                                                                                                                                                                      |                                                                                        |                            |
| 91                   | \$2,981,000                                                                                                                                                                                          | \$ 38,000                                                                                                                                    | \$2,515,000                                                                                                                                                                                          | \$6,292,000                                                                            |                            |
| 141                  | 29.16<br>\$ 938,914                                                                                                                                                                                  | 24.64                                                                                                                                        | \$ 885,144                                                                                                                                                                                           | 29.71<br>\$ 946,242                                                                    |                            |
| - 09                 | \$2,981,000                                                                                                                                                                                          | \$ 38,500                                                                                                                                    | \$2,515,000                                                                                                                                                                                          | \$6,292,000                                                                            |                            |
| 101                  | \$8,732,000                                                                                                                                                                                          | \$7,929,000                                                                                                                                  | \$8,271,000                                                                                                                                                                                          | \$8,772,000                                                                            |                            |
| 400                  | \$11,713,000                                                                                                                                                                                         | \$7,967,000                                                                                                                                  | \$10,786,000                                                                                                                                                                                         | \$15,064,000                                                                           |                            |
| 49                   | \$1.47                                                                                                                                                                                               | \$1.00                                                                                                                                       | \$1.35                                                                                                                                                                                               | \$1,89                                                                                 |                            |
|                      |                                                                                                                                                                                                      |                                                                                                                                              |                                                                                                                                                                                                      |                                                                                        |                            |

<sup>\*</sup> Development costs not included; would be determined by future interpretive prospectus.

| PARKWIDE TOTALS           Capital Investment-Development Cost:         \$8,317,000         \$ 54,000         \$ 55,987,000         \$ 15,309,000           Staffing/Operations:         45.16         \$ 135.87         43.12         43.12         \$ 15,309,000           Staffing/Operations:         \$ 10-Year Cost:         \$ 54,000         \$ 54,000         \$ 15,367,177         \$ 15,309,000           Staffing/Operations         \$ 112,374,000         \$ 112,394,000         \$ 112,394,000         \$ 13,397,000         \$ 13,597,000           Staffing/Operations         \$ 11,239,000         \$ 11,239,000         \$ 13,397,000         \$ 13,597,000           Relative Cost         \$ 1,291,000         \$ 11,239,000         \$ 13,557,083         \$ 13,557,083                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Category,<br>Activity,<br>or Place             | Preferred Alternative | Continuation of Existing Conditions Alternative | Minimum Requirements<br>Alternative | Other<br>Practicable Alternative |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------|-----------------------|-------------------------------------------------|-------------------------------------|----------------------------------|
| \$8,317,000 \$ 54,000 \$6,987,000 \$1,443,747 \$ \$1,118,424 \$1,387,177 \$1,443,747 \$ \$1,387,177 \$12,974,000 \$11,239,000 \$11,239,000 \$11,85,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$11,239,000 \$ | PARKWIDE TOTAL                                 | 5                     |                                                 |                                     |                                  |
| \$1,443,747 \$1,387,112<br>\$1,443,747 \$1,387,177<br>\$1,387,177<br>\$1,118,424 \$1,387,177<br>\$12,974,000 \$11,185,000<br>\$11,291,000 \$11,239,000<br>\$11,239,000 \$19,375,000<br>\$1.72                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Capital<br>Investment-<br>Development<br>Cost: | \$8,317,000           | \$ 54,000                                       | \$6,987,000                         | \$15,309,000                     |
| \$12,974,000 \$ 117,185,000 \$ 12,388,000 \$ 12,312,291,000 \$ 117,239,000 \$ 1.72                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Staffing/<br>Operations:<br>FTE<br>Cost        | 45.16<br>\$1,443,747  | 35.87<br>\$1,118,424                            | 43.12                               | 49.10<br>\$1,557,083             |
| \$12,974,000<br>\$11,291,000<br>\$11,239,000<br>\$11,239,000<br>\$11,239,000<br>\$11,239,000                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 10-Year Costs:<br>Development                  | \$8,317,000           | \$ 54,000                                       | \$6,987,000                         | \$15,309,000                     |
| \$11,239,000 \$11,239,000 \$19,375,000 \$19,375,000 \$1.72                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Operations                                     | \$12,974,000          | \$11,185,000                                    | \$12,388,000                        | \$13,597,000                     |
| \$1.89 \$1.72                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | GRAND TOTAL                                    | \$21,291,000          | \$11,239,000                                    | \$19,375,000                        | \$28,906,000                     |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Relative Cost                                  | \$1.89                | \$1.00                                          | \$1.72                              | \$2.57                           |

# Notes:

- All land protection discussions and recommendations, including those for external concerns (such as the Medora airstrip, and air and visual quality relating to regional energy development) are presented in the "Land Protection Plan" element of the document.
- A few subjects affecting the south unit were dropped as planning issues due to the ability of the park to solve them through maintenance measures at existing operational levels. These include the standard of the East River Road, water quality at headquarters, and deployment of staffing at visitor centers. is
- The problem of mixed traffic (horses, pedestrians, and vehicles) at the Peaceful Valley horse concession is not adequately documented and requires additional observation by the park staff. Solutions probably can be resolved operationally without specific GMP guidance; if needed, a future DCP could be programmed. Any ground-disturbing proposals would be the subject of future environmental documentation.
- 4. Costs are based on 1985 dollars.
- include construction, material, labor, advance and project planning, construction supervision, and facilitating administration services Capital investment cost estimates are class "C", which are conceptual in nature and based on similar facilities in other parks. ó
- Personnel staffing and their operational costs are provided on an annual basis except for the 10-year totals at the end of each unit. 9

## APPENDIX D: TRACT DESCRIPTIONS OF NONFEDERAL LANDS

## LANDOWNERSHIP SUMMARY

The land and minerals status maps in the text show the locations of the 10 nonfederal surface tracts (totaling 740.51 acres) within Theodore Roosevelt National Park. Except for 50 acres of state-owned highway right-of-way in the north unit, all tracts have been recommended for fee or scenic easement acquisition. A summary of the type, number, and acreage of nonfederal tracts by park unit follows:

| Unit    | Type of Tract                   | Number of Tracts | Total Acreage |
|---------|---------------------------------|------------------|---------------|
| North   | Private                         | 6                | 513.97        |
| North   | State (highway)<br>right-of-way | 2                | 50.24         |
| Elkhorn |                                 |                  |               |
| South   | Private                         | _2               | 176.30        |
| Totals  |                                 | 10               | 740.51        |

## TRACT DESCRIPTIONS

A description of each (surface) tract of nonfederally owned land within the park follows. Each tract description also contains a discussion of protection issues (how and why the tract requires protection), visitor use issues, a recommendation, and rationale for the recommendation.

NORTH UNIT Tract 01-118 Total acres: 90.52 No improvements



## Description

Tract 01-118 is a privately owned (Stenehjem, et ux) parcel at the east end of the north unit, adjacent on the west side to federal ownership. A newly constructed and rerouted section of US 85 cuts through the linear tract, leaving slightly less than one-third of the tract west of the highway and the remainder to the east of the highway. Much of the tract has been modified and scarred by an abandoned curve of former highway, as well as construction of the new highway, which has left one significant cut and several major road fills. In addition, a buried natural gas pipeline has recently been laid through the northeastern corner of the parcel, while a fairly obtrusive WAPA overhead power line angles through the southern portion of the tract.

The topography of the tract varies from gently sloping to moderately steep. Vegetation includes grasses, shrubs, and a limited amount of Rocky Mountain juniper. The property is used only for occasional horse or cattle grazing. It appears to have development potential both east and west of US 85. The right-of-way (3.54 acres) for the access road, between US 85 and the west boundary of this tract, is owned in fee by the USA; however, the mineral rights are privately owned.

## Protection Issues

The parcel is in a key location, since US 85 passes nearly through the middle of it, while portions of an abandoned US 85 curve cut through the middle and north end of the tract. Almost any development on the tract would be within clear view of the highway. Development within the southern part of the parcel would be within view of the park entrance and visitor contact area. The mineral rights for the area of the tract are owned by the surface owner and several others. These rights have been leased for potential oil and gas development, but the lease has expired.

#### Visitor Use Issues

The southwestern and west-central portions of the parcel are very close to the entrance and visitor contact area for the north unit of the park. There could be some spillover of visitor use here. The northeastern part of the tract (east of the highway) contains some hilly terrain with a good view of the Little Missouri River.

#### Recommendation

- Fee acquisition of the portion of the tract west of US 85 (about 28 acres)
- Scenic easement acquisition of the portion of the tract east of US 85 (about 62.5 acres)

## Rationale

The portion of the tract west of US 85 lying between the highway and the edge of the federally owned portion of the north unit is a critical area because it includes the US 85 corridor and areas adjacent to the north unit headquarters and entrance road. Any private development in this area would be in direct conflict with preserving the view from the highway and the integrity of the park entrance and visitor contact area.

US 85 forms a boundary between important and scenic park resources and visitor use areas to the west and the area to the east of the highway which contains no important natural features and is not needed for visitor purposes. This area can remain in private ownership, although it should be protected from unsightly developments and major changes in land use, as it is within view of US 85 and the park entrance and visitor center area. The area could still be put to reasonable use by the owner, as defined by the terms of the scenic easement.

NORTH UNIT Tract 01-119 Total acres: 120 No improvements



## Description

Tract 01-119, owned by Maxine McCloskey, lies immediately to the east of tract 01-118. The southern third of the east boundary of the tract is also the east boundary of the north unit of the park. The tract is in a mostly natural condition except for the upper and lower sides of an abandoned curve of US 85, which are found within the north half of the property (the right-of-way for which has reverted to the tract owners). Also, the recently laid natural gas pipeline, described under tract 01-118,

traverses most of the length of this parcel, while the WAPA overhead power line crossing 01-118 also angles laterally across this tract. Topography varies from mostly rolling at the south end to extremely steep at the far north end; much of the tract is fairly rough and uneven. Vegetation includes grasses, shrubs, and Rocky Mountain juniper.

