

## **APPENDIX A: LEGISLATION**



## 39. Great Sand Dunes National Monument

Establishment: Proclamation (No. 1994) of March 17, 1932..... Page  
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BY THE PRESIDENT OF THE UNITED STATES OF AMERICA

## A PROCLAMATION

[No. 1994—March 17, 1932—47 Stat. 2506]

WHEREAS it appears that the public interest would be promoted by including the lands hereinafter described within a national monument for the preservation of the great sand dunes and additional features of scenic, scientific, and educational interest;

NOW, THEREFORE, I, Herbert Hoover, President of the United States of America, by virtue of the power in me vested by sec. 2 of the act of Congress entitled "AN ACT For the preservation of American antiquities," approved June 8, 1906 (34 Stat. 225), do proclaim and establish the Great Sand Dunes National Monument and that, subject to all valid existing rights, the following-described lands in Colorado be, and the same are hereby, included within the said national monument:

## SIXTH PRINCIPAL MERIDIAN

- T. 25 S., R. 73 W., secs. 31 and 32;
- T. 26 S., R. 73 W., secs. 3 to 11, inclusive;  
secs. 14 to 23, inclusive;  
secs. 26 to 35, inclusive;
- T. 27 S., R. 73 W., secs. 3 to 10, inclusive;  
secs. 15 to 22, inclusive;

## NEW MEXICO PRINCIPAL MERIDIAN

- T. 40 N., R. 12 E., secs. 1 and 2;  
sec. 11, NE.  $\frac{1}{4}$ ;  
secs. 12, 13, 24, and 25;
  - T. 41 N., R. 12 E., sec. 10, lots 1 to 4, inclusive;  
sec. 11, lots 1 to 4, inclusive;  
sec. 12, lots 1 to 4, inclusive;  
secs. 13 to 15, inclusive;  
secs. 22 to 27, inclusive;  
secs. 34 to 36, inclusive;
- and unsurveyed land which upon survey will probably be described as:
- Fractional T. 40 N., R. 13 E.;
  - Fractional T. 41 N., R. 13 E.;
  - Fractional T. 42 N., R. 13 E.; secs. 30 and 31.

Warning is hereby expressly given to all unauthorized persons not to appropriate, injure, destroy, or remove any feature of this monument and not to locate or settle upon any of the lands thereof.

The Director of the National Park Service, under the direction of the Secretary of the Interior, shall have the supervision, management, and control of this monument as provided in the act of Congress entitled "AN ACT To establish a National Park Service, and for other purposes," approved August 25, 1916 (39 Stat. 535-536), and acts additional thereto or amendatory thereof.

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IN WITNESS WHEREOF, I have hereunto set my hand and caused the seal of the United States to be affixed.

DONE at the City of Washington this 17th day of March, in the year of our Lord nineteen hundred and thirty-two, and of the Independence of the United States of America the one hundred and fifty-sixth.

By the President:  
HENRY L. STIMSON,  
*Secretary of State.*

HERBERT HOOVER.

## PROCLAMATION 2100

## REVISING THE BOUNDARIES OF GREAT SAND DUNES NATIONAL MONUMENT, COLORADO

WHEREAS the Great Sand Dunes National Monument in the State of Colorado was established by Proclamation No. 1994 of March 17, 1932 (47 Stat. 2505), as modified by Proclamation No. 2681 of March 12, 1946, for the preservation of the great sand dunes and additional features of scenic, scientific, and educational interests; and

WHEREAS it appears that retention of certain lands within the monument is

no longer necessary for such purpose; and

WHEREAS it appears that it would be in the public interest to exclude such lands from the monument; and

WHEREAS certain lands now a part of the Rio Grande National Forest are better suited for national-monument purposes than for national-forest purposes and should be excluded from such forest, and these lands and certain other land adjoining the monument are required for the proper care, management, and protection of the objects of scenic, scientific, and educational interest situated on lands within the monument; and

WHEREAS it appears that it would be in the public interest to reserve such lands as an addition to the monument:

NOW, THEREFORE, I, DWIGHT D. EISENHOWER, President of the United States of America, under and by virtue of the authority vested in me by section 2 of the act of June 8, 1906, 34 Stat. 225 (16 U. S. C. 431), and the act of June 4, 1897, 30 Stat. 34, 36 (16 U. S. C. 473), do proclaim as follows:

1. The following-described lands in the State of Colorado are hereby excluded from the Great Sand Dunes National Monument:

## New Mexico Principal Meridian

T. 41 N., R. 12 E.  
Sec. 22, SW $\frac{1}{4}$ ;  
Sec. 26, all;  
Sec. 27, all;  
Sec. 34, all;  
Sec. 35, all.  
T. 40 N., R. 12 E.  
Sec. 2, all;  
Sec. 11, NE $\frac{1}{4}$ ;  
Sec. 12, SW $\frac{1}{4}$ ;  
Sec. 13, W $\frac{1}{2}$ ;  
Sec. 24, all;  
Sec. 25, all.  
Fractional T. 40 N., R. 13 E.  
Sec. 19, all;  
Sec. 20, all;  
Sec. 21, all.

## SOUTH PRINCIPAL MERIDIAN

T. 27 S., R. 73 W.  
Sec. 15, SE $\frac{1}{4}$  SW $\frac{1}{4}$ , SE $\frac{1}{4}$  SE $\frac{1}{4}$ ;  
Sec. 19, all;  
Sec. 20, all;  
Sec. 21, all;  
Sec. 22, all.

The public lands hereby excluded from the monument shall not be subject to application, location, settlement, entry, or other forms of appropriation under the public-land laws until further order of an

authorized officer of the Department of the Interior.

2. Subject to valid existing rights, the following-described lands in the State of Colorado are hereby reserved as and made a part of the Great Sand Dunes National Monument, and so much thereof as is now within the Rio Grande National Forest is hereby excluded therefrom and the boundaries of the said National Forest are modified accordingly:

## SOUTH PRINCIPAL MERIDIAN

T. 26 S., R. 73 W.  
Sec. 2, all.  
T. 27 S., R. 73 W.  
Sec. 2, W $\frac{1}{2}$ .

Warning is hereby expressly given to all unauthorized persons not to appropriate, injure, destroy, or remove any feature of this monument and not to locate or settle upon any of the lands thereof.

IN WITNESS WHEREOF, I have hereunto set my hand and caused the Seal of the United States to be affixed.

DONE at the City of Washington this seventh day of June in the year of our Lord nineteen hundred and [SEAL] fifty-six, and of the Independence of the United States of America the one hundred and eightieth.

DWIGHT D. EISENHOWER

By the President:

JOHN FOSTER DULLES,  
Secretary of State.

REDEFINING THE AREA OF GREAT SAND  
DUNES NATIONAL MONUMENT, COLO-  
RADO:

WHEREAS the lands included within the Great Sand Dunes National Monument, Colorado, by Proclamation No. 1994 of March 17, 1932 (47 Stat. 2565), were described therein in conformity with plats then on file in the General Land Office and other maps of the locality:

WHEREAS resurveys by the General Land Office disclose that sections 10, 11, 12, and parts of sections 13, 14, and 15, Township 41 North, Range 12 East, and unsurveyed sections 20 and 31, Township 42 North, Range 13 East, New Mexico Principal Meridian, as described in the said Proclamation, do not exist; and

WHEREAS it appears necessary and desirable in the public interest to re-define the area included within the Monument in accordance with the latest plats of survey:

NOW, THEREFORE, I, HARRY S. TRUMAN, President of the United States of America, under and by virtue of the authority vested in me by section 2 of the act of June 8, 1906, c. 3060, 34 Stat. 225 (U.S.C., title 16, sec. 431), do revise the land description contained in said Proclamation No. 1994 of March 17, 1932, to read as follows:

EIGHTH PRINCIPAL MERIDIAN

T. 25 S., R. 73 W.,  
secs. 31 and 32.  
T. 26 S., R. 73 W.,  
secs. 3 to 11, secs. 14 to 22, and secs. 25 to  
33, inclusive.  
T. 27 S., R. 73 W.,  
secs. 3 to 10 and secs. 15 to 22, inclusive.

NEW MEXICO PRINCIPAL MERIDIAN

T. 40 N., R. 12 E.,  
secs. 1 and 2;  
sec. 11, NE¼;  
secs. 12, 13, 24, and 25.  
T. 41 N., R. 12 E.,  
secs. 12, 14, 15, those parts south of Luis  
Marta Baca Grant No. 4;  
secs. 22 to 27, inclusive;  
secs. 34, 35, and 36.  
Tps. 40 and 41 N., R. 12 E., unsurveyed.  
Containing approximately 44,810 acres.

All other provisions contained in the said Proclamation of March 17, 1932, shall remain in full force and effect.

IN WITNESS WHEREOF I have here-  
unto set my hand and caused the seal  
of the United States to be affixed.

DONE at the city of Washington this  
12th day of March, in the year of our  
Lord nineteen hundred and  
(SEAL) forty-six, and of the Independ-  
ence of the United States of  
America the one hundred and seventieth.

HARRY S. TRUMAN

By the President:

JAMES F. BYRNE,  
Secretary of State.

90 STAT. 2692

PUBLIC LAW 94-367—OCT. 20, 1976

Public Law 94-367  
94th Congress

## An Act

Oct. 20, 1976

[H.R. 13160]

To designate certain lands within units of the National Park System as wilderness; to revise the boundaries of certain of those units; and for other purposes.

*Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,* That in accordance with section 3(c) of the Wilderness Act (78 Stat. 890; 16 U.S.C. 1132(c)), the following lands are hereby designated as wilderness, and shall be administered by the Secretary of the Interior in accordance with the applicable provisions of the Wilderness Act:

(a) Bandelier National Monument, New Mexico, wilderness comprising twenty-three thousand two hundred and sixty-seven acres, depicted on a map entitled "Wilderness Plan, Bandelier National Monument, New Mexico", numbered 315-20,014-B and dated May 1976, to be known as the Bandelier Wilderness.

(b) Black Canyon of the Gunnison National Monument, Colorado, wilderness comprising eleven thousand one hundred and eighty acres, depicted on a map entitled "Wilderness Plan, Black Canyon of the Gunnison National Monument, Colorado", numbered 144-20,017 and dated May 1973, to be known as the Black Canyon of the Gunnison Wilderness.

(c) Chiricahua National Monument, Arizona, wilderness comprising nine thousand four hundred and forty acres, and potential wilderness additions comprising two acres, depicted on a map entitled "Wilderness Plan, Chiricahua National Monument, Arizona", numbered 145-20,007-A and dated September 1973, to be known as the Chiricahua National Monument Wilderness.