The property is used only for occasional horse or cattle grazing. South of the abandoned highway curve, the tract appears to have some development potential, and parts of the tract have a pleasant view of the Little Missouri River and scenic lands to the south and east.

## Protection Issues

Much of this tract is reasonably well-removed from US 85, but most of it can be seen from the highway. Some of the parcel can be seen from the park entrance/visitor contact area, although the view toward the tract from the park entrance area west is dominated by the large fills along the lower side of the highway. The mineral rights for the southern two-thirds of the tract are federally owned, while the rights for the remainder of the tract are privately owned. No new uses or developments have been proposed for the parcel, and it contains no significant park resources or attractions.

## Visitor Use Issues

At present there is almost no visitor use of the tract. Access from the highway is rather difficult, and there will probably be little change in the future in the limited use the tract currently receives.

#### Recommendation

Scenic easement acquisition for the entire tract.

## Rationale

Fee acquisition of this tract is not required, as it is in the separated portion of the park east of US 85, an area that contains no park resources or scenic attractions and is not needed for visitor uses. However, the parcel is within the viewshed of US 85 and should be protected from incompatible or excessive development that could degrade the scene for those entering or leaving the north unit. Part of the tract can also be seen from the entrance area of the park. The proposed scenic easement should provide this protection, while permitting reasonable use of the land by the owner.

NORTH UNIT Tract 01-120 Total acres: 70.36 No improvements



## Description

This tract, owned by Odin Stutrud, is the northernmost parcel in the block of private land that forms the eastern end of the north unit. The reconstructed portion of US 85 cuts through the western end of the parcel. This leaves approximately 2 acres of the tract west of the highway; a large, mostly barren fill slope is immediately adjacent to this area, while to the immediate east of the highway a portion of a very large and bare cut slope dominates the scene. The linear tract is superimposed over the edge of an escarpment which runs generally from the park radio tower near the tract's northwest corner almost to its southwest corner. The (upper) area north of the escarpment edge is gently sloped, while the area to the south is a steep, unusable slope above the present US 85 and the abandoned curve section of the highway. Vegetation consists mostly of grasses and shrubs. Some of the steeper slopes, including the large cut, are mostly bare and subject to erosion. This parcel is also crossed by the newly laid (buried) natural gas pipeline installed by the Williston Gas Company.

The property may support occasional grazing and is crossed by commercial trail rides. The portions of the tract above the escarpment edge have agricultural as well as residential development potential. The steeper slopes that are found on half or more of the parcel are virtually unusable.

## Protection Issues

US 85 passes through the western one-third of this linear tract, but this is part of an area of new road construction involving large cuts and fills. The 2 acres of the parcel to the west of the highway adjoin important scenic resource areas of the park. The rest (eastern portion) of the tract, which is effectively severed from the rest of the north unit by the highway, is characterized by steep slopes and by gently sloping areas that are above but that can largely be seen from the present highway location. The mineral rights for this tract are owned by the surface owner and several others. The rights have been leased for potential oil and gas development.

## Visitor Use Issues

Most of the parcel is not readily accessible or is too steep for visitor use. However, the gently sloping (high) portion near the NPS radio tower can be walked or driven to (when dry) from US 85 by staying above and to the east of the large cutbanks. This area, within the western third of the tract, affords an excellent view of the surrounding country to the south and west. The remainder of the tract is essentially inaccessible, at least from US 85.

## Recommendation

- 1. Fee acquisition of the 2-acre portion of the tract west of US 85.
- Scenic easement acquisition of the portion of the tract east of US 85 (about 68.36 acres).

## Rationale

Except for the small portion of the tract west of US 85, which immediately adjoins scenic resources of the north unit as seen from the highway, fee acquisition of this tract is not essential. It contains no park resources, is basically inaccessible, is separated from the rest of the north unit, and is not needed for visitor purposes. However, the tract is within the viewshed of US 85 and, therefore, incompatible or excessive development that could degrade the scene for those entering or leaving the north unit should not be permitted. The scenic easement should accomplish this, while permitting reasonable use of the land by the owner.

NORTH UNIT

Tract 01-121

Total Acres: 153.09

Limited improvements, as follows: small mobile home residence, barn, other minor structures, old rodeo arena and corral, and fences.



## Description

Tract 01-121, the largest and most significant of the private tracts here, is situated at the southeast corner of the north unit. It is the only private parcel containing a residence (of Mrs. Ruth Baye, who has sold the property on a contract for deed to Wright, et al/). The tract straddles US 85, while its entire south boundary is formed by the Little Missouri River. The western edge of the tract, most especially the northwest corner, lies very close to the maintenance and park residence area and a portion of the entrance road for the north unit.

The east side of the tract adjoins the property (outside the park) containing the Wike Dude Ranch, and a road from US 85 through the east side of the tract provides access to the dude ranch. The parcel has been modified from a natural condition to a relatively small extent, although the cut-and-fill reconstruction of a portion of US 85 has affected the north end, while the buried natural gas pipeline recently laid by the Williston Gas Company has left a noticeable south-north swath through the east side of the tract not far from the highway.

<sup>1.</sup> Deed transfers to the new owners when the payments for the property have been completed.

The topography varies from level to gently sloping. Much of the tract supports grass, sagebrush, and other small shrubs, but there is a large group of hardwood trees and shrubs in the southwest part of the parcel near the river. The tract is used only for stock grazing and as a residence, but it has the potential for development (including recreation) and perhaps farming.

The intended visitor use to be made of this parcel precludes retention of use and personal occupancy. However, should the residence be occupied at the time of acquisition, relocation benefits would be provided for any displacement under the provisions of PL.91-646.

## Protection Issues

For the several reasons described above, this parcel is in a key location. Relative to the north unit headquarters area, the park entrance, the highway, and the Little Missouri River, this parcel is more strategically located than any of the other tracts in the area, especially that portion of the tract west of US 85. The tract has also been leased for possible oil and gas development, although the lease has expired and no development has occurred in this area.

Commercial or other intensive development of this property would threaten the integrity of adjacent park lands, including the north unit headquarters and visitor contact area, create an environmental intrusion (especially to the west) for highway and park access road users, and might result in safety hazards along the highway just south of the intersection with the north unit access road. Existing improvements on the west side of this property, however, create only a fairly minor environmental intrusion.

## Visitor Use Issues

Other than use of the access road to the Wike Dude Ranch, there is very little public use of the tract. However, there is a need for better public access to the Little Missouri River for boating, fishing, and general recreation, and a developed access site within the tract is proposed. At present, the areas within the highway right-of-way on either side of the Little Missouri River bridge are used for such access, but these areas are narrow and inadequate and lack good and safe roads off US 85. This parcel, not open for public use, offers potentially excellent public river access and shoreline areas, especially west of the highway. The tract could also accommodate some public horse use and access, and possibly a group horse rider camp (it is one of three alternate sites for such a camp).

## Recommendation

- Fee acquisition of the portion of the tract west of US 85 (about 95 acres)
- Scenic easement acquisition of the portion of the tract east of US 85 (about 58 acres)

## Rationale

The location of this tract, especially the portion west of US 85, is extremely sensitive. It is adjacent to the north unit headquarters area, the Little Missouri River, US 85, and the Wike Dude Ranch--just outside the park. It is very accessible, has no steep terrain, and has development potential. Any adverse development within the parcel could be easily seen from US 85 and most of the north unit headquarters and visitor contact area. The tract contains an area (west of the highway) needed for public access to the Little Missouri River and related recreation development. The parcel also contains some developments that intrude on the natural scene to a minor degree.

The portion of the tract east of US 85 is not adjacent to any park resource or developed areas, is not proposed for recreation improvements, has less development potential than the area west of the highway, and is within the area separated from the main part of the north unit. However, this portion of the parcel does border on the river and is within easy view of the highway. The controls that would be provided by the proposed scenic easement should provide adequate protection of this portion of the property, while permitting reasonable use of the land by the owners.

NORTH UNIT Tracts 01-122 and 01-123 Total acres:

Tract 01-122--40 Tract 01-123--40 No improvements



## Description

These two adjoining tracts are owned by Odin Stutrud, who also owns tract 01-120. The parcels are the easternmost of the private lands in this area. They were added to the park in 1978 to include the apex of the curve of US 85 that had previously not been contained within the boundary. This portion of the road has now been relocated, so these two parcels are removed from US 85. Except for the abandoned and reseeded highway right-of-way, these tracts are undisturbed. The topography is gently rolling. The environment is very pleasant, consisting of open grassy areas interpersed with shrubs and scattered trees. From certain points good views are available to the south and east.

The property is used for occasional stock grazing at most. It appears to have development potential.

## Protection Issues

These parcels are sufficiently removed from US 85 and the park entrance/ visitor contact area that most potential development of the property would not be visible from these two areas. However, developments highly incompatible with park purposes as well as any significant amount of traffic exiting to or from the properties at the highway could cause adverse impacts for park visitors. The subsurface rights to tract 01-122 have been leased for potential oil and gas development.

## Visitor Use Issues

These tracts are neither used nor needed for public purposes. The owner has indicated an interest in developing a home on one of his three tracts. Most likely, he would want to build on one of these two.

#### Recommendation

A scenic easement is needed to ensure that reasonable uses of this area continue and negative impacts on sensitive areas to the west do not develop.

#### Rationale

As stated above, these two tracts are removed from the present location of US 85 and are not needed for public purposes. A scenic easement should provide adequate protection, while permitting reasonable use of the land, including development of at least one residence, by the owner.

NORTH UNIT

Tracts 01-124 and 01-125

Total Acres: Tract 01-124--40.60

Tract 01-125--9.64

Improvements involve approximately

1.4 miles of US 85, including

right-of-way fences.