(d) Great Sand Dunes National Monument, Colorado, wilderness comprising thirty-three thousand four hundred and fifty acres, and potential wilderness additions comprising six hundred and seventy acres, depicted on a map entitled "Wilderness Plan, Great Sand Dunes National Monument, Colorado", numbered 140-20,006-C and dated February 1976, to be known as the Great Sand Dunes Wilderness.

(e) Haleakala National Park, Hawaii, wilderness comprising nineteen thousand two hundred and seventy acres, and potential wilderness additions comprising five thousand five hundred acres, depicted on a map entitled "Wilderness Plan, Haleakala National Park, Hawaii", numbered 162-20,006-A and dated July 1972, to be known as the Haleakala Wilderness.

(f) Isle Royale National Park, Michigan, wilderness comprising one hundred and thirty-one thousand eight hundred and eighty acres, and potential wilderness additions comprising two hundred and thirty-one acres, depicted on a map entitled "Wilderness Plan, Isle Royale National Park, Michigan", numbered 139-20,004 and dated December 1974, to be known as the Isle Royale Wilderness.

(g) Joshua Tree National Monument, California, wilderness comprising four hundred and twenty-nine thousand six hundred and ninety acres, and potential wilderness additions comprising thirty-seven thousand five hundred and fifty acres, depicted on a map entitled

retary of Agriculture shall be deemed to be a reference to the Secretary of the Interior.

\* \* \* \* \*

October 20, 1976.

An Act to authorize additional appropriations for the acquisition of lands and interests in lands within the Sawtooth National Recreation Area in Idaho. (92 Stat. 3467) (P.L. 95-625)

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

### TITLE III—BOUNDARY CHANGES

SEC. 301. The boundaries of the following units of the National Park System are revised as follows, and there are authorized to be 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:

\* \* \* \* \*

(8) Great Sand Dunes National Monument, Colorado: To add approximately one thousand one hundred and nine acres as generally depicted on the map entitled "Boundary Map, Great Sand Dunes National Monument, Colorado", numbered 140-80,001-A, and dated November 1974: \$166,000.

SEC. 302. Within twelve months after the date of the enactment of this Act, the Secretary shall publish in the Federal Register a detailed map or other detailed description of the lands added or excluded from any area pursuant to section 301.

SEC. 303. (a) Within the boundaries of the areas as revised in accordance with section 301, the Secretary is authorized to acquire lands and interests therein by donation, purchase with donated or appropriated funds, exchange, or transfer from any other Federal agency. Lands and interests therein so acquired shall become part of the area to which they are added, and shall be subjected to all laws, rules, and regulations applicable thereto. When acquiring any land pursuant to this title, the Secretary may acquire any such land subject to the retention of a right of use and occupancy for a term not to exceed twenty-five years or for the life of the owner or owners. Lands owned by a State or political subdivision thereof may be acquired only by donation.

(b) (1) Lands and interests deleted from any area pursuant to section 301 may be exchanged for non-Federal lands within the revised boundaries of such area, or



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transferred to the jurisdiction of any other Federal agency or to a State or political subdivision thereof, without monetary consideration, or be administered as public lands by the Secretary, as the Secretary may deem appropriate.

(2) In exercising the authority contained in this section with respect to lands and interests therein deleted from any such area which were acquired from a State, the Secretary may, on behalf of the United States, transfer to such State exclusive or concurrent legislative jurisdiction over such lands, subject to such terms and conditions as he may deem appropriate, to be effective upon acceptance thereof by the State.

(c) It is the established policy of Congress that wilderness, wildlife conservation, and park and recreation values of real property owned by the United States be conserved, enhanced, and developed. It is further declared to be the policy of Congress that unutilized, underutilized, or excess Federal real property be timely studied as to suitability for wilderness, wildlife conservation, or park and recreation purposes. To implement this policy, the Secretary, the Administrator of General Services, and the Director of the Office of Management and Budget shall establish a system with appropriate procedures to permit the Secretary full and early opportunity to make such studies and propose appropriate recommendations to disposing agencies for consideration in connection with determinations of further utilization or disposal of such property under existing law. Each affected executive agency is authorized and directed to provide to the Secretary such advice and information relating to such studies as the Secretary may request.

SEC. 304. The authorities in this title are supplementary to any other authorities available to the Secretary with respect to the acquisition, development, and administration of the areas referred to in section 301.

\* \* \* \* \*

Approved November 10, 1973.

PUBLIC LAW 96-87—OCT. 12, 1979

93 STAT. 665

Sec. 202. (a) The Secretary shall administer the property, Site, including personal property comprising the archival collection, acquired for the purposes of this Act in accordance with the Act of August 25, 1916 (39 Stat. 535), as amended and supplemented, and the Act of August 21, 1935 (49 Stat. 666), as amended.

Administration.

(b) The Secretary is authorized to enter into a cooperative agreement with an appropriate entity for the management of the archival collection acquired for the purposes of this Act.

16 USC 461.

(c) Within three years of the date of enactment of this Act, the Secretary shall submit to the Committee on Interior and Insular Affairs of the United States House of Representatives and the Committee on Energy and Natural Resources of the United States Senate, a general management plan for the Site pursuant to the provisions of section 12(b) of the Act of August 18, 1970 (84 Stat. 325), as amended. Within six months of the date of enactment of this Act, the Secretary shall submit a written report to the same committees relating the state of progress of his acquisition and provisions for management and permanent protection of the archival collection. He shall submit a similar report within one year of the date of enactment of this Act to the same committees indicating the final management and protection arrangements he has concluded for such collection.

General management plan, submittal to congressional committees.  
16 USC 1a-1.

Report to congressional committees.

Sec. 203. (a) Effective October 1, 1979, there are authorized to be appropriated from the Land and Water Conservation Fund such sums as may be necessary for the acquisition of lands and interests therein.

(b) There is hereby authorized to be appropriated, effective October 1, 1979, an amount not to exceed \$314,000 for the acquisition of the archival collection; an amount not to exceed \$200,000 for development; and an amount not to exceed \$1,230,000 for the preservation of the archival collection.

Appropriation authorization.

## TITLE III

Sec. 301. Notwithstanding any other provision of law, the Secretary shall permit the late Chief Turkey Tayac to be buried in the ossuary at Piscataway Park in Oxon Hill, Maryland. The Secretary shall select the site in such ossuary at which Chief Tayac may be buried. No Federal funds may be used for the burial of Chief Tayac except such funds as may be necessary for the maintenance of the burial site by the Department of the Interior.

Chief Turkey Tayac, burial in Oxon Hill, Md.

## TITLE IV

Sec. 401. The National Parks and Recreation Act of 1978, approved November 10, 1978 (92 Stat. 3467), is amended as follows:

National Park System.

(a) Section 101(8), re: DeSoto National Memorial, is amended by changing the phrase "changing '\$3,108,000' to '\$5,108,000'." to read "by changing '\$175,000' to '\$292,000'."

16 USC 1 note.  
92 Stat. 3471.  
16 USC 450dd note.

(b) Section 101(20), re: Pecos National Monument, is amended by changing "\$2,375,000" to "\$2,575,000".

92 Stat. 3472.

(c) Section 301, re: revision of boundaries, is amended by changing the words "but not exceed" in the first sentence to "but not to exceed".

92 Stat. 3473.

(d) Section 301(8), re: Great Sand Dunes National Monument, is amended by (1) changing "one thousand one hundred and nine acres" to "one thousand nine hundred acres" and by changing "\$166,000" to "\$265,000"; and (2) by adding the following at the end thereof: "The Secretary shall designate the lands described by this paragraph for management in accordance with the adjacent lands within the monument by publication of a notice in the Federal Register."

Publication in Federal Register.

PUBLIC LAW 106–530—NOV. 22, 2000

114 STAT. 2527

Public Law 106–530  
106th Congress

An Act

To provide for the establishment of the Great Sand Dunes National Park and Preserve and the Baca National Wildlife Refuge in the State of Colorado, and for other purposes.

Nov. 22, 2000  
[S. 2547]

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

SECTION 1. SHORT TITLE.

This Act may be cited as the “Great Sand Dunes National Park and Preserve Act of 2000”.

Great Sand  
Dunes National  
Park and  
Preserve Act of  
2000.  
16 USC 410hhh  
note.  
16 USC 410hhh.

SEC. 2. FINDINGS.

Congress finds that—

(1) the Great Sand Dunes National Monument in the State of Colorado was established by Presidential proclamation in 1932 to preserve Federal land containing spectacular and unique sand dunes and additional features of scenic, scientific, and educational interest for the benefit and enjoyment of future generations;

(2) the Great Sand Dunes, together with the associated sand sheet and adjacent wetland and upland, contain a variety of rare ecological, geological, paleontological, archaeological, scenic, historical, and wildlife components, which—

(A) include the unique pulse flow characteristics of Sand Creek and Medano Creek that are integral to the existence of the dunes system;

(B) interact to sustain the unique Great Sand Dunes system beyond the boundaries of the existing National Monument;

(C) are enhanced by the serenity and rural western setting of the area; and

(D) comprise a setting of irreplaceable national significance;

(3) the Great Sand Dunes and adjacent land within the Great Sand Dunes National Monument—

(A) provide extensive opportunities for educational activities, ecological research, and recreational activities; and

(B) are publicly used for hiking, camping, and fishing, and for wilderness value (including solitude);

(4) other public and private land adjacent to the Great Sand Dunes National Monument—

(A) offers additional unique geological, hydrological, paleontological, scenic, scientific, educational, wildlife, and recreational resources; and

114 STAT. 2528

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- (B) contributes to the protection of—
  - (i) the sand sheet associated with the dune mass;
  - (ii) the surface and ground water systems that are necessary to the preservation of the dunes and the adjacent wetland; and
  - (iii) the wildlife, viewshed, and scenic qualities of the Great Sand Dunes National Monument;
- (5) some of the private land described in paragraph (4) contains important portions of the sand dune mass, the associated sand sheet, and unique alpine environments, which would be threatened by future development pressures;
- (6) the designation of a Great Sand Dunes National Park, which would encompass the existing Great Sand Dunes National Monument and additional land, would provide—
  - (A) greater long-term protection of the geological, hydrological, paleontological, scenic, scientific, educational, wildlife, and recreational resources of the area (including the sand sheet associated with the dune mass and the ground water system on which the sand dune and wetland systems depend); and
  - (B) expanded visitor use opportunities;
- (7) land in and adjacent to the Great Sand Dunes National Monument is—
  - (A) recognized for the culturally diverse nature of the historical settlement of the area;
  - (B) recognized for offering natural, ecological, wildlife, cultural, scenic, paleontological, wilderness, and recreational resources; and
  - (C) recognized as being a fragile and irreplaceable ecological system that could be destroyed if not carefully protected; and
- (8) preservation of this diversity of resources would ensure the perpetuation of the entire ecosystem for the enjoyment of future generations.