## Description

All of this land is area that has been purchased in fee by the North Dakota State Highway Department as right-of-way for the development of US 85. All of these two sections are part of a stretch of highway that was recently reconstructed and improved; thus, all of the road here is high standard and involves several substantial cuts and fills (some of which are on park land).

Tract 01-124 passes through privately owned tracts 01-118 and 01-121, while tract 01-125 passes through privately owned tract 01-120.

#### Protection Issues

The highway in this location may be considered to be a permanent man-made feature upon the land. No protection issues are involved, aside from those that involve the privately owned lands on either side of the highway.

## Visitor Use Issues

These are discussed in the tract descriptions for tracts 01-118, 01-119, 01-120, 01-121, and 01-122/123.

#### Recommendation

Continued state right-of-way ownership. No federal interest required.

## Rationale

There are no natural or historical values contained within the highway right-of-way to require protection. Any protection needed will be adequately provided by the North Dakota State Highway Department.

SOUTH UNIT Tract 03-106 Total acres: 149.00 No improvements



### Description

Tract 03-106 is one of only two privately owned surface tracts in the south unit. These parcels, which are owned by Norbert Sickler and wife, are situated immediately to the north of I-94. This, the larger and more westerly of the two tracts, is largely (but not totally) visible from the highway. The north side of the parcel borders on the south edge of the former right-of-way for Highway 10, which has been abandoned and obliterated. The tract is completely undeveloped and lacks any form of access. This parcel, held by the previous owner at the time of interstate construction, was not provided any access from the new highway by the state. There is also no access to this location from the area of the park to the interstate. A high chain-link fence separates the south side of the tract from the interstate right-of-way.

The topography varies from nearly level to rolling, with some small buttes, steep slopes, and rough areas. Vegetation consists primarily of grass, with a few scattered shrubs, cottonwoods, and junipers. The tract is part of a scenic area of badlands, viewed by more people (from the interstate) than any other part of the park. The property has not been used by the present and previous owners.

## Protection Issues

The parcel is in a critical location since it is a part of a continuous area of scenic badlands, and because I-94 forms the southern boundary of the property, and most development or incompatible uses would be clearly visible from the highway. Development of the tract or an access road to the tract across nearby park lands would be unacceptable for these reasons.

The mineral rights for the area underlying the parcel are split between three different subsurface tracts (one in each of the three sections involved) and three different owners or dual owners. Two of these three tracts have been leased for possible oil and gas development, although no development of the subsurface resources has been attempted.

## Visitor Use Issues

Since the tract is fenced along the interstate right-of-way and has no access, it receives virtually no visitor use. The only potential for visitor use would be through development of a trail through the area; however, none is planned, so use should remain extremely limited.

#### Recommendation

Fee acquisition.

## Rationale

This nonaccessible parcel is a continuous part of a critical resource area highly visible for the most part from I-94. There are no improvements or uses on these tracts and other than passive uses, none would be acceptable and compatible with the preservation of the visual scene in a totally natural area; therefore, scenic easement would not be practical. Any road access to the tract would damage the sensitive natural resources and the visual scene described above. To guarantee complete, long-term protection, the land must be acquired in fee.

SOUTH UNIT Tract 03-108 Total acres: 27.30 No improvements



## Description

Tract 03-108 is the additional (of two) privately owned surface tracts in the south unit. The information describing tract 03-106 also applies to this parcel, with the following differences. This tract is smaller and approximately  $\frac{1}{2}$  mile east of tract 03-106. The old (obliterated) right-of-way for Highway 10 forms the east boundary of the tract. The property more or less centers on a gulch and the terrain is mostly steep-sided, with more gentle but limited terrain at the bottom. All of the tract is visible from I-94.

#### Protection Issues

This parcel is also in a very critical location, since any development or incompatible use of the property would be visible from the interstate. The tract would be difficult to develop, but any development on it would be unacceptable from a resource protection and visibility standpoint. The mineral rights are owned by several individuals, not including the surface owner. These rights have not been leased.

## Visitor Use Issues

The comments found under tract 03-106 also apply to this tract. This area is seen in passing by many thousands, but is not used per se.

## Recommendation

Fee acquisition.

## Rationale

Same as for tract 03-106.

## APPENDIX E: TABULAR LISTING OF NONFEDERAL SUBSURFACE (MINERAL) OWNERSHIPS

As noted in the text and shown on the land and minerals ownership maps, there are approximately 1,317 acres of nonfederal subsurface rights within Theodore Roosevelt National Park. To date, no known development of these rights has occurred, either within or outside the park through directional drilling. The primary potential of these subsurface resources is for oil and gas recovery. Some coal (lignite) may exist, but there have been no attempts to extract coal from any area near the park. For a number of the nonfederal mineral tracts, the federal government (USA) owns the coal resources.

The following subsurface ownership lists present detailed information on nonfederal minerals and mineral leases within the park. These may be compared with the mineral status maps, which show tract ownership numbers, locations, and interests owned or leased. However, the complexity of and metes-and-bounds surveys for a number of mineral tracts in the southeastern part of the south unit made it difficult to show the exact location and interrelationship of the ownerships involved.

The tracts in the south unit that apparently have shared ownership between Billings County and the USA will require some form of title quieting action or agreement to assure federal control, as explained in the "Land Protection Plan."

This information is subject to change and updating. This possibility could result from (1) continuing changes in ownership and leasing status since the data was collected in 1983-84; (2) further analysis of records data collected and finalization of title reports by the National Park Service; (3) clarification of ownership questions; and/or (4) the chance that additional information on the existence of outstanding mineral interests will be brought to the attention of the National Park Service. The data presented in the lists are based on more detailed title reports and other information collected by the NPS Division of Energy, Mining, and Minerals in Denver--principally through research of courthouse records.

Nonfederal Subsurface (Minerals) Ownership (Showing Recommended Protection)

| Tract<br>(Ownership)<br>Number | Owner(s) or Lessee(s) and Interest(s) Owned                                          | Acreage | Interest or Protection Needed                                                      | Priority | Other                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|--------------------------------|--------------------------------------------------------------------------------------|---------|------------------------------------------------------------------------------------|----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 01-145                         | Unknown                                                                              | 40.60   | None                                                                               | E        | Surface of this tract is highway right-                                                                                                                                                                                                                                                                                                                                                                                                                  |
| 01-146<br>01-147<br>01-148     | P.O.C. Johnson, et. ux.<br>(FM)<br>Deleted                                           | 3.54    | Acquisition of mineral rights                                                      | 2        | of-way owned by state of North Dakota. Surface of this tract is USA-owned right-of-way for the north unit road.                                                                                                                                                                                                                                                                                                                                          |
| 01-150                         | Undetermined                                                                         | 524.20  | None                                                                               | 1        | Title to the bed of the Little Missouri River is being contested by the federal government and the state of North Dakota. Ownership as of this date is in question. The mineral rights, should they be determined to be the state's, are not needed, as state has indicated it would not lease and permit mineral development within the park. NOTE: This acreage is not in- cluded in the compilation of non-federal subsurface ownership for the park. |
| SOUTH UNIT                     | SOUTH UNIT (Medora Area)                                                             |         |                                                                                    |          |                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| 02-126                         | Meridian Land and<br>Mineral Co. (A/OGH)<br>Milestone Petroleum,                     | 9.23    | Acquisition of mineral rights<br>Acquisition of mineral rights                     |          | These mineral rights underlie the park headquarters area at Medora. These mineral rights underlie the park                                                                                                                                                                                                                                                                                                                                               |
| 02-128                         | Costal Oil and Gas<br>Corp 758<br>Al-Aquitaine Exploration,<br>Ltd 258<br>(OGLE 758) | }       | Acquisition of leasehold rights                                                    | -        | Nonfederal oil and gas lease issued 11/03/80 by Burlington Northern, Inc. to Coastal Oil and Gas Corp. and Al-Aquitaine Exploration, Ltd. Primary term of lease is 5 years with extension privileges. (Milestone Petroleum, Inc. is the current owner of oil and gas interest in leased area). No release recorded. These mineral rights underlie the park headquarters area at Medora.                                                                  |
| SOUTH UNIT                     | SOUTH UNIT (North-Central Area)                                                      |         |                                                                                    |          |                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| 03-117<br>SOUTH UNIT           | 03-117 County of Billings (ALL 50%) SOUTH UNIT (Northeastern Boundary)               | 144.78  | Acquisition of mineral rights by quitclaim deed, agreement or other (not purchase) | m        | These are two separated areas in the north-central part of the south unit that are apparently owned by the USA and Billings County (50% each).                                                                                                                                                                                                                                                                                                           |
| 03-118                         | W T Vanceroriff &                                                                    | 80 00   | Acquisition of mineral rights                                                      | 4        |                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| 03-118                         |                                                                                      | 00.     | מלמומים כן ווווופים וואומים                                                        | ,        |                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| 03-119                         | Hancock Enterprises<br>(OG 3.1258)                                                   | ;       | Acquisition of mineral rights                                                      | 4        |                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| 03-120                         | Mary Alice Fortin<br>(A/C 3.125%)                                                    | ;       | Acquisition of mineral rights                                                      | 4        |                                                                                                                                                                                                                                                                                                                                                                                                                                                          |