16 USC 410hhh-  
1.**SEC. 3. DEFINITIONS.**

In this Act:

- (1) **ADVISORY COUNCIL.**—The term “Advisory Council” means the Great Sand Dunes National Park Advisory Council established under section 8(a).
- (2) **LUIS MARIA BACA GRANT NO. 4.**—The term “Luis Maria Baca Grant No. 4” means those lands as described in the patent dated February 20, 1900, from the United States to the heirs of Luis Maria Baca recorded in book 86, page 20, of the records of the Clerk and Recorder of Saguache County, Colorado.
- (3) **MAP.**—The term “map” means the map entitled “Great Sand Dunes National Park and Preserve”, numbered 140/80,032 and dated September 19, 2000.
- (4) **NATIONAL MONUMENT.**—The term “national monument” means the Great Sand Dunes National Monument, including lands added to the monument pursuant to this Act.
- (5) **NATIONAL PARK.**—The term “national park” means the Great Sand Dunes National Park established in section 4.
- (6) **NATIONAL WILDLIFE REFUGE.**—The term “wildlife refuge” means the Baca National Wildlife Refuge established in section 6.

PUBLIC LAW 106-530—NOV. 22, 2000

114 STAT. 2529

(7) **PRESERVE.**—The term “preserve” means the Great Sand Dunes National Preserve established in section 5.

(8) **RESOURCES.**—The term “resources” means the resources described in section 2.

(9) **SECRETARY.**—The term “Secretary” means the Secretary of the Interior.

(10) **USES.**—The term “uses” means the uses described in section 2.

#### **SEC. 4. GREAT SAND DUNES NATIONAL PARK, COLORADO.**

(a) **ESTABLISHMENT.**—When the Secretary determines that sufficient land having a sufficient diversity of resources has been acquired to warrant designation of the land as a national park, the Secretary shall establish the Great Sand Dunes National Park in the State of Colorado, as generally depicted on the map, as a unit of the National Park System. Such establishment shall be effective upon publication of a notice of the Secretary’s determination in the Federal Register.

(b) **AVAILABILITY OF MAP.**—The map shall be on file and available for public inspection in the appropriate offices of the National Park Service.

(c) **NOTIFICATION.**—Until the date on which the national park is established, the Secretary shall annually notify the Committee on Energy and Natural Resources of the Senate and the Committee on Resources of the House of Representatives of—

(1) the estimate of the Secretary of the lands necessary to achieve a sufficient diversity of resources to warrant designation of the national park; and

(2) the progress of the Secretary in acquiring the necessary lands.

(d) **ABOLISHMENT OF NATIONAL MONUMENT.**—(1) On the date of establishment of the national park pursuant to subsection (a), the Great Sand Dunes National Monument shall be abolished, and any funds made available for the purposes of the national monument shall be available for the purposes of the national park.

(2) Any reference in any law (other than this Act), regulation, document, record, map, or other paper of the United States to “Great Sand Dunes National Monument” shall be considered a reference to “Great Sand Dunes National Park”.

(e) **TRANSFER OF JURISDICTION.**—Administrative jurisdiction is transferred to the National Park Service over any land under the jurisdiction of the Department of the Interior that—

(1) is depicted on the map as being within the boundaries of the national park or the preserve; and

(2) is not under the administrative jurisdiction of the National Park Service on the date of enactment of this Act.

#### **SEC. 5. GREAT SAND DUNES NATIONAL PRESERVE, COLORADO.**

(a) **ESTABLISHMENT OF GREAT SAND DUNES NATIONAL PRESERVE.**—(1) There is hereby established the Great Sand Dunes National Preserve in the State of Colorado, as generally depicted on the map, as a unit of the National Park System.

(2) Administrative jurisdiction of lands and interests therein administered by the Secretary of Agriculture within the boundaries of the preserve is transferred to the Secretary of the Interior, to be administered as part of the preserve. The Secretary of Agriculture shall modify the boundaries of the Rio Grande National Forest to exclude the transferred lands from the forest boundaries.

16 USC 410hhh–  
2.  
Effective date.  
Notification.  
Federal Register,  
publication.

16 USC 410hhh–  
3.

114 STAT. 2530

PUBLIC LAW 106-530—NOV. 22, 2000

(3) Any lands within the preserve boundaries which were designated as wilderness prior to the date of enactment of this Act shall remain subject to the Wilderness Act (16 U.S.C. 1131 et seq.) and the Colorado Wilderness Act of 1993 (Public Law 103-767; 16 U.S.C. 539i note).

(b) MAP AND LEGAL DESCRIPTION.—(1) As soon as practicable after the establishment of the national park and the preserve, the Secretary shall file maps and a legal description of the national park and the preserve with the Committee on Energy and Natural Resources of the Senate and the Committee on Resources of the House of Representatives.

(2) The map and legal description shall have the same force and effect as if included in this Act, except that the Secretary may correct clerical and typographical errors in the legal description and maps.

(3) The map and legal description shall be on file and available for public inspection in the appropriate offices of the National Park Service.

(c) BOUNDARY SURVEY.—As soon as practicable after the establishment of the national park and preserve and subject to the availability of funds, the Secretary shall complete an official boundary survey.

16 USC 410hhh-  
4, 668dd note.

#### **SEC. 6. BACA NATIONAL WILDLIFE REFUGE, COLORADO.**

(a) ESTABLISHMENT.—(1) When the Secretary determines that sufficient land has been acquired to constitute an area that can be efficiently managed as a National Wildlife Refuge, the Secretary shall establish the Baca National Wildlife Refuge, as generally depicted on the map.

Effective date.  
Federal Register,  
publication.

(2) Such establishment shall be effective upon publication of a notice of the Secretary's determination in the Federal Register.

(b) AVAILABILITY OF MAP.—The map shall be on file and available for public inspection in the appropriate offices of the United States Fish and Wildlife Service.

(c) ADMINISTRATION.—The Secretary shall administer all lands and interests therein acquired within the boundaries of the national wildlife refuge in accordance with the National Wildlife Refuge System Administration Act of 1966 (16 U.S.C. 668dd et seq.) and the Act of September 28, 1962 (16 U.S.C. 460k et seq.) (commonly known as the Refuge Recreation Act).

(d) PROTECTION OF WATER RESOURCES.—In administering water resources for the national wildlife refuge, the Secretary shall—

(1) protect and maintain irrigation water rights necessary for the protection of monument, park, preserve, and refuge resources and uses; and

(2) minimize, to the extent consistent with the protection of national wildlife refuge resources, adverse impacts on other water users.

16 USC 410hhh-  
5.

#### **SEC. 7. ADMINISTRATION OF NATIONAL PARK AND PRESERVE.**

(a) IN GENERAL.—The Secretary shall administer the national park and the preserve in accordance with—

(1) this Act; and

(2) all laws generally applicable to units of the National Park System, including—

(A) the Act entitled “An Act to establish a National Park Service, and for other purposes”, approved August 25, 1916 (16 U.S.C. 1, 2-4); and

PUBLIC LAW 106-530—NOV. 22, 2000

114 STAT. 2531

(B) the Act entitled “An Act to provide for the preservation of historic American sites, buildings, objects, and antiquities of national significance, and for other purposes”, approved August 21, 1935 (16 U.S.C. 461 et seq.).

(b) GRAZING.—

(1) ACQUIRED STATE OR PRIVATE LAND.—With respect to former State or private land on which grazing is authorized to occur on the date of enactment of this Act and which is acquired for the national monument, or the national park and preserve, or the wildlife refuge, the Secretary, in consultation with the lessee, may permit the continuation of grazing on the land by the lessee at the time of acquisition, subject to applicable law (including regulations).

(2) FEDERAL LAND.—Where grazing is permitted on land that is Federal land as of the date of enactment of this Act and that is located within the boundaries of the national monument or the national park and preserve, the Secretary is authorized to permit the continuation of such grazing activities unless the Secretary determines that grazing would harm the resources or values of the national park or the preserve.

(3) TERMINATION OF LEASES.—Nothing in this subsection shall prohibit the Secretary from accepting the voluntary termination of leases or permits for grazing within the national monument or the national park or the preserve.

(c) HUNTING, FISHING, AND TRAPPING.—

(1) IN GENERAL.—Except as provided in paragraph (2), the Secretary shall permit hunting, fishing, and trapping on land and water within the preserve in accordance with applicable Federal and State laws.

(2) ADMINISTRATIVE EXCEPTIONS.—The Secretary may designate areas where, and establish limited periods when, no hunting, fishing, or trapping shall be permitted under paragraph (1) for reasons of public safety, administration, or compliance with applicable law.

(3) AGENCY AGREEMENT.—Except in an emergency, regulations closing areas within the preserve to hunting, fishing, or trapping under this subsection shall be made in consultation with the appropriate agency of the State of Colorado having responsibility for fish and wildlife administration.

(4) SAVINGS CLAUSE.—Nothing in this Act affects any jurisdiction or responsibility of the State of Colorado with respect to fish and wildlife on Federal land and water covered by this Act.

(d) CLOSED BASIN DIVISION, SAN LUIS VALLEY PROJECT.—Any feature of the Closed Basin Division, San Luis Valley Project, located within the boundaries of the national monument, national park or the national wildlife refuge, including any well, pump, road, easement, pipeline, canal, ditch, power line, power supply facility, or any other project facility, and the operation, maintenance, repair, and replacement of such a feature—

(1) shall not be affected by this Act; and

(2) shall continue to be the responsibility of, and be operated by, the Bureau of Reclamation in accordance with title I of the Reclamation Project Authorization Act of 1972 (43 U.S.C. 615aaa et seq.).

(e) WITHDRAWAL.—(1) On the date of enactment of this Act, subject to valid existing rights, all Federal land depicted on the

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map as being located within Zone A, or within the boundaries of the national monument, the national park or the preserve is withdrawn from—

(A) all forms of entry, appropriation, or disposal under the public land laws;

(B) location, entry, and patent under the mining laws; and

(C) disposition under all laws relating to mineral and geothermal leasing.