| Interest or Protection Needed Priority Other    | Acquisition of mineral rights 4                                   | Acquisition of mineral rights 4                                             | Acquisition of mineral rights 4 | Acquisition of mineral rights 4             | Acquisition of mineral rights 4 | Acquisition of mineral rights 4                   | Acquisition of mineral rights 4                           | Acquisition of leasehold rights 4 Involves five nonfederal oil and gas | Acquisition of leasehold rights 4 Involves a nonfederal oil and gas lease which is adjacent to and may be within Frank's Creek KGS. | Acquisition of leasehold rights 4 Involves two nonfederal oil and gas leases which are adjacent to and may be | Mithin Frank's Creek KGS.  A Involves a nonfederal oil and gas lease which is adjacent to and may be within Frank's Creek KGS. |                                   | Acquisition of mineral rights 4 | Acquisition of mineral rights (old Hwy 10 right-of-way) 2 (Surface tract | Acquisition of leasehold rights  4 Nonfederal oil and gas lease issued 12/30/80  (ald Hwy by Burlington Northern Railroad Co. to right-of- Coastal Oil and Gas Corp. and Al-Aquitaine way)  Exploration Ltd. Primary term of lease is 2  5 years with extension privileges. No re- |
|-------------------------------------------------|-------------------------------------------------------------------|-----------------------------------------------------------------------------|---------------------------------|---------------------------------------------|---------------------------------|---------------------------------------------------|-----------------------------------------------------------|------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|---------------------------------|--------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Acreage Interes                                 | Acquis                                                            | Acquis                                                                      | Acquis                          | Acquis                                      | Acquis                          | Acquis                                            | Acquis                                                    | Acquis                                                                 | Acquis                                                                                                                              | Acquis                                                                                                        | Acquis                                                                                                                         |                                   | 15.0 Acquis                     | 40.5 Acquis                                                              | Acquis                                                                                                                                                                                                                                                                             |
| Owner(s) or Lessee(s) and Interest(s) Owned Act | William R. Everett,<br>Mary Lynn Kubik &<br>Kardin Jane Kathrolin | Natini Sale Natifrein<br>(A/C 25.00§)<br>Wilma T. Higgins<br>(A/C 15. ESE®) | (A/C 13.8238)<br>F.A. Dietrich  | (A/C 3.12%)<br>Peter L. Guth<br>(A/C 3.12%) | John M Kagy<br>(A/C 3 1258)     | (A/C 3.1238)<br>Mary A. Fortin<br>(A/COG 1.56258) | (A/COG 1.30238)<br>Hancock Enterprises<br>(A/COG 1.56258) | Donald C. Stawson<br>(OGLE 44.458)                                     | K & E Petroleum, Inc 47.58<br>CZOR Petroleum, Inc.                                                                                  | - 5\$ (OGLE 11.55\$)<br>International Tublar<br>Supply (OGLE 19.00\$)                                         | McAlester Fuel Co.<br>(OGLE 20.008)<br>Brazos Young Corp.<br>(OGLE 5.008)                                                      | SOUTH UNIT (Southeastern Portion) | Unknown 1                       | Burlington.Northern Inc. 4<br>(ALL)                                      | Coastal Oil and Gas Corp.<br>- 75\$ and Al-Aquitaine<br>Exploration, Ltd 25\$<br>(OGLE 75\$)                                                                                                                                                                                       |
| Tract<br>(Ownership)<br>Number                  | 03-121                                                            | 03-122                                                                      | 03-123                          | 03-124                                      | 03-125                          | 03-126                                            | 03-127                                                    | 03-128                                                                 | 03-129                                                                                                                              | 03-130                                                                                                        | 03-131<br>and<br>03-132                                                                                                        | SOUTH UNIT                        | 03-133                          | 03-134                                                                   | 03-135                                                                                                                                                                                                                                                                             |

| Other                                       |                               |                                          | Nonfederal oil and gas lease issued 12/31/80 by Burlington Northern Railroad Co. to Coastal Oil and Gas Corp and Al-Aquitaine Exploration Ltd. Primary term of lease is 5 years with extension privileges (Milestone Petroleum Inc. is the current owner of oil and gas interest leased area). No release |                                   |                               |                                 |                               |                               |                                      |
|---------------------------------------------|-------------------------------|------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|-------------------------------|---------------------------------|-------------------------------|-------------------------------|--------------------------------------|
| Priority                                    | Surface<br>tract<br>03-106)   | (Surface tract 03-106)                   | (Surface<br>(Surface<br>tract<br>4<br>(Remainder)                                                                                                                                                                                                                                                         | Surface<br>tract<br>03-108)       | (Surface tract 03-108)        | (Surface tract 03-108)          | (Surface tract 03-108)        | (Surface tract 03-108)        | (Surface tract 03-108) 4 (Remainder) |
| Interest or Protection Needed               | Acquisition of mineral rights | Acquisition of mineral rights            | Acquisition of leasehold rights                                                                                                                                                                                                                                                                           | Acquisition of mineral rights     | Acquisition of mineral rights | Acquisition of mineral rights   | Acquisition of mineral rights | Acquisition of mineral rights | Acquisition of mineral rights        |
| Acreage                                     | 0.89                          | 1                                        | t                                                                                                                                                                                                                                                                                                         | 261.00                            | 1                             |                                 | 1                             | ;                             | 1                                    |
| Owner(s) or Lessee(s) and interest(s) Owned | (OGH)                         | Meridian Land and<br>Mineral Co. (A/OGH) | Coastal Oil and Gas Corp 758 Al-Aquitaine Exploration Ltd 258 (OGLE 1008)                                                                                                                                                                                                                                 | Bertha Ceperley<br>(A/C 12.963\$) | (A/C 1.851%)                  | Dorothy Caulter<br>(A/C 1.851%) | (A/C 16.667%)                 | (A/C 33.338)                  | (A/C 25.00%)                         |
| Tract<br>(Ownership)<br>Number              | 03-137                        | 03-138                                   | 03-139                                                                                                                                                                                                                                                                                                    | 03-140                            | 03-141                        | 03-142                          | 03-143                        | 03-144                        | 03-145                               |

| Priority Other                                 | Surface tract 03-108) (Remainder)               | Federal oil and gas lease M30616(ND), effective 1/01/75. Committed to the Fryburg-Heath-Madison Unit Agreement. Use of surface of leased land for leasehold operations is prohibited. | Federal oil and gas lease M30613(ND), effective 1/01/75. Committed to the Fryburg-Heath-Madison Unit agreement. Use of surface of leased land for lease-hold operations is prohibited. | Federal oil and gas lease M21358(ND), effective 5/01/57. Committed to the Fryburg-Heath-Madison Unit agreement. This lease predates this area being incorporated into the park. The lease does not contain a "no operational use of surface" clause. | 4                                     | 7                             |                                     | •                                   | This narrow parcel of land adjoins 1-94 and the access road to the Painted Canyon overlook. This was apparently an excess taking of right-of-way for the interstate. | Nonfederal oil and gas lease issued by Ada<br>Ferguson to Amerada Hess Corp, 10/13/77.<br>Lease is within the Fryburg-Heath-Madison | Nonfederal oil and gas lease issued to Donald B. Sass by the state of North Dakota on 9/27/73. Lease assigned by Donald B. Sass to Amerada Hess Corp., 2/28/74. Committed to Fryburg-Heath-Madison Unit. Nonoperative lease. | A Nonfederal oil and gas lease issued to Stano-<br>lind Oil and Gas Co. by the state of North<br>Dakota on 1/26/54. Lease assigned by<br>Stanolind Oil and Gas Co. to Clinton Oil Co.,<br>1/27/72. Insofar as it covers the SW\$SW\$,<br>Sec. 36,7140N,R101W, lease is within the<br>Fryburg-Heath-Madison Unit area. | federal oil and gas lease M14903(ND), effective 9/10/53. Committed to the Fryburg-Heath-Madison Unit agreement. This lease predates this area being incorporated into the Dark. The lease does not contain a "no |
|------------------------------------------------|-------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------|-------------------------------|-------------------------------------|-------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Interest or Protection Needed                  | Acquisition of mineral rights                   | None (This is a portion of<br>the federal subsurface leased<br>to Amerada-Hess in 1975)                                                                                               | None (This is a portion of<br>the federal subsurface leased<br>to Amerada-Hess in 1975)                                                                                                | Acquisition of leasehold rights                                                                                                                                                                                                                      | Acquisition of mineral rights         | Acquisition of mineral rights | Acquisition of mineral rights       | Acquisition of mineral rights       | None                                                                                                                                                                 | Acquisition of leasehold rights                                                                                                     | Acquisition of leasehold rights                                                                                                                                                                                              | Acquisition of leasehold rights                                                                                                                                                                                                                                                                                       | Acquisition of leasehold rights                                                                                                                                                                                  |
| Acreage                                        |                                                 | 320.00                                                                                                                                                                                | 220.23                                                                                                                                                                                 | 15.3                                                                                                                                                                                                                                                 | 51.3                                  | 13.6                          | 99.92                               | 11.08                               | 2.25                                                                                                                                                                 | 13.6                                                                                                                                | 37.9                                                                                                                                                                                                                         | 13.47                                                                                                                                                                                                                                                                                                                 | 2,991                                                                                                                                                                                                            |
| Owner(s) or Lessee(s)<br>and Interest(s) Owned | Lawrence K. and<br>Greta Madsen<br>(A/C 8:3338) | Amerada Hess Corp 99.75028% Coastal Oil and Gas Corp 00.24972% (UOGLE 100%)                                                                                                           | Amerada Hess Corp 99.75028\$ Coastal Oil and Gas Corp 00.24972\$ (UOGLE 1008)                                                                                                          | Amerada Hess Corp.<br>(UOGLE 100%)                                                                                                                                                                                                                   | State of North Dakota<br>(ALL 50.00%) | Ada Ferguson<br>(ALL 25%)     | Phillips Petroleum<br>Co. (ALL 25%) | Phillips Petroleum<br>Co. (ALL 258) | State of North Dakota involves ownership of surface and minerals)                                                                                                    | Amerada Hess Corp.<br>(UOGLE 25%)                                                                                                   | Amerada Hess Corp.<br>(UOGLE 50%)                                                                                                                                                                                            | Clinton Oil Co.<br>(UOGLE 50%)                                                                                                                                                                                                                                                                                        | Amerada Hess Corp.<br>(UOGLE 25%)                                                                                                                                                                                |
| Number<br>Number                               | 03-146                                          | 03-147                                                                                                                                                                                | 03-148                                                                                                                                                                                 | 03-149                                                                                                                                                                                                                                               | 03-150                                | 03-151                        | 03-152                              | 03-153                              | 03-154                                                                                                                                                               | 03-155                                                                                                                              | 03-156                                                                                                                                                                                                                       | 03-157                                                                                                                                                                                                                                                                                                                | 03-158                                                                                                                                                                                                           |

| Other                                       | Federal oil and gas lease M21357(ND), effective 2/09/52. Lease committed to the Fryburg-Heath-Madison Unit. This lease predates this area being incorporated into the park. This lease does not contain a "no more allowed the surface" clause. | Federal oil and gas lease M30614(ND), effective 1/01/75. Committed to the Fryburg-Heath-Madison Unit agreement. Use of surface of leased land for leasehold operations is prohibited. (Lease document cites U.S. interest as 50%; however, based on title research, it appears that only a 25% mineral interest is owned by the United | Federal oil and gas lease M30620(ND), effective 2/01/75. Committed to the Fryburg-Heath-Madison Unit agreement. Use of surface of leased lands for leasehold operations is prohibited. (Lease document cites U.S. interest as 50%; however, based on title research, it appears that only a 25% mineral interest is owned by the United | Acquisition of basic rights, if possible, may not require purchase from state | Nonfederal oil and gas lease issued to Donald B. Sass by the state of North Dakota on 9/27/73. Lease, assigned by Donald B. Sass to Amerada Hess Corp., 2/28/74. Committed to the Fryburg-Heath-Madison Unit. Noncompative oil and oscillasses. | Federal oil and gas lease M30615(ND), effective 1/01/75. Committed to the Fryburg-Heath-Madison Unit. Use of surface of leased lands for leasehold operation is probabiled. |                               | Federal oil and gas lease M30612(ND), effective 2/01/75. Committed to the Fryburg-Heath-Madison Unit. Use of surface of leased lands for leasehold operations is probibited. |                               |                                   | Federal oil and gas lease BLM-A 035297(ND), effective 10/01/57. Committed to the Fryburg-Heath-Madison Unit. This lease predates this area being incorporated into the park. The lease does not contain a "no operational use of the surface" clause. |
|---------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|-----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Priority                                    | 4                                                                                                                                                                                                                                               | 4                                                                                                                                                                                                                                                                                                                                      | Ĭ                                                                                                                                                                                                                                                                                                                                       | 4                                                                             | 4                                                                                                                                                                                                                                               | 1                                                                                                                                                                           | 4                             | 9                                                                                                                                                                            | 4                             | 4                                 | 4                                                                                                                                                                                                                                                     |
| Interest or Protection Needed               | Acquisition of leasehold rights                                                                                                                                                                                                                 | None (This is a portion of the the federal subsurface leased to Amerada Hess in 1975)                                                                                                                                                                                                                                                  | None (This is a portion of<br>the federal subsurface leased<br>to Amerada-Hess in 1975).                                                                                                                                                                                                                                                | Acquisition of mineral rights                                                 | Acquisition of mineral rights                                                                                                                                                                                                                   | None (This is a portion of<br>the federal subsurface leased<br>to Amerada-Hess in 1975).                                                                                    | Acquisition of mineral rights | None (This is a portion of<br>the federal subsurface leased<br>to Amerada-Hess in 1975).                                                                                     | Acquisition of mineral rights | Acquisition of mineral rights     | Acquisition of leasehold rights                                                                                                                                                                                                                       |
| Acreage                                     | 11.08                                                                                                                                                                                                                                           | 27.80                                                                                                                                                                                                                                                                                                                                  | 0.310                                                                                                                                                                                                                                                                                                                                   | 4.86                                                                          | 4.86                                                                                                                                                                                                                                            | 233.89                                                                                                                                                                      | 4.07                          | 28.02                                                                                                                                                                        | 35.8                          | 35.8                              | 12.3                                                                                                                                                                                                                                                  |
| Owner(s) or Lessee(s) and Interest(s) Owned | Amerada Hess Corp.<br>(UOGLE 25%)                                                                                                                                                                                                               | Amerada Hess Corp 99.75028% Coastal Oil and Gas - 00.24972% (UDGLE 25%)                                                                                                                                                                                                                                                                | Amerada Hess Corp 99.75028% Coastal Oil and Gas Corp 00.24972% (UOGLE 25%)                                                                                                                                                                                                                                                              | State of North Dakota (ALL)                                                   | Amerada Hess Corp.<br>(UOGLE 100%)                                                                                                                                                                                                              | Amerada Hess Corp 99.75028<br>Coastal Oil and Gas<br>Corp. 00.249728<br>UOGLE 100%)                                                                                         | Samuel V.S. Fisher (C)        | Amerada Hess Corp 99.750288 - coastal Oil and Gas Corp 00.249728 (UOGLE 1008)                                                                                                | Herbert G. Olis<br>(C 50%)    | M.L. Lasson<br>(C 508)<br>DELETED | Amerada Hess Corp.<br>(UOGLE 100%)                                                                                                                                                                                                                    |
| (Ownership)<br>Number                       | 03-159                                                                                                                                                                                                                                          | 03-160                                                                                                                                                                                                                                                                                                                                 | 03-161                                                                                                                                                                                                                                                                                                                                  | 03-162                                                                        | 03-163                                                                                                                                                                                                                                          | 03-164                                                                                                                                                                      | 03-165                        | 03-166                                                                                                                                                                       | 03-167                        | 03-168<br>03-169<br>and 03-170    | 171-80                                                                                                                                                                                                                                                |

| 1.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | (Ownership)<br>Number | Owner(s) or Lessee(s) and Interest(s) Owned                                            | Acreage | Interest or Protection Needed                                                            | Priority | Other                                                                                                                                                                                                                                                      |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|----------------------------------------------------------------------------------------|---------|------------------------------------------------------------------------------------------|----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| State of North Dakota 3.05 Acquisition of mineral rights 4  Amerada Hess Corp. 3.05 None (This is a portion of the federal subsurface leased Coastal Oil and Gas Corp. 00.24972%  (UOGLE 50%)  Amerada Hess Corp. 133.26 None (This is a portion of the federal subsurface leased Coastal Oil and Gas Corp. 00.24972%  (UOGLE 100%)  Evelyn M. Rauch (A/C 60%)  Shirley R. Shapiro & 44.72 Acquisition of mineral rights 3 Robert J. and Joseph 44.72 Acquisition of mineral rights 3 R. Kellogg (A/C 80%)  R. Kellogg (A/C 22%)  Kathleen Kellogg (A/C 22%)  Kathleen Kellogg (A/C 22%)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 03-172                | Amerada Hess Corp. 99.750288<br>Coastal Oil and Gas<br>Corp. 00.249728<br>(UOGLE 100%) | 318.21  | None (This is a portion of<br>the federal subsurface leased<br>to Amerada-Hess in 1975). | i        | Federal oil and gas lease M-30617(ND), effective 1/01/75. Committed to the Fryburg-Heath-Madison Unit. Use of surface of leased lands for leasehold operations is prohibited.                                                                              |
| Amerada Hess Corp. 3.05 None (This is a portion of the federal subsurface leased Coastal Oil and Gas Corp. 00.249728 to Amerada Hess in 1975).  Corp 00.249728 to Amerada Hess in 1975).  Amerada Hess Corp 00.249728 to Amerada Hess in 1975).  Corp 00.249728 to Amerada Hess in 1975).  Corp 00.249728 to Amerada Hess in 1975).  Corp 00.249728 to Amerada Hess in 1875).  Acquisition of mineral rights 3  Robert J. and Joseph 44.72 Acquisition of mineral rights 3  RAC 9.08)  Kathleen Kellogg  (A/C 9.08)  Kathleen Kellogg  (A/C 2.08)  Kathleen Kellogg  (A/C 2.08)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 03-173                | State of North Dakota<br>(A/C 50%)                                                     | 3.05    | Acquisition of mineral rights                                                            | च        | EXCEPTION: A 33-toot-wide strip of land adjacent to the northernmost and westernmost boundary line of sec. 6 within the national park. Mineral ownership of this strip appears to be as follows: John Gawryluk (A/C-50%), state of North Dakola (A/C-50%). |
| Amerada Hess Corp. 133.26 None (This is a portion of coastal oil and Gas to Amerada-Hess in 1975).  Shirley R. Shapiro & 44.72 Acquisition of mineral rights 3 Evelyn M. Rauch (A/C 60%) Geneva Stedman (A/C 9.0%) Robert J. and Joseph (A/T) | 03-174                | Amerada Hess Corp.  - 99.750268  Coastal Oil and Gas  Corp 00.249728  (UOGLE 508)      | 3.05    | None (This is a portion of<br>the federal subsurface leased<br>to Amerada-Hess in 1975). | 1        | Federal oil and gas lease M-306/8(ND), effective 2/01/75. Committed to the Fryburg-Heath-Madison Unit. Use of surface of leased lands for leasehold operations is prohibited.                                                                              |
| Shirley R. Shapiro & 44.72 Acquisition of mineral rights  Evelyn M. Rauch (A/C 608) Geneva Stedman (A/C 9.08) Robert J. and Joseph R. Kellogg (A/C 9.08) Kathleen Kellogg (A/C 228)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 03-175                | Amerada Hess Corp 99.75028\$ Coastal Oil and Gas Corp 00.24972\$ (UOGLE 1008)          | 133.26  | None (This is a portion of<br>the federal subsurface leased<br>to Amerada-Hess in 1975). | 1        | Federal oil and gas lease M-30619(ND), effective 1/01/75. Committed to the Fryburg-Heath-Madison Unit. Use of surface of leased lands for leasehold operations is prohibited.                                                                              |
| Shirley R. Shapiro & 44.72 Acquisition of mineral rights  Evelyn M. Rauch (A/C 608) Geneva Stedman (A/C 9.08) Robert J. and Joseph R. Kellogg (A/C 9.08) Kathleen Kellogg (A/C 228)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | ELKHORN UN            | 11                                                                                     |         |                                                                                          |          |                                                                                                                                                                                                                                                            |
| Geneva Stedman 44.72 Acquisition of mineral rights (A/C 9.0%) Robert J. and Joseph 44.72 Acquisition of mineral rights (A/C 9.0%) Kathleen Kellogg 44.72 Acquisition of mineral rights (A/C 22%)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 03-176                | Shirley R. Shapiro & Evelyn M. Rauch (A/C 60%)                                         | 44.72   | Acquisition of mineral rights                                                            | m        | 1                                                                                                                                                                                                                                                          |
| Robert J. and Joseph 44.72 Acquisition of mineral rights R. Kellogg (A/C 9.08) Kathleen Kellogg 44.72 Acquisition of mineral rights (A/C 228)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 03-177                | Geneva Stedman<br>(A/C 9.0%)                                                           | 44.72   | Acquisition of mineral rights                                                            | 9        |                                                                                                                                                                                                                                                            |
| Kathleen Kellogg 44.72 Acquisition of mineral rights (A/C 22%)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 03-178                | Robert J. and Joseph<br>R. Kellogg<br>(A/C 9.0%)                                       | 44.72   | Acquisition of mineral rights                                                            | £        |                                                                                                                                                                                                                                                            |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 92-179                | (A/C 22%)                                                                              | 44.72   | Acquisition of mineral rights                                                            | 3        |                                                                                                                                                                                                                                                            |