Applicability.

(2) The provisions of this subsection also shall apply to any lands—

(A) acquired under this Act; or

(B) transferred from any Federal agency after the date of enactment of this Act for the national monument, the national park or preserve, or the national wildlife refuge.

(f) WILDERNESS PROTECTION.—(1) Nothing in this Act alters the Wilderness designation of any land within the national monument, the national park, or the preserve.

(2) All areas designated as Wilderness that are transferred to the administrative jurisdiction of the National Park Service shall remain subject to the Wilderness Act (16 U.S.C. 1131 et seq.) and the Colorado Wilderness Act of 1993 (Public Law 103-77; 16 U.S.C. 539i note). If any part of this Act conflicts with the provisions of the Wilderness Act or the Colorado Wilderness Act of 1993 with respect to the wilderness areas within the preserve boundaries, the provisions of those Acts shall control.

16 USC 410hhh-6.

#### SEC. 8. ACQUISITION OF PROPERTY AND BOUNDARY ADJUSTMENTS.

(a) ACQUISITION AUTHORITY.—(1) Within the area depicted on the map as the “Acquisition Area” or the national monument, the Secretary may acquire lands and interests therein by purchase, donation, transfer from another Federal agency, or exchange: *Provided*, That lands or interests therein may only be acquired with the consent of the owner thereof.

(2) Lands or interests therein owned by the State of Colorado, or a political subdivision thereof, may only be acquired by donation or exchange.

(b) BOUNDARY ADJUSTMENT.—As soon as practicable after the acquisition of any land or interest under this section, the Secretary shall modify the boundary of the unit to which the land is transferred pursuant to subsection (b) to include any land or interest acquired.

(c) ADMINISTRATION OF ACQUIRED LANDS.—

(1) GENERAL AUTHORITY.—Upon acquisition of lands under subsection (a), the Secretary shall, as appropriate—

(A) transfer administrative jurisdiction of the lands to the National Park Service—

(i) for addition to and management as part of the Great Sand Dunes National Monument, or

(ii) for addition to and management as part of the Great Sand Dunes National Park (after designation of the Park) or the Great Sand Dunes National Preserve; or

(B) transfer administrative jurisdiction of the lands to the United States Fish and Wildlife Service for addition to and administration as part of the Baca National Wildlife Refuge.



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(2) FOREST SERVICE ADMINISTRATION.—(A) Any lands acquired within the area depicted on the map as being located within Zone B shall be transferred to the Secretary of Agriculture and shall be added to and managed as part of the Rio Grande National Forest.

(B) For the purposes of section 7 of the Land and Water Conservation Fund Act of 1965 (16 U.S.C. 4601-9), the boundaries of the Rio Grande National Forest, as revised by the transfer of land under paragraph (A), shall be considered to be the boundaries of the national forest.

#### SEC. 9. WATER RIGHTS.

16 USC 410hhh-7.

(a) SAN LUIS VALLEY PROTECTION, COLORADO.—Section 1501(a) of the Reclamation Projects Authorization and Adjustment Act of 1992 (Public Law 102-575; 106 Stat. 4663) is amended by striking paragraph (3) and inserting the following:

“(3) adversely affect the purposes of—

“(A) the Great Sand Dunes National Monument;

“(B) the Great Sand Dunes National Park (including purposes relating to all water, water rights, and water-dependent resources within the park);

“(C) the Great Sand Dunes National Preserve (including purposes relating to all water, water rights, and water-dependent resources within the preserve);

“(D) the Baca National Wildlife Refuge (including purposes relating to all water, water rights, and water-dependent resources within the national wildlife refuge); and

“(E) any Federal land adjacent to any area described in subparagraph (A), (B), (C), or (D).”.

(b) EFFECT ON WATER RIGHTS.—

(1) IN GENERAL.—Subject to the amendment made by subsection (a), nothing in this Act affects—

(A) the use, allocation, ownership, or control, in existence on the date of enactment of this Act, of any water, water right, or any other valid existing right;

(B) any vested absolute or decreed conditional water right in existence on the date of enactment of this Act, including any water right held by the United States;

(C) any interstate water compact in existence on the date of enactment of this Act; or

(D) subject to the provisions of paragraph (2), State jurisdiction over any water law.

(2) WATER RIGHTS FOR NATIONAL PARK AND NATIONAL PRESERVE.—In carrying out this Act, the Secretary shall obtain and exercise any water rights required to fulfill the purposes of the national park and the national preserve in accordance with the following provisions:

(A) Such water rights shall be appropriated, adjudicated, changed, and administered pursuant to the procedural requirements and priority system of the laws of the State of Colorado.

(B) The purposes and other substantive characteristics of such water rights shall be established pursuant to State law, except that the Secretary is specifically authorized to appropriate water under this Act exclusively for the purpose of maintaining ground water levels, surface water

levels, and stream flows on, across, and under the national park and national preserve, in order to accomplish the purposes of the national park and the national preserve and to protect park resources and park uses.

(C) Such water rights shall be established and used without interfering with—

(i) any exercise of a water right in existence on the date of enactment of this Act for a non-Federal purpose in the San Luis Valley, Colorado; and

(ii) the Closed Basin Division, San Luis Valley Project.

(D) Except as provided in subsections (c) and (d), no Federal reservation of water may be claimed or established for the national park or the national preserve.

(c) NATIONAL FOREST WATER RIGHTS.—To the extent that a water right is established or acquired by the United States for the Rio Grande National Forest, the water right shall—

(1) be considered to be of equal use and value for the national preserve; and

(2) retain its priority and purpose when included in the national preserve.

(d) NATIONAL MONUMENT WATER RIGHTS.—To the extent that a water right has been established or acquired by the United States for the Great Sand Dunes National Monument, the water right shall—

(1) be considered to be of equal use and value for the national park; and

(2) retain its priority and purpose when included in the national park.

(e) ACQUIRED WATER RIGHTS AND WATER RESOURCES.—

(1) IN GENERAL.—(A) If, and to the extent that, the Luis Maria Baca Grant No. 4 is acquired, all water rights and water resources associated with the Luis Maria Baca Grant No. 4 shall be restricted for use only within—

(i) the national park;

(ii) the preserve;

(iii) the national wildlife refuge; or

(iv) the immediately surrounding areas of Alamosa or Saguache Counties, Colorado.

(B) USE.—Except as provided in the memorandum of water service agreement and the water service agreement between the Cabeza de Vaca Land and Cattle Company, LLC, and Baca Grande Water and Sanitation District, dated August 28, 1997, water rights and water resources described in subparagraph (A) shall be restricted for use in—

(i) the protection of resources and values for the national monument, the national park, the preserve, or the wildlife refuge;

(ii) fish and wildlife management and protection; or

(iii) irrigation necessary to protect water resources.

(2) STATE AUTHORITY.—If, and to the extent that, water rights associated with the Luis Maria Baca Grant No. 4 are acquired, the use of those water rights shall be changed only in accordance with the laws of the State of Colorado.

(f) DISPOSAL.—The Secretary is authorized to sell the water resources and related appurtenances and fixtures as the Secretary deems necessary to obtain the termination of obligations specified

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in the memorandum of water service agreement and the water service agreement between the Cabeza de Vaca Land and Cattle Company, LLC and the Baca Grande Water and Sanitation District, dated August 28, 1997. Prior to the sale, the Secretary shall determine that the sale is not detrimental to the protection of the resources of Great Sand Dunes National Monument, Great Sand Dunes National Park, and Great Sand Dunes National Preserve, and the Baca National Wildlife Refuge, and that appropriate measures to provide for such protection are included in the sale.

**SEC. 10. ADVISORY COUNCIL.**

16 USC 410hhh-  
8.

(a) **ESTABLISHMENT.**—The Secretary shall establish an advisory council to be known as the “Great Sand Dunes National Park Advisory Council”.

(b) **DUTIES.**—The Advisory Council shall advise the Secretary with respect to the preparation and implementation of a management plan for the national park and the preserve.

(c) **MEMBERS.**—The Advisory Council shall consist of 10 members, to be appointed by the Secretary, as follows:

(1) One member of, or nominated by, the Alamosa County Commission.

(2) One member of, or nominated by, the Saguache County Commission.

(3) One member of, or nominated by, the Friends of the Dunes Organization.

(4) Four members residing in, or within reasonable proximity to, the San Luis Valley and 3 of the general public, all of whom have recognized backgrounds reflecting—

(A) the purposes for which the national park and the preserve are established; and

(B) the interests of persons that will be affected by the planning and management of the national park and the preserve.

(d) **APPLICABLE LAW.**—The Advisory Council shall function in accordance with the Federal Advisory Committee Act (5 U.S.C. App.) and other applicable laws.

(e) **VACANCY.**—A vacancy on the Advisory Council shall be filled in the same manner as the original appointment.

(f) **CHAIRPERSON.**—The Advisory Council shall elect a chairperson and shall establish such rules and procedures as it deems necessary or desirable.

(g) **NO COMPENSATION.**—Members of the Advisory Council shall serve without compensation.

(h) **TERMINATION.**—The Advisory Council shall terminate upon the completion of the management plan for the national park and preserve.

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16 USC 410hhh–  
9.

**SEC. 11. AUTHORIZATION OF APPROPRIATIONS.**

There are authorized to be appropriated such sums as are necessary to carry out this Act.

Approved November 22, 2000.

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**LEGISLATIVE HISTORY—S. 2547:**

SENATE REPORTS: No. 106-479 (Comm. on Energy and Natural Resources).

CONGRESSIONAL RECORD, Vol. 146 (2000):

Oct. 5, considered and passed Senate.

Oct. 25, considered and passed House.



**APPENDIX B:  
INFORMATION REGARDING POTENTIAL CONSERVATION SITES,  
COLORADO NATURAL HERITAGE PROGRAM**



## INFORMATION REGARDING POTENTIAL CONSERVATION SITES, COLORADO NATURAL HERITAGE PROGRAM

The Colorado Natural Heritage Program (CNHP) is Colorado's primary comprehensive biological diversity data center. The program provides comprehensive information on rare, threatened, or endangered species and on natural communities in the state.