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|----------|
| Interest |
| ) puagan |
| Symbols  |

| 0G - Oil and Gas 0GH - Oil, Gas, and Hydrocarbons 0GLE - Oil and Gas Lease UOGLE - Unitized Oil and Gas Lease 0GLEA - Oil and Gas Lease Application 50% - Percentage owned by the particular entity (example)                |  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| ALL - All Minerals  A/C - All Minerals Except Coal  A/COG - All Minerals Except Coal, Oil, and Gas  A/OGH - All Minerals Except Oil, Gas, and Hydrocarbons  A/U - All Minerals Except Uranium  FM - Fluid Minerals  C - Coal |  |

Different tract numbers are used for each separate interest owned (by single or joint owners). A particular area may involve more than one tract number.

See "Land Protection Plan" text for explanation of priority numbers.

The information in this table is current to 1/17/84. NOTE:

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## APPENDIX F: SUMMARIES OF FLOODPLAIN AND WETLAND PROCEDURES AND GUIDELINES

## E.O. 11988 FLOODPLAIN MANAGEMENT (05/24/77)

Each agency shall take action to reduce the risk of flood loss, to minimize the impact of floods on human safety, health, and welfare, and to restore and preserve the natural and beneficial values served by floodplains in carrying out its responsibilities for (1) acquiring, managing, and disposing of federal lands and facilities; (2) providing federally undertaken, financed, or assisted construction and improvements; and (3) conducting federal activities and programs affecting land use, including but not limited to water and related land resources planning, regulating, and licensing activities.

Each agency has a responsibility to evaluate the potential effects of any actions it may take in a floodplain.

Before taking any action, each agency shall determine whether the proposed action will occur in a floodplain (determination of floodplain must be made based on HUD floodplain maps).

If an agency has determined or proposes to conduct, support, or allow an action to be located in a floodplain, the agency shall consider alternatives to avoid adverse effects and incompatible development in the floodplain. If the head of the agency finds that the only practicable alternatives consistent with the law and with policy requires siting in a floodplain, the agency shall, prior to taking action, (i) design or modify its actions in order to minimize potential harm to or within the floodplain and (ii) prepare and circulate a notice containing an explanation of why the action is proposed to be located in the floodplain.

Structures must be elevated above the base flood level rather than filling in land.

The regulations and procedures established shall, <u>at a minimum</u>, require the construction of federal structures and facilities to be in accordance with the standards and criteria of the National Flood Insurance Program.

If property used by the general public has suffered flood damage or is located in an identified flood hazard area, the responsible agency shall provide conspicuous delineation of past and probable flood height.

Base flood -- flood which has a 1% or greater chance of occurrence in any given year.

Floodplain -- lowland and relatively flat areas adjoining inland and coastal water including floodprone areas of offshore islands, including, at a minimum, that area subject to a 1% or greater chance of flooding in any given year.

## E.O. 11990 PROTECTION OF WETLANDS (05/24/77)

Each agency shall provide leadership and shall take action to minimize the destruction, loss or degradation of wetlands, and to preserve and enhance the natural and beneficial values of wetlands in carrying out the agency's responsibilities for (1) acquiring, managing, and disposing of federal lands and facilities; (2) providing federally undertaken, financed, or assisted construction and improvements; and (3) conducting federal activities and programs affecting land use, including but not limited to water and related land resources planning, regulating, and licensing activities.

Each agency shall avoid undertaking or providing assistance for new ocnstruction located in wetlands unless the head of the agency finds (i) that there is no practicable alternative to such construction, and (ii) that the proposed action included all practicable measures to minimize harm to wetlands which may result from such use.

Each agency shall consider factors relevant to a proposal's effect on the survival and quality of the wetlands:

a) public health, safety, and welfare; pollution; flood and storm hazards; sediment and erosion

b) maintenance of natural systems

c) other uses of wetlands in the public interest, including recreational, scientific, and cultural uses

New construction -- dredging, draining, channelizing, filling, diking, impounding, and related structures or facilities

Wetlands -- those areas that are inundated by surface or groundwater with a frequency sufficient to support and under normal circumstances does or would support a prevalence of vegetative or aquatic life that requires saturated or seasonally saturated soil conditions for growth and reproduction

Wetlands include swamps, marshes, bogs and similar areas such as sloughs, potholes, wet meadows, river overflows, mud flats, and natural ponds.

## FLOODPLAIN MANAGEMENT GUIDELINES FOR IMPLEMENTING E.O. 11988 - WATER RESOURCES COUNCIL (02/10/78)

Agencies are required to:

-- avoid the base floodplain; unless it is the only practicable alternative

-- adjust to the base floodplain, if it cannot be avoided in order to: (1) reduce the hazard and the risk of flood loss; (2) minimize the impact of floods on human safety, health, and welfare; and (3) restore and preserve the natural and beneficial floodplain values.

By including planning programs as a separate item, the order emphasizes that all actions, even those that do not result in a physical change, must be evaluated for their impacts to or within the floodplain.

HUD/FIA (FIA is now FEMA) floodplain maps are established as the minimum standards for making the determination of whether the proposed action will be located in a floodplain. Even if no map data exists, the intent is that the agency proposing the action perform or have performed a determination of whether a proposed action is located in a floodplain.

Each agency shall take floodplain management into account when formulating its own water and land use plans as well as evaluating the water and land use plans of others.

The flood hazard aspects and the floodplain value aspects should be expressed in terms of (1) potential for monetary loss; (2) human safety, health, and welfare; (3) shifting of costs or damage to others; and (4) potential for affecting the natural and beneficial floodplain values.

Each agency will be required to assess the degree of hazard associated with its program activities under a possible range of flood conditions. Then the agency must state the specific kinds of actions or adjustments that would be employed to comply with this action.

Agencies will follow the requirements of the National Flood Insurance Program (NFIP). Under the NFIP, residential structures (including basements) are required to be elevated to or above the base flood level. Nonresidential structures may be elevated as described above, or floodproofed watertight to or above the base flood level.

The cumulative effect of the proposed action, when combined with all existing and anticipated development, will not increase the water surface elevation of the base flood more than one foot at any point within the community wherein the action is proposed.

The term "new construction" includes construction associated with: (1) new structures and facilities; (2) the reconstruction of existing structures and facilities following damage caused by fire, flood, or other hazard; and (3) the improvement of existing structures and facilities by rehabilitation, repair, alteration or addition.

Agencies will consider whether proposed actions will: (1) result in an increase in the useful life of the structure or facility in question; (2) maintain the investment at risk and exposure of lives to the flood hazard; or (3) eliminate an opportunity to restore the natural and beneficial floodplain values.

All structures shall be elevated using open works, e.g., columns, walls, piers, piles, etc., rather than fill.

Floodproofing measures for certain types of facilities, e.g., sewer interceptor lines and other types of piping, and bridges and roads have been developed, and are familiar to agencies having responsibilities in those areas. Other flood protection measures including warning and evacuation plans, etc. are discussed in the <u>Unified National Program for Floodplain Management</u>.

The conspicuous delineation of past and probable flood heights is required on property which has been or could be subjected to flooding and is used by the general public.

## DECISION-MAKING PROCESS

- 1. Determine if the proposed action is in the base floodplain.
- Make public the intent to locate a proposed action in the base floodplain. Provide a description of the proposed action with ample lead time for meaningful input from the public.
- If the action is in the base floodplain, identify and evaluate the practicable alternatives to locating in the base floodplain.
- Identify if the proposal has impacts in the base floodplain or directly or indirectly supports floodplain development that has additional impacts.
- If the proposed alternative has identifiable impacts, these effects must be minimized. Further, natural and beneficial floodplain values must be restored and preserved.
- Reevaluate the proposed alternative taking into account the identified impact, the steps to minimize those impacts, and opportunities to restore and preserve floodplain values.
- If the only practicable alternative is in the base floodplain, public notice of the reasons must be given for this finding.
- After a reasonable period to allow for public response, the proposed action can be implemented.

## Descriptions:

Riverine floodplains are valley areas adjacent to any size stream or river which can be covered by floodwaters. Flooding in these areas results from excessive rainfall, snowmelt, or a combination thereof. If runoff is increased to the point that the carrying capacity of the channel is exceeded, flooding occurs. Flooding also occurs when the capacity of the stream channel is reduced by natural obstructions (ice or debris dams, sediment, and vegetation) and man-placed obstruction.

Coastal floodplains border lakes, estuaries, oceans, or similar bodies of standing water. Flooding in these areas is due to landward flows caused by unusually high tides, waves from high winds, storm surges, tsunamis, or by a combination of these causes.