CNHP delineates potential conservation sites to successfully protect biotic populations or occurrences. They include ecological processes that are necessary to support the continued existence of elements of natural heritage significance in Colorado. Site boundaries represent an estimate of the landscape area that supports the rare elements and the ecological processes that support them. Factors considered may include (1) the extent of current and potential habitat for the elements present, considering the ecological processes necessary to maintain or improve existing conditions; (2) species movement and migration corridors; (3) maintenance of surface water quality within the site and the surrounding watershed; (4) maintenance of the hydrologic integrity of the groundwater, i.e., by protecting recharge zones; (5) land intended to protect the site against future changes in the use of surrounding lands; and (6) exclusion or control of invasive non-native species; land necessary for management or monitoring activities (CNHP 1998).

Potential conservation sites are assigned a rank from 1 to 5 to reflect their overall biodiversity significance as follows:

- *B1 - Outstanding Significance:* only site known for an element of an excellent occurrence of a G1 (critically imperiled globally because of rarity or because of some factor of

its biology making it especially vulnerable to extinction) species.

- *B2 - Very High Significance:* one of the best examples of a community type, good occurrence of a G1 species, or excellent occurrence of a G2 (imperiled globally because of rarity or because of other factors demonstrably making it vulnerable to extinction throughout its range) or G3 (vulnerable through its range or found locally in a restricted range) species.
- *B3 - High Significance:* excellent example of any community type, good occurrence of a G3 species, or a large concentration of good occurrences of state rare species.
- *B4 - Moderate or Regional Significance:* good example of a community type, excellent or good occurrence of state rare species.
- *B5 - General or Local Biodiversity Significance:* good or marginal occurrence of a community type, S1 (critically imperiled statewide because of rarity or because of some factor of its biology making it especially vulnerable to extinction), or S2 (imperiled state-wide because of rarity or because of other factors demonstrably making it vulnerable to extinction throughout its range) species.

The methods used to successfully identify potential conservation sites at the Great Sand Dunes followed CNHP's general

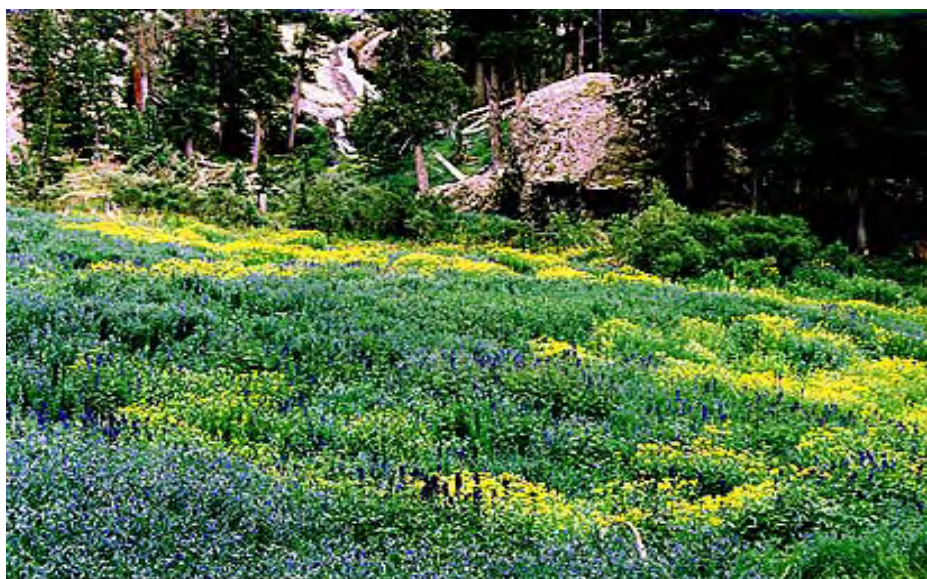
approach that has been used successfully in many rare or imperiled species inventories. The basic steps are: (1) collect existing information, (2) identify possible sites, (3)

select and prioritize targeted inventory areas, (4) conduct field surveys, and (5) delineate potential conservation sites (CNHP 1998).



## **APPENDIX C: RESOURCE OPPORTUNITY AREAS**





SANGRE DE CRISTO MOUNTAINS AND FOOTHILLS	
Location	Upland portions of mountain drainage basins within the park and preserve.
Dunes System	Mountains and passes affect wind patterns, supply creek water, and are the source of some sand in the dunes.
Natural Diversity	Multiple life zones are tied to elevation zones. High vegetative biodiversity. Medano and Little Medano Creek watersheds have a B3 (high significance) biodiversity rating.
<i>Vegetation</i>	Pinyon-juniper woodland, montane forest (Douglas-fir, white fir, ponderosa pine, aspen), subalpine forest (Englemann spruce, blue spruce, subalpine fir), krumholz, and alpine tundra plant communities.
<i>Wildlife</i>	Bighorn sheep; deer; carnivores (wolverines, mountain lions, bears); rodents (marmots, pikas).
<i>Water</i>	Snowpack is the source of springtime meltwater runoff in the creeks.
Human Connections	Culturally scarred trees; numerous archeological sites (including wickiups); water diversion; pinyon nut and mushroom gathering.
Visitor Opportunities	Experiencing quiet and solitude in a wilderness environment; driving the Medano Pass four-wheel-drive road; seeing wildlife in its natural setting; viewing the dune mass from the mountains; serves as backdrop for the dunes. Learning/education opportunities: dunes system and other geology, wilderness values, biodiversity, and habitat.
Wilderness Status / Suitability	Most is already wilderness (exceptions are Medano Road corridor and small exclusion areas near Mosca Pass, the mouth of Mosca Canyon, and diversion ditches).

SANGRE DE CRISTO MOUNTAINS AND FOOTHILLS	
Planning Issues and Opportunities	<ul style="list-style-type: none"> <li>Fire management</li> <li>Access to preserve for hunting and recreation</li> <li>Tundra sensitivity</li> <li>Trans-mountain water diversions</li> <li>Potential for crowding around alpine lakes</li> <li>Human waste management</li> <li>Nonnative species (e.g., leafy spurge)</li> <li>Management of ATV use (currently illegal) on Medano Road</li> <li>Management of illegal off-road ATV use</li> <li>Management of primitive roadside and backcountry camping</li> <li>Opportunities for backcountry-related education, especially for organized groups</li> <li>Wilderness management</li> <li>Management of historic trail corridors</li> </ul>



MOUNTAIN LAKES AND STREAMS	
Location	Mountain stream riparian corridors and high-altitude lakes.
Dunes System	Headwaters for creeks that transport water and sand.
Natural Diversity	Sand Creek and Deadman Creek have a B2 (very high significance) biodiversity rating. Medano and Little Medano Creek watersheds have a B3 (high significance) biodiversity rating.
<i>Vegetation</i>	Mountain streams: willows, cottonwoods, river birch, aspens, duckweed. Alpine lakes: sedges, spruces, willows.
<i>Wildlife</i>	Native fish refugia (Medano Creek, with potential in others).
<i>Water</i>	Outstanding water quality (Medano Creek). Medano Creek, and to some extent Sand Creek, is an aquatically isolated system.
Human Connections	Archeological sites.
Visitor Opportunities	Seeing wildlife in its natural setting; experiencing quiet and solitude in a wilderness environment; narrow views down onto dunes. Learning/education opportunities: dunes system, riparian systems, biodiversity, history, and wilderness.
Wilderness Status / Suitability	All is existing wilderness except Medano corridor and Deadman Creek. Deadman Creek is suitable for wilderness.

MOUNTAIN LAKES AND STREAMS	
Planning Issues and Opportunities	<p>Transmountain water diversion</p> <p>Concentration of visitors</p> <p>Water quality in streams and alpine lakes due to intensity of human use in surrounding areas</p> <p>Impacts of road adjacent to Medano Creek (and crossings)</p> <p>Management of primitive roadside and backcountry camping</p> <p>Visitor access to and along stream corridors</p> <p>Nonnative fish in Sand Creek and creeks north of there</p> <p>Mitigation or management of retention ponds, restoration opportunities</p> <p>Nonnative plants (e.g., Canada thistle, leafy spurge)</p>



LOWER MEDANO AND SAND CREEKS	
Location	Downstream from the point where the water begins to interact with the sand substrate (where the stream cross-section changes from a rectangular to a braided channel).
Dunes System	Surface water flows recycle sand and transport it along margins of the dunefield; critical for vertical growth of dunes; great example of surge flow (rare phenomenon); flow dependent on subsurface aquifer (and vice versa); barrier to eastward sand migration; dramatic slip faces formed by stream-caused sand erosion.
Natural Diversity	Lower Sand and Medano creeks are within a B1 (outstanding significance) biodiversity area, but this significance is due primarily to endemic species that occur outside the stream corridors.
<i>Vegetation</i>	Unhybridized narrowleaf cottonwoods; cottonwood/willow riparian forest.
<i>Wildlife</i>	Heavily used by elk, bison, deer; birds abundant in riparian areas; amphibians.
<i>Water</i>	Creeks are a source of recharge to the aquifers.
Human Connections	Important area to certain contemporary American Indian tribes; local community interest in Medano Creek flow.
Visitor Opportunities	Experiencing surge flow; playing in Medano Creek at the foot of the dunes; slip faces to see and play on; sand play; viewing wildlife and birds in their natural setting (Sand Creek). Learning/education opportunities: dunes system (water cycle, see water flowing into ground, water quality); habitat; biodiversity; history; and wilderness.
Wilderness Status / Suitability	Medano Creek: part is existing wilderness and part is not suitable for wilderness. Sand Creek: part is existing wilderness and part is suitable for wilderness.

LOWER MEDANO AND SAND CREEKS	
Planning Issues and Opportunities	Water quality Horse use Aquifer monitoring Dogs Crowding and congestion at Castle Creek Education opportunities Wilderness management, especially appropriate uses Human waste management Cultural resources not fully surveyed





DUNEFIELD	
Location	Main dune mass.
Dunes System	Active dunefield, including the tall dunes; vertically growing, wind-caused, nonmigratory dunes.
Natural Diversity	Dunefield is within a B1 (outstanding significance) biodiversity area. Opposing elemental interactions within the landscape (contrast between water, wind, sand, and sun).
<i>Vegetation</i>	Mostly unvegetated; some sparse, specially adapted mostly perennial vegetation in dune troughs (e.g., Indian ricegrass, blowout grass, scurfpea, sunflowers).
<i>Wildlife</i>	Endemic insects.
<i>Water</i>	Sand transported around margins of dunefield by creeks; precipitation only—very little infiltration to groundwater aquifer.
Human Connections	Jicarilla Apache collect sand; dunes are a major landmark in contemporary and historic times.
Visitor Opportunities	Climbing and descending high dunes (resilient landscape); free play; experiencing quiet and solitude in a wilderness environment; camping in the dunes; seeing “the heavens” at night; viewing the dunes under changing light conditions; visual focal point of San Luis Valley. Learning and education opportunities: learning about the dunes system; habitat; biodiversity; and wilderness.
Wilderness Status / Suitability	All is existing wilderness.

DUNEFIELD	
Planning Issues and Opportunities	<p>Overcrowding in area between dunes parking area and high dunes</p> <p>Trash</p> <p>Dogs and horses</p> <p>Parking capacity</p> <p>Access to the west side of the dunefield</p> <p>Water quality (human and dog waste)</p> <p>Noise</p> <p>Threatened values mostly relate to visitor experience/opportunities</p> <p>Most natural values not really threatened in this resource opportunity area</p> <p>Visitor exposure to elements: heat, sun, dehydration, lightning, blowing sand</p> <p>Dunefield is a fundamental visitor experience, but it is very difficult for some with limited mobility to get there</p> <p>Dunes parking area is the easiest/only way for many people to get to the dunes</p> <p>Wilderness management (dune wheelchair)</p> <p>Wilderness values in a heavily used area</p>



SAND SHEET AND SABKHA	
Location	Relatively flat western (upwind) portion of the national park; wraps along eastern margin of the dunes.
Dunes System	Vegetated portion of the dune system (some small areas lack vegetation); relatively little sand movement; sand sheet stability is precarious—vegetation is the stabilizing factor; immediate source of sand for the dunefield; near-surface water table is the defining factor for the sabkha (creates mineral deposits).
Natural Diversity	Sand sheet is within a B1 (outstanding significance) biodiversity area. Sabkha is within a B2 (very high significance) biodiversity area. Great wildlife diversity.
<i>Vegetation</i>	Sabkha—salt-tolerant plants like four-wing saltbush, saltgrass, and greasewood; sand sheet—rabbitbrush, prickly pear, yucca, and grasses; irrigated meadows in sabkha and on the Baca Ranch provide forage for bison.
<i>Wildlife</i>	Endemic insects; great wildlife habitat overall.
<i>Water</i>	High groundwater table; seasonal standing water in the sabkha.
Human Connections	One of the oldest known Paleo-Indian (Folsom) sites; numerous archeological sites; culturally scarred trees.
Visitor Opportunities	Experiencing quiet and solitude in a wilderness environment; seeing the heavens at night; viewing the dunes with backdrop of the high peaks; viewing wildlife in its natural setting; driving the Medano Pass four-wheel-drive road (east side of dunefield). Learning and educational opportunities: learning about the dunes system, prehistory, habitat, biodiversity.
Wilderness Status / Suitability	Most of sabkha is unsuitable for wilderness. Most of sand sheet is suitable for wilderness.

SAND SHEET AND SABKHA	
Planning Issues and Opportunities	<ul style="list-style-type: none"> <li>Natural gas exploration on the former Baca Ranch lands</li> <li>Boundaries and trespass</li> <li>Future management of Medano Ranch</li> <li>Bicycling opportunities</li> <li>Access to Liberty and Duncan, Sand and Deadman creeks</li> <li>Access to west side of dunes</li> <li>Nonnative plants (e.g., white top, Russian thistle)</li> <li>Effects of ranching, irrigation, and other human uses on vegetation and wildlife</li> <li>Fire management</li> <li>Sensitive archeological resources</li> <li>Free-ranging bison herd?</li> </ul>



SPRING CREEKS AND WETLANDS	
Location	Perennial water sources in the western portion of the national park: Big and Little Spring creeks, interdunal wetlands, and small playa lakes.
Dunes System	Groundwater aquifer near surface greatly affects the landscape; biodiversity related to near surface groundwater; presence and amount of flow in springs and wetlands are indicators of aquifer status.
Natural Diversity	Springs and wetlands are within a B2 (very high significance) biodiversity area. Great vegetative diversity.
<i>Vegetation</i>	Rushes, sedges, duckweed, slender spider flower, cattails; other riparian vegetation; emergent wetlands.
<i>Wildlife</i>	Focal point for wildlife.
<i>Water</i>	Gaining stream (groundwater flows into the stream); groundwater becomes saltier as the water moves downgradient; stream geomorphology is tied to San Luis Lakes.
Human Connections	American Indian ties; numerous archeological sites.
Visitor Opportunities	Experiencing quiet and solitude in a wilderness environment; seeing the heavens at night; viewing the dunes with backdrop of the high peaks; viewing wildlife in its natural setting. Learning and educational opportunities: learning about the dunes system (especially groundwater aquifers), prehistory, habitat, biodiversity.
Wilderness Status / Suitability	Upper stretches suitable for wilderness; lower stretches unsuitable for wilderness.

SPRING CREEKS AND WETLANDS	
Planning Issues and Opportunities	<p>           Opportunity to restore natural flows (water has been diverted for irrigation)            Closed Basin Project has potential to affect aquifer and related natural systems            Valleywide dewatering of aquifer from agricultural uses            Visitor access            Artifacts collecting and location of other sensitive sites            Vegetation and water quality susceptible to damage from trespass livestock            Nonnative fish and turtles in Big Spring and Big Spring Creek            Reintroduction of native amphibians            Nonnative species (e.g., Canada thistle and white top)            Standing water—possible West Nile virus concern         </p>

## **APPENDIX D: CARRYING CAPACITY STEPS**





## CARRYING CAPACITY STEPS

The carrying capacity process for national parks typically involves the following steps:

1. Identify desired conditions (goals) for resources and visitors.
2. Identify indicators (things to monitor to determine whether desired conditions are being met).
3. Identify standards (limits of acceptable change) for the indicators.
4. Monitor indicators.
5. Take management action as necessary to ensure that standards are met.
6. Regularly evaluate and make adjustments based on new information and lessons learned.

Step 1: identify desired conditions, involves assigning management zones that have different desired resource and visitor conditions to different park areas.

Step 2: identify indicators, often begins with a discussion of park and zone-specific resource and visitor experience concerns (signs that desired conditions are perhaps not being met). Discussing specific concerns helps managers identify potential resource and visitor experience indicators to monitor. Depending on the situation, managers may also consult scientific literature, conduct research, consult other park managers, consult public opinion, and apply management judgment to assist with identifying indicators.

Step 3: identify standards, involves using scientific information, combined with best judgment, to establish the minimum acceptable condition for an indicator. (A standard does not define an intolerable condition. It is not a condition that managers should strive to achieve, unless intolerable conditions already exist.)

Step 4: monitor indicators, means checking indicators to see if conditions are deteriorating or if standards are being exceeded. Ideally, monitoring involves systematic and periodic measurement of indicators according to a predefined plan. With limited NPS staff and budgets, park managers must focus on areas where there are definite concerns and/or clear evidence of problems. This means monitoring should generally take place where:

- conditions are at or violate standards
- conditions are changing rapidly
- specific and important values are threatened by visitation
- effects of management actions are unknown

Step 5: take management action, means taking corrective steps to address deteriorating or unacceptable conditions. Management action includes things like expanding education or information, requiring visitor guides or permits, delineating trails, extending seasons or hours, expanding facilities, establishing one-way trails, increasing patrols, implementing temporary closures, or redirecting use. Using a combination of strategies provides managers with greater flexibility and allows them to address multiple dimensions and causes of undesired impacts. Reducing use may appear to be the obvious solution to

visitor use impacts, but less restrictive strategies may work as well and have fewer undesired consequences.

Step 6: sometimes referred to as adaptive management, means remaining flexible and “learning as you go.” Park managers rarely have all the information they desire to make decisions. Nonetheless, they are responsible

for ensuring that park resources remain unimpaired for the enjoyment of future generations, which may mean taking a cautious or conservative approach while gathering additional information. Adaptive management also includes using best judgment, trying different things to see what works, and adapting as new information becomes available.

## **APPENDIX E: DEVELOPMENT OF THE GENERAL MANAGEMENT PLAN**



## DEVELOPMENT OF THE GENERAL MANAGEMENT PLAN

### INITIAL PLANNING STEPS

Work on the Great Sand Dunes National Park and Preserve General Management Plan / Wilderness Study / Environmental Impact Statement began in earnest in early 2003. The planning team consisted of Great Sand Dunes staff, specialists from the National Park Service – Intermountain Region, and professionals from the consulting firm engineering-environmental Management, Inc. (e<sup>2</sup>M).

The planning team was assisted by the Great Sand Dunes National Park Advisory Council. The council has operated in accordance with the Federal Advisory Committee Act (5 USC App.) and other applicable laws. Early in the planning process, council members participated in field trips to learn more about the park, its surroundings, and planning issues. As of fall 2005, the council had met 11 times.

Advisory council meetings are open to the public and typically include an opportunity for public comment. Advisory council meeting minutes are available online. The council (see “Preparers and Consultants” for a list of members) participated in each step of the National Park Service planning process, including identifying fundamental resources and values, developing management zones and alternatives, gathering and considering public input, and identifying consequences of alternatives. After completion of the general management plan, the council is to be dissolved.

Early steps in the GMP planning process included the following (see chapter one for details):

- reaffirm the park’s purpose and significance

- identify the park’ fundamental resources and values
- consider legislative mandates and constraints
- recognize planning issues

The planning team and advisory council conducted field trips, and gathered and studied information and park resources, visitor use and values, and planning issues. With this information, the team and advisory council developed four preliminary concepts for alternatives (including a no-action alternative) for managing natural and cultural resources and visitor use. These concepts were presented to the public in a newsletter, and comments from the public and other agencies were gathered and reviewed.

Based on public input and further consideration, the planning team developed three draft alternatives, each with an accompanying option for new wilderness from these preliminary concepts. The team also dismissed certain ideas or actions from further consideration. These draft alternatives were then presented in a newsletter and at public meetings, and again, comments were collected and reviewed. Possible consequences of the alternatives were discussed, neighboring agencies were consulted, and additional field trips were conducted. Based on all of this information, certain elements of the GMP alternatives were modified.

### DEVELOPING THE NATIONAL PARK SERVICE PREFERRED ALTERNATIVE

The next major step was to identify (develop) a preferred National Park Service alternative. The four revised alternatives, titled “no-action,” “dunefield focus—

maximize wildness,” “three public nodes,” and “dispersed use-joint facilities,” were evaluated. The planning team used an evaluation process called “choosing by advantages.” This process evaluates different choices (in this case, the four management alternatives) by identifying and comparing the relative advantages of each according to a set of criteria. In this case, the criteria were based on the park’s purpose, significance, and fundamental resources and values. The Great Sand Dunes Advisory Council reviewed the criteria and its comments were incorporated.