Special floodplain areas encompass sheet flow or shallow flooding areas, wetlands, and sinkholes.

Within the base floodplain, extreme hazard is associated with those portions of riverine and coastal floodplains nearest to flood sources, where depths and velocities of flood waters are greatest.

## DETERMINATION OF FLOODPLAIN

The following agencies have some form of expertise in floodplains and should be contacted for information.

## Federal Insurance Administration (now Federal Emergency Management Agency)

Flood Hazard Boundary Maps have been developed for most communities and are available upon request. Flood Insurance Study Reports are also available (detailed engineering reports). Requests for floodplain management services and a list of experienced consulting engineers are available from the Washington, D.C. office.

The National Flood Insurance Headquarters should be contacted first to see if there are any FHBMs for the area. Because this system is usually run for communities, be sure to specify when talking to them that you need unincorporated portions of a certain county.

Maryland (800-638-6620)

## Soil Conservation Service

As part of the SCS Floodplain Management Assistance Program, each State Conservationist carries out cooperative Flood Hazard Analyses on request of local government, in accordance with a Joint Coordination Agreement with the responsible state agency. SCS flood hazard reports contain floodplain delineation on aerial photographs, flood profiles, and discharge and floodway data.

Check with state or field office.

If number is not known, contact: Chief, Floodplain Management and Special Projects Branch, River Basins Division, SCS (8-447-7697)

### Army Corps of Engineers

The Corps' separately funded Flood Plain Management Services Program has units in 47 offices located throughout the country that provide information and assistance in flood-related matters. They maintain a file of floodplain information, survey, and other reports containing floodplain delineations, flood profiles, and data on flood discharges and hydrographs.

Check with District Office. Sacramento District Office (8-448-3550)

If number is not known, contact: Chief, Flood Plain Management Service, Washington, D.C. (8-202-272-0169) or the division office.

Southwestern Division, Dallas, TX (214-767-2310) Missouri River Division, Omaha, NB (402-221-7270) North Central Division, Chicago, IL (312-353-6531)

### NOAA - National Weather Service

Floodplain information and interpretive assistance for specific points on larger rivers of the US can be obtained from the National Weather Service.

# Federal Housing Administration

The civil engineer at the 78 local or regional offices has specific knowledge of flood elevations for many urban locations and can provide knowledge of material available to assist in making a determination of floodplain location.

Utah Regional Office (8-588-5237)

If number is not known, contact FHA (8-755-5111)

# US Geological Survey

Users Assistance Centers at 48 locations can provide (a) factual information on flood peaks and discharges, flood depths, and velocities, profiles of the water surface during major floods, areas inundated during major floods, time-of-travel of flood wave, and sediment transport data; (b) interpretive information regarding flood-frequency relations, estimates of 10-, 50-, 100-, and 500-year flood discharges, computed water surface profiles, and floodprone areas delineated on topographic maps in most communities in the U.S. with known flood problems; and (c) assistance in minimizing flood losses by quickly identifying areas of potential flood hazards.

Salt Lake District Office (8-801-524-5663)

If number is not known, contact: Chief, Surface Water Branch, Water Resources Division, National Center, Reston, Virginia (8-928-6837)

### Bureau of Land Management

Check with District Office.

Utah District Office (8-801-524-4227)

If number is not known, contact: D.C. office (8-343-5717)

### Bureau of Reclamation

Check with flood hydrologist in regional office.

If number is not known, contact: Flood Hydrology Section, DFC (234-2035)

### Other

If none of these agencies has information or can provide assistance, the services of an experienced consulting engineer should be sought.

Several other agencies must be contacted for information on wetlands mapping. These include:

# Fish and Wildlife Service

Fish and Wildlife Service maintains the National Wetland Inventory (based on infra-red photography). They should be contacted initially to determine if a map is available.

Denver (234-5586)

Salt Lake City (8-588-5637)

# Environmental Protection Agency

EPA typically maps high growth areas, in Colorado, mostly Denver and ski areas.

Denver (234-4963)

# Army Corps of Engineers

Have some wetlands mapping, mainly Landsat imagery. They usually map on a case-by-case basis on request.

Seattle (8-399-3495) Sacramento District Office (8-448-2842) Grand Junction (8-322-0333)

### NOAA

Should be contacted to determine whether or not their inventory contains the area affected.

### State Agencies

State Departments of Natural Resources, Fish and Game, etc. should be contacted to determine if they have performed any wetlands inventory.

Colorado Wildlife Resources - Waterfowl Research (303-484-2836) Utah Division of Wildlife Resources - Non-Game (801-789-3103)

### Critical Actions

Some key questions to be asked about critical actions (those for which even a slight chance of flooding would be too great) are:

If flooded, would the proposed action create an added dimension to the disaster as could be the case for liquefied natural gas terminals and facilities producing and storing highly volatile, toxic, or water-reactive materials?

Given the flood warning lead time available, would the occupants of buildings such as hospitals, schools, and nursing homes be insufficiently mobile to avoid loss of life and injury?

Would essential and irreplaceable records, utilities, and/or emergency services be lost or become inoperable if flooded?

If the answer to questions such as these is "yes," an alternative location must be sought completely outside the larger floodplain.

### IDENTIFYING ALTERNATIVES

Alternatives must include (1) carrying out the proposed action at a location outside the base floodplain (alternative sites); (2) other means which accomplish the same purpose as the proposed action (alternative actions); and (3) no action.

If a practicable site exists outside the base floodplain, the proposed action must not be located in the base floodplain. Whenever a floodplain site is the only practicable alternative, the agency analysis leading to this conclusion should be fully documented.

At a minimum, site practicality shall be addressed in the light of the following:

natural (topography, habitat, hazards, etc.) social (aesthetics, historic and cultural values, land use patterns)

economic (cost of space, construction, services, relocation) legal (deeds, leases)

### FLOODPLAIN IMPACTS

Three basic types of impacts to be considered are positive and negative; concentrated and dispersed; and short- and long-term.

Two basic types of floods are used in determining flood hazards: observed or historic floods and probability floods.

### Evaluation of Flood Hazard

Is the proposed action to be located in the floodway portion of the riverine floodplain, or the coastal high hazard area?

Is the proposed action in a flood-fringe area such as the flood-fringe portion of a riverine floodplain or in the backwater areas of a coastal floodplain?

Is the flood hazard aggravated by the presence of, or potential for, destructive velocity flows, flood-related erosion, subsidence or sinkholes, or other special problems?

Is there a combination of flood sources present which may flood simultaneously in the area (e.g., river and ocean, or shallow overland runoff and river, etc.)?

# Floodplain Values

Floodplains in their natural or relatively undisturbed state serve water resources values (natural moderation of floods, water quality maintenance, and groundwater recharge), living resource values (fish, wildlife, and plant resources), cultural resource values (open space, natural beauty, scientific study, outdoor education, and recreation), and cultivated resources values (agriculture, aquaculture, and forestry).

Floods shape floodplain topography, soils, and ecology.

Except for some steep valley and coastal bluff situations, naturally vegetated floodplains can provide a broad area to spread and slow floodwaters, thereby reducing velocities and flood peaks.

Floodplain vegetation functions in maintaining the physical and chemical integrity of the water that ultimately supports biological communities. Runoff is slowed by vegetation, allowing the water to deposit not only sediments originating on land but also those scoured from the channel bank and bed. Sediment deposition may add rich nutrients to the floodplain soil and keeps sediment-associated pathogens from the water.

However, siltation can destroy biological communities supported on the floodplain because it contributes to eutrophication, decreased dissolved oxygen, increased water temperature, and serious impairment of photosynthetic productivity. Vegetation shades stream banks and decreases daily water temperature fluctuation thereby alleviating temperature stress to the biota. Vegetation slows the flow of water and provides slack waters that give the aquatic biota a greater chance to survive flooding. In addition, floodplain storage and vegetation reduces siltation in downstream reservoirs.

An additional value of floodplain vegetation's role in slowing runoff is in groundwater recharge. Slowing the floodwater allows it to infiltrate through the generally porous floodplain soil. Base streamflow and the level of standing water bodies is regulated naturally by groundwater. During periods of excessive precipitation, runoff enters the groundwater system as well as stream channels and standing waterbodies, thereby reducing peak flows; during the dry season, water generally flows from the groundwater system into surface waters, augmenting low flows.

Fish and wildlife resources are highly susceptible to man-induced disruption of the floodplain because of their high sensitivity to the resultant impacts.

### Methods to Minimize, Restore, and Preserve

Minimize is a demanding standard and requires the agency to reduce the harm to the smallest possible degree, thus establishing a far more rigorous standard than other terms which often are used in similar contexts, e.g., alleviate (to lessen), mitigate (to moderate the severity of), ameliorate (to improve), etc.

Restore means to reestablish a setting or environment in which the natural and beneficial values can again operate. Where floodplain values have been degraded by past actions, the agency must identify, evaluate, and implement measures to restore the values diminished or lost.

Preserve means to prevent modification of the natural floodplain environment, or to maintain it as closely as possible to its natural state.

#### Natural Moderation of Floods:

Minimize floodplain fills and actions that require fills such as construction of dwellings, factories, highways, etc.

Require that structures and facilities on wetlands provide for adequate flow circulation.

Use minimum grading techniques and save as much of the site from compaction as possible.

Relocate non-conforming structures and facilities out of the floodplain.

Return site to natural contours.

Preserve free natural drainage when designing and constructing bridges, road fills, and large built-up centers.

Prevent intrusion on and destruction of beach and estuarine ecosystems and restore damaged dunes and vegetation.

## Water Quality:

Maintain wetland and floodplain vegetation buffers to reduce sedimentation and delivery of chemical pollutants to the water body.

Control agricultural activities to minimize nutrient inflow.

Control urban runoff, other storm water, and point and nonpoint discharges.

Control methods used for grading, filling, soil removal, and replacement etc. to minimize erosion and sedimentation during construction.