The criteria area listed below (not in priority order):

- preserves natural diversity and natural processes (especially fundamental resources and values)
- preserves human connections (cultural resources), especially fundamental resources and values
- provides for visitor opportunities (especially fundamental resources and values)
- supports the park’s education and research programs
- provides for efficient NPS operations and for employee and visitor safety
- considers interests of neighboring agencies, communities, and public comments

The team identified the relative advantages of each alternative for each of the six criteria. Each advantage (not each criterion) was given a point value that reflected its importance. Then, by adding up the scores for each alternative, the team was able to

determine how the four alternatives compared overall. Costs of implementing the alternatives were then compared to examine the relationships between advantages and costs.

The relative advantages of the alternatives for each criterion are summarized below.

*Preserves natural diversity and natural processes (especially fundamental resources and values)*—The dunefield focus—maximize wildness alternative scored highest for this criterion. This alternative had the greatest amount of new wilderness proposed and most of the natural/wild management zone. It therefore had the least habitat fragmentation, least wildlife disturbance, and permitted a return to a more natural hydrologic regime. The management zones and minimal access would probably lead to relatively light use of the Baca and Medano Ranch areas, which would mean less spread of invasive plants into biologically special areas.

*Preserves human connections (cultural resources), especially fundamental resources and values*—The dispersed use—joint facilities alternative scored highest for its protection of cultural resources, archeological resources, historic structures, and cultural landscapes. Its wilderness recommendation, overlaid with the guided learning zone, would help protect sensitive areas by limiting vehicle access. People would not be permitted to drive to areas containing especially sensitive resources. This alternative also would maintain and preserve the Medano Ranch headquarters historic structures and cultural landscape via administrative and related adaptive use. This would provide an additional level of protection to sensitive cultural resources in and near the Medano Ranch area. A relatively large backcountry adventure zone would permit construction of trails that

would direct use away from other sensitive areas.

*Provides for visitor opportunities (especially fundamental resources and values)*—The dispersed use—joint facilities alternative scored highest for this factor. It would provide for and could accommodate growth in visitation, and provide for an appropriate range of visitor opportunities. (The quality of visitor experiences was judged more important than having a wide variety of experiences that may not relate to the park's fundamental resources and values.) A modest shuttle system would provide options for transporting visitors to the dunes area during peak visitor use periods. The guided learning zone would encourage a different type of park experience and provides protective measures for especially sensitive resources. A northern access point would be important for addressing neighboring agency needs and providing options for access to the northern part of the park.

*Supports the park's education and research programs*—The three public nodes alternative scored highest for this criterion because it would permit environmental education and interpretive options at the Medano Ranch headquarters, and would not limit vehicle access (no new wilderness recommendation) for researchers and educators.

*Provides for efficient NPS operations and for employee and visitor safety*—The no-action alternative scored highest for this criterion due to no increase in fire risk and no access limitations (via wilderness recommendation) for administrative purposes. Also, Medano Ranch would be maintained by The Nature Conservancy, which would mean park staff would remain free for other operational needs. Limited visitor access to new lands would keep

additional patrol, response, and maintenance needs (and staff) to a minimum. No new services to provide or facilities to maintain would help keep park operations small and streamlined.

*Considers interests of neighboring agencies, communities, and public comments*—The dispersed use—joint facilities alternative scored highest for this criterion. It would preserve historic structures and landscapes at Medano Ranch and recommend new wilderness (which may affect management by some other agencies, but also preserves wilderness values that are highly valued by the public). It would provide flexibility to consider various access options to USFS lands and the mountain front. It would also provide some measure of administrative access for park and agency staff, new recreational opportunities for visitors, and partnering opportunities that could enhance socioeconomic interests in the San Luis Valley.

After studying the advantages of the revised alternatives according to the six criteria in the foregoing discussion, the planning team developed the NPS preferred alternative. The dispersed use-joint facilities alternative provided the overall best value (greatest total advantage for the cost expended), so the team started with this alternative, then studied the choosing by advantages results to see where elements of other alternatives could be incorporated to add advantages without adding much additional cost. In this way, certain other elements were incorporated to build the NPS preferred alternative. Having taken this step, the planning team eliminated the dispersed use—joint facilities alternative from detailed analysis and discussion in the GMP/EIS to keep the document manageable and understandable, and because many of its key elements had been incorporated into the NPS preferred alternative.

## **RATIONALE FOR THE NPS PREFERRED ALTERNATIVE**

The following discussion provides the rationale for why various elements were included in the NPS preferred alternative.

### **Frontcountry Zone**

A modest shuttle system for peak visitor use periods was included in the preferred alternative for the following reasons: (1) to minimize the incidence of visitor vehicles parked on road shoulders for safety and resource reasons, (2) to reduce vehicle congestion and visitor frustration because enlarging parking areas within the frontcountry zone would have undesired scenic and resource impacts, and (3) because the frontcountry and dunes play zones can accommodate more visitors (without vehicles) without undue social consequences.

The frontcountry zone was widened slightly along the main park road to provide for future bicycle lanes. Some people ride bicycles along the main park road. To do this, cyclists must share the road, which has no shoulders in many places, with large RVs. This is a safety concern, especially when traffic is heavy. Adding bicycle lanes would improve safety, provide an alternative, more sustainable way of visiting the park (one that does not require a vehicle parking space), and increase recreational opportunities. This option would be less costly and have fewer environmental impacts (e.g., habitat fragmentation) than a multiuse path that is separate from the main road corridor.

A separate hiking/biking path that connects the campground with the visitor center and dunes parking lot/access area) would allow visitors to safely walk or ride bicycles between these areas without creating

additional social trails. Use of such a path would also reduce the amount of traffic on the main park road, and reduce or eliminate danger associated with visitors, including children, sharing this heavily used section of roadway with motor vehicles.

The nonhistoric entrance station would be relocated near the park boundary. Its current location immediately west of park headquarters presents the following problems: (1) vehicle congestion around the headquarters area, (2) no way for a visitor shuttle bus to bypass the main entrance gate, (3) no way for park staff vehicles to bypass lines of vehicles queuing as they enter or leave the park, and (4) little room for vehicles to turn around in the immediate area (does not provide for redirection of visitor vehicles). The new location would help alleviate these problems and support a modest shuttle system operating out of the Oasis area.

### **Dunes Play Zone**

The dunes play management zone was included to acknowledge and provide management direction for this localized dune and Medano Creek area located west of the dunes parking lot. The area is special because, although it is located within a designated wilderness area, it receives high concentrations of visitor use during busy summer weekends and holidays. The National Park Service believes that such use is appropriate.

### **Guided Learning Zone**

An area in the south-central portion of the park was zoned guided learning to protect an area of diverse sensitive resources while still allowing public use (guided only). Because Medano Ranch headquarters would not be managed as a public day-use area (see administrative zone below), the



planning team felt there was no need to extend the zone westward to the headquarters as a means of discouraging visitors from wandering into sensitive areas.

### **Backcountry Access Zone**

The Medano Pass primitive road corridor was zoned backcountry access because no substantial changes in management are needed or desired, and this zone best fits the area.

The backcountry access zone and trailhead in the northern portion of the park provides for future public vehicle access to this area. The shape and extent of this zone in the northern portion of the park allows maximum flexibility for siting a route from the Baca Grande subdivision. Similarly, maximum flexibility for public vehicle access to the mountain front—a USFS goal—was retained by including a provision for a joint NPS/USFS study of the need for and impacts of: (1) an extension of Cow Camp Road to connect with Liberty Road, and/or (2) access via Liberty Road. Either would require a separate NEPA process.

The backcountry access zone in the northern portion of the park does not include a campground, which was included in another GMP alternative. The planning team felt it best not to introduce noise, visual impacts, nighttime traffic, and lights in this area. Two campgrounds are located in nearby Crestone. Staff and maintenance requirements for campgrounds far exceed those needed for a trailhead—this was an agency consideration. There was also substantial concern about encouraging high levels of use near Deadman Creek (a special ecological area) due to the potential for introduction of invasive plant species and damage to streambanks from horse and foot traffic. Risk of wildfire (from campfires) was

a concern, especially with the Baca Grande subdivision in the path of prevailing winds.

### **Backcountry Adventure Zone**

The areas north and south of the front-country zone along the main park road and along the southern portion of the Medano Pass primitive road were zoned backcountry adventure. This zoning acknowledges that some visitors wander away from these roads, which are located in the busier frontcountry zone, to explore adjacent areas. Also, zoning of the backcountry adventure zone allows an option for the future to provide hiking or horseback trails from the Oasis commercial area (located just outside the main park entrance) to appropriate dunefield and Medano Creek areas. [Note: there is an established “no public horse use area” located within the main portion of the frontcountry and dunes play zones.] Similarly, it would allow more flexibility in the event that the Oasis served as an alternate base for guided hiking and horseback tours into the guided learning zone.

The planning team felt that the northern portion of the preserve, around Music Pass and Sand Creek Lakes, is an area that already experiences relative high levels of use, and where use may increase substantially in the future. The team zoned this area backcountry adventure to keep management options open for formalizing trails, creating loop trails, providing designated backcountry campsites, and for interfacing with USFS management of the adjacent area.

The National Park Service is in the early stages of learning more about the characteristics and resources of the former Baca Ranch area, located northwest of the dunefield. Thus, this area was zoned backcountry adventure, which gives the

National Park Service future flexibility to define trails and otherwise direct visitor use as needed to protect special or sensitive resources.

### **Natural/Wild Zone**

The dunefield and the area surrounding the Medano Ranch headquarters were zoned natural/wild. The planning team anticipated low use levels in these areas because trails would be expensive to impossible to build and maintain due to the sandy conditions. With the natural/wild zone, it would still be possible, should a trailhead be developed at the San Luis Lakes State Park and Wildlife Area, to access the national park via cross-country foot or horseback travel.

The southern portion of the national preserve was also zoned natural/wild (except for the Mosca Pass trail corridor) because there is a desire to maintain it in a natural wild condition, the area is unlikely to experience a substantial increase in use, and there are few logical places for additional formal trails.

### **Administrative Zone**

Liberty Road is zoned administrative within the national park to permit National Park Service and other agency use for administrative purposes. Visitor foot and horseback travel would be permitted, but not general public vehicle use. (Vehicle use by hunters who are accompanied or authorized by agency personnel may be permitted.) If general public vehicle use were allowed on this road segment, many people would likely continue by vehicle southward along Liberty Road, accessing the national forest, national preserve, and the national park, much of which is designated wilderness. This GMP does not analyze the impacts of those activities because the USFS has not identified through planning what role

Liberty Road would play and what activities would be appropriate in the Baca Mountain Tract. Therefore, the NPS preferred alternative does not resolve the northern park access issue, but leaves flexibility to accommodate appropriate uses determined through joint NPS/USFS planning.

Areas along the eastern boundary of the preserve, near the top of Medano Pass, were zoned administrative to allow access for private entities that own water rights associated with irrigation ditches in the area.

Closed basin pipeline right-of-ways in the far southwest corner of the park were zoned administrative to allow access for agencies to check and maintain these working structures. Certain roads in the southwestern portion of the park were zoned administrative to allow agency access for operational activities such as resource management and monitoring.

The dirt road that accesses Alpine Camp from the north would be zoned administrative to allow NPS vehicle access to the site. Alpine Camp would serve as a base for patrols of the backcountry access and backcountry adventure zones, research, and monitoring activities, etc.

The Medano Ranch access road and headquarters are zoned administrative to permit NPS adaptive use of structures for operational and administrative purposes (offices, storage, housing, research activities support, etc.). The area would also be used for scheduled, guided public activities such as interpretive programs, environmental education, a base for guided hiking or horseback tours, and special events; the access road would be gated, and the gate would be opened on a limited, as-needed (scheduled) basis for public vehicle access to the Medano Ranch headquarters area.

The planning team decided against zoning the Medano Ranch headquarters as front-country, which would have allowed general public use, due to concerns about sensitive resources in this general area of the park, staffing and maintenance costs associated with operating public facilities, and visitor safety.

**Wilderness Recommendation** (see also Appendix F: Wilderness Study and Recommendation).

The general approach to wilderness was to recommend designated wilderness for as much of the wilderness-eligible land as possible to protect wilderness values and provide protection for remote natural and cultural resources over the long term. NPS staff had serious concerns that designating additional large blocks of wilderness would severely constrain National Park Service and other agency access to monitoring equipment (e.g., groundwater monitoring wells along Sand Creek and at Big Spring) and for research and resource management activities. For that reason, the extent of the wilderness recommendation was passionately debated, as were several wilderness exclusions along two-track roads. Ultimately, the team concluded that the wilderness recommendation should be based on what is best for resources and wilderness values over the long term, not on operational convenience and efficiency.

Wilderness-eligible lands excluded from the wilderness recommendation included narrow strips (approximately 200 feet wide) immediately north of and adjacent to County Road 6N and SH 150. The purpose of these exclusions is to allow future flexibility for road, utility, and drainage improvement in these areas. The Alpine Camp area was also excluded to allow the simple facilities there (one-room cabin, corral and stock loading ramp, tack

building, and privy) to serve as an operational base.

## Dogs

Dogs on leashes were allowed in the national monument, and upon expansion, in the national park and preserve. By law, dogs being used for hunting are allowed in the preserve (see chapter three, “Health and Safety—Dogs” section for details). The future management of dogs was an issue raised in scoping. After considerable discussion of visitor comments and environmental consequences, the planning team decided on a “middle ground” policy: dogs (leashes required) would be permitted only in the national preserve and in the front-country, dunes play, and backcountry access zones, and the Liberty Road administrative zone of the national park. The team seriously considered restricting dogs (on leashes) to parking lots, car campgrounds, and picnic areas. However, there was concern based on past experience that visitors would leave their dogs in hot cars or tied to car bumpers if dogs were not allowed in the dunes play zone. Also, dogs on leashes have been permitted everywhere in the park for years. Many repeat visitors (there are many) count on bringing their dogs when they visit the park. The team decided to allow leashed dogs in the preserve because hunting dogs are allowed, and to minimize the dog policy differences between the preserve and the adjacent national forest, where dogs are allowed and must be within voice control of the owner if not on-leash. The team also decided to allow dogs in the backcountry access zone and Liberty Road administrative zone to allow people with dogs access to the Baca Mountain tract of the USFS. However, if dogs become more of a problem over time, the National Park Service may consider further limitations under the authority of the Superintendent’s Compendium.

## DEVELOPING THE NPS FINAL GMP AND WILDERNESS RECOMMENDATION

The National Park Service collected, compiled, and analyzed the agency, tribe, organization, and individual comments submitted on the draft GMP according to CEQ guidelines and NPS policy. The planning team then identified substantive comments. Substantive comments are defined as those that:

- question, with reasonable basis, the accuracy of the information in the EIS
- question, with reasonable basis, the adequacy of the environmental analysis
- present reasonable alternatives other than those presented in the EIS
- cause change or revision in the proposal

In other words, they raise, debate, or question a point of fact or policy. The National Park Service is obligated to address all substantive comments. Possible responses are to:

- modify alternatives including the proposed action
- develop and evaluate alternatives not previously given serious consideration
- supplement, improve, or modify its analyses
- make factual corrections
- explain why the comments do not warrant further response, citing the sources, authorities, or reasons that

support the NPS position and, if appropriate, indicate those circumstances that would trigger reappraisal or further response

A summary of NPS responses is provided in chapter five. Factual changes were made throughout the final EIS. Changes were also made to enhance the adequacy of the environmental analysis as warranted. No new alternatives were developed. The most notable changes to the preferred alternative are:

- The backcountry access and back-country adventure zones in the north part of the national park were modified, as requested by the USFWS, to remove the potential future option of public motorized vehicle access via the Baca National Wildlife Refuge.
- The backcountry access zone in the north part of the national park does not come near or end at Deadman Creek.
- The asterisks in the north part of the national park are better explained in terms of potential future actions, should a suitable access route outside the park be found or not be found.
- The NPS position on managing a free-roaming bison herd was clarified to indicate that if additional bison habitat becomes available, this option may be reconsidered.
- The wilderness recommendation was increased by 1,962 additional acres northeast of Medano Ranch headquarters and in the northern portion of the former Baca Ranch.

## **APPENDIX F: COST ESTIMATES FOR THE GMP ALTERNATIVES**



<b>Cost Summary: Great Sand Dunes GMP Alternatives</b>				
	<b>No-Action Alternative</b>	<b>NPS Preferred Alternative</b>	<b>Dunefield Focus— Maximize Wildness Alternative</b>	<b>Three Public Nodes Alternative</b>
<b>Annual Costs</b>  FY 04 Operations Costs: \$1,450,000	\$1,450,000 – \$1,670,000  This estimate includes payroll for 28 FTEs with benefits, personnel support, utilities, transportation, and maintenance.	\$1,870,000 – \$2,150,000  This estimate assumes 8 additional FTEs, a 20% increase in utility and maintenance costs, and a 15% increase in transportation costs. Potential partnership support at Medano Ranch may partially offset operations costs.	\$1,700,000 – \$1,950,000  This estimate assumes 5 additional FTEs, a 5% increase in utility costs, and a 10% increase in transportation and maintenance costs.	\$1,970,000 – \$2,270,000  This estimate assumes 10 additional FTEs, and a 25% increase in utility, transportation, and maintenance costs. Potential partnership support at Medano Ranch may partially offset operations costs.
<b>Initial Capital Costs</b>  (includes construction, exhibits, research support, etc.)	\$5,400,000 – \$6,800,000  Major cost projects include funded expansion / reconfiguration of the dunes parking lot, utilities, and infrastructure improvements (e.g., new water storage tank and distribution lines) and two housing units.	\$16,450,000 – \$21,200,000  Major cost projects include those listed under no action, plus new trails and trailheads, an access road, relocating the nonhistoric entrance station, bicycle lanes, removal of a bison fence, and structure and utility improvements at Medano Ranch. Costs for the latter may be offset by grants and partnerships.	\$8,200,000 – \$10,600,000  Major cost projects include those listed under no action, plus expansion of parking and restrooms in the frontcountry zone, a multiuse path from the park entrance, and removal of a bison fence.	\$15,800,000 – \$20,600,000  Major cost projects include those listed under no action, plus new trails, an access road, a trailhead, a primitive campground, removal of a bison fence, and structure, and utility improvements at Medano Ranch. Costs for the latter may be offset by grants and partnerships.
<b>Total Life-Cycle Costs over the Life of the Plan</b>	\$28,100,000– \$29,500,000	\$44,850,000– \$49,600,000	\$35,600,000– \$36,700,000	\$46,700,000– \$50,300,000
<p>Important notes and assumptions:</p> <ol style="list-style-type: none"> <li>1. These cost estimates were developed in 2005; they are very general and are intended to be used for comparing alternatives only. They are not intended for budgeting purposes.</li> <li>2. Total life-cycle costs also include other costs that recur at intervals longer than annually (e.g., road paving).</li> <li>3. Initial capital costs were prepared using the NPS Denver Service Center “Class C” estimating guide, and include add-ons of 40% for overhead and profit, 15% for design contingency, 10% for general conditions, a regional location factor of 1.0, and a park location factor of 1.0.</li> <li>4. Cost ranges reflect uncertainty about future costs, especially costs for capital improvement projects.</li> <li>5. Life-cycle costs were determined using the NPS Construction Management LCC template, which assumes a discount rate of 7% and a project life cycle of 25 years.</li> </ol>				
<p>The National Park Service develops five-year deferred maintenance and capital improvement plans. Project proposals are developed at the park level, but projects are evaluated and ranked in priority order nationally, primarily based on critical health and safety and resource protection considerations.</p>				
<p>Capital developments, maintenance, and staffing proposals in this plan will be evaluated in light of competing priorities for this and other units of the national park system. Because the budget process currently emphasizes alleviating the existing maintenance backlog, funding for new development is not likely within the next five years. However, development and operational proposals in this plan may be implemented sooner if funding is available from partnerships that do not rely on the National Park Service budget.</p>				





## **APPENDIX G: WILDERNESS STUDY AND RECOMMENDATION**



## WILDERNESS STUDY AND RECOMMENDATION

### INTRODUCTION

The purpose of wilderness designation, which is accomplished solely by congressional action, is to preserve and protect wilderness characteristics and values over the long term, while providing opportunities for solitude or primitive and unconfined recreation. With passage of the 1964 Wilderness Act (16 USC 1131 *et seq.*), Congress declared that it is national policy to secure for present and future generations the benefits of enduring wilderness resources.

As of 2005, Great Sand Dunes National Park and Preserve had two designated wilderness areas within its boundaries. The Great Sand Dunes Wilderness Area, comprised primarily of the main dunes within Great Sand Dunes National Park, was established in 1976 by Public