Prohibit the location of potential pathogenic and toxic sources on the floodplain, such as sanitary landfills and septic tanks, etc.

### Groundwater Recharge:

Require the use of previous surfaces where practicable.

Design construction projects for runoff detention.

Dispose of spoils and waste materials so as not to contaminate ground or surface water or change land contours.

# Living Resources:

Identify and protect wildlife habitat and other vital ecologically sensitive areas from disruption.

Require topsoil protection programs during construction.

Control wetland drainage, channelization, and water withdrawal.

Reestablish damaged floodplain ecosystems.

Minimize tree cutting and other vegetation removal.

Design floodgates and seawalls to allow natural tidal activity and estuarine flow.

#### Cultural Resources:

Provide public access to and along the waterfront for recreation, scientific study, educational purposes, etc.

Locate and preserve from harm. historical cultural resources; consult with appropriate governmental agency or private group.

### Reevaluate Alternatives

Having identified the impacts the proposed action would have on the floodplain, methods to minimize these impacts, and opportunities to restore and preserve floodplain values; the proposed action should now be reevaluated. For proposed actions in the base floodplain, the reevaluation should consider if the action is still feasible at this site. If not, consider limiting the action to make non-floodplain sites practicable. If neither is acceptable, the alternative is no action.

The reevaluation should also include a provision for comparison of the relative adverse impacts associated with the proposed action located in and out of the floodplain.

However, a site out of the floodplain should not be chosen if the overall harm is significantly greater than that associated with the floodplain site.

### NPS FINAL PROCEDURES FOR IMPLEMENTING EO 11988 AND 11990

Most of the detailed information contained in the NPS procedures has already been summarized in the WRC Guidelines. Additional information covered includes:

### Excepted Actions

- If normally excluded from NEPA compliance and with no potential for adverse effects on floodplains or wetlands, is excepted from compliance with orders.
- 2. Other excepted actions include:
  - a. Scenic overlooks and foot trails
  - Picnic and camping facilities including sanitary facilities, providing that floodproofing is a consideration in their design and construction
  - Entrance, access, and internal roads to or within existing units of the system (not excepted for wetlands)
  - d. Outdoor play courts in recreation areas (not excepted for wetlands)
  - e. Landscaping in outdoor recreation areas (not excepted for wetlands)
  - f. Small parking lots for use of the area (not excepted for wetlands)
- 3. No justification necessary for marinas, docks, piers, water intake facilities, bridges, flood control facilities, water monitoring stations, drainage ditches, debris removal, outdoor water sports facilities, boardwalks to protect wetlands, and similar water dependent actions to be located in the floodplain.
- 4. Emergency actions essential to protect property and public health and safety will take into consideration all possible setups to mitigate adverse impacts.

If it is too expensive to obtain base floodplain boundaries, NPS will assume the project is in or will affect the base floodplain (worst case analysis). In the absence of evidence to the contrary, the NPS will assume that any action involving a strucutre or facility that has been flooded lies in the 100-year floodplain.

# Determine if a Proposed Action Could Affect a Floodplain or Wetland

If the information gathered shows that the proposed action is not in a floodplain or wetland, the NPS Regional Director must then determine if the project holds the potential for indirect impacts on nearby floodplains or wetlands. An action has indirect impacts on nearby floodplains or wetlands if it:

Supports, encourages, allows, serves, or otherwise facilitates additional floodplain or wetland development.

Reinforces existing land uses which have developed without reflecting the concepts of hazard and risk minimzation and restoration of natural floodplain or wetland values.

Has secondary or dispersed effects which reach into the floodplain or wetland and can cause change to the ecological systems functioning there or can increase flood loss potential to existing developments.

### Critical Actions

The GMP will identify all critical actions in the 500-year floodplain, describe corrective measures to be taken, and present a time schedule for the corrective measures. Possible alternatives are:

relocate outside the 500-year floodplain change the use to a non-critical action use floodproofing to protect the critical action from the 500-year flood

Critical actions include, but are not limited to, the erection or rehabilitation of structures and facilities:

Which contain hazardous material such as highly volatile, flammable, explosive, toxic, infectious, or water reactive materials. These could create an added dimension to the flood disaster. Major fuel storage facilities and 40,000 gpd or larger sewage treatment facilities shall not be placed within the 100-year floodplain, and will occupy the 500-year floodplain only when there is no practicable alternative and they can be completely floodproofed against the erosive and hydraulic force of the 500-year flood.

From which evacuation would be difficult. These are structures occupied by persons who may not be sufficiently mobile to avoid the loss of life or injury during flood and storm events. Clinic and emergency stations will not be located in the 500-year floodplain.

Which contain irreplaceable documents or objects. This includes museums, record collections, artifacts, historic furnishings, etc.

# High Hazard Areas

These are areas subject to flooding events which are so unexpected, violent, or otherwise devastating that human lives are placed in immediate and grave danger. High hazard areas include, but are not limited to areas subject to flash flooding, areas below dams known to be structurally unsound, the floodway, and coastal high hazard areas. Coastal high hazard areas are defined in the WRC guidelines as "usually confined to the beach area in front of high bluffs or the crest of primary or foredunes, where wave impact is the most significant inducing factor."

Structures for human occupancy will not be placed in coastal high hazard areas except as provided for in 7.C.3., the floodway, or in areas subject to flash flooding. A "flash flood" is one in which the flood waters rise so rapidly that there is insufficient time for warning and evacuation of persons threatened by the flood. Further, no structures in which humans might seek shelter during storm or flood events will be placed in these areas. Facilities for parking, camping, picnicking, or similar activities causing congregations of people and property will not be placed in flash flood areas because of the surprise nature of such events. Undeveloped areas subject to flash flooding and known to be frequented by people even without the attraction of developed facilities will be posted with signs warning of flash flood danger. The hazardous flooding for a flash flood shall be the area covered by the probable maximum flood.

In coastal areas subject to storm overwash where no foredunes exist as defined above, and where structures and/or facilities must be placed for the management and legislated use of the affected areas, their placement and construction shall be limited to those necessary to meet the minimum needs for visitor use and park management. Furthermore, mitigating measures will be developed for the protection of human life and property. An early warning and evacuation plan will be developed and made operational. The design and construction of the structures and/or facilities shall be accordance with the criteria and standards promulgated under the National Flood Insurance Program. These warning and evacuation plans and other mitigating measures shall be addressed in the draft and final GMP/Environmental Document and subsequent, more detailed action plans, as required.

A unit Superintendent has the authority to "close to public use all or any portion of a park area when necessary for the protection of the area or the safety and welfare of persons or property by the posting of appropriate signs indicating the extent and scope of closure." When studies reveal, or it otherwise becomes apparent, that existing structures and/or facilities are subject to flash flood or other high water hazard, the unit Superintendent will prepare a plan of action which considers both their closure to public use and/or mitigation of the flood hazard by one or more structural flood control methods or non-structural measures such as floodproofing, warning and evacuation measures, seasonal closures, relocation of structures and facilities and other appropriate steps. Plans will be phased in such a manner to provide the greatest possible degree of protection. Actions to remove the structures and facilities may require EA and the following of these procedures to avoid relocating in a similarly hazardous area.

# Removal or Modification of Existing Structures and Facilities

GMPs for units of the NPS will inventory existing structures, facilities, and programs involving the use of floodplains and wetlands, and will record decisions on their retention or modification. The Regional Safety Manager will evaluate all such structures and facilities to ensure that early warning systems, plans, and means of personnel evacuation are in compliance with safety standards. Upon the Safety Manager's recommendation, the Regional Director also may require the closure of structures to human occupancy or require that the use to the structures be changed. The Regional Director may also require the modification or floodproofing of structures and facilities

Management Plan and/or the Water Resources Management Plan will specify requirements for monitoring programs and other actions to ensure protection and enhancement of floodplain and wetland values to the greatest extent possible. These plans will provide an important basis for demonstrating NPS compliance with the Orders. Non-critical actions for which compliance documentation has been prepared, either on an action itself or in the context of a previous enabling plan, will be listed and the nature of the compliance documentation indicated.

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#### LIST OF PREPARERS

### NATIONAL PARK SERVICE

#### Denver Service Center

Larry Knowles, Team Captain/Landscape Architect
Don Bock, Outdoor Recreation Planner
John Myers, Cartographer
Allen Hagood, Environmental Specialist
John Austin, Socioeconomic Specialist
Roberta Seibel, Planner
Dave Scherer, Historic Architect
Berle Clemensen, Historian
Keith Dunbar, Outdoor Recreation Pianner
Bruce McCraney, Landscape Architect
Robert Todd, Cartographer
Dick McNulty, Engineering Estimator

### Theodore Roosevelt National Park

Harvey Wickware, Superintendent Micki Hellickson, Interpretive Planner Jeff Bradybaugh, Resource Management Specialist Bob Powell, Chief Ranger Dick Bennett, Chief of Maintenance Other park staff

### Rocky Mountain Region

Roy Slatkavitz, Planning Coordinator/Chief of Planning Belva Skiver, Realty Assistant Lee Garrison, Realty Specialist Dick Young, Chief, Land Resources Division

#### Denver-Based Washington Office

Erik Hauge, Environmental Specialist
Sid Covington, Geologist
Marcie Sullivan, Conveyance Examiner
Opal Bradford, Realty Specialist
Howard Stark, Realty Specialist
Bill Oates, Mining Engineer Technician
Leslie Vaculik, Petroleum Engineer
Frank Buono, Environmental Protection Specialist

# U.S. GEOLOGICAL SURVEY, WATER RESOURCES DIVISION, BISMARCK, NORTH DAKOTA

Doug Emerson Kathleen Macek-Rowland Orlo Crosby

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As the nation's principal conservation agency, the Department of the Interior has basic responsibilities to protect and conserve our land and water, energy and minerals, fish and wildlife, parks and recreation areas, and to ensure the wise use of all these resources. The department also has major responsibility for American Indian reservation communities and for people who live in island territories under U.S. administration.

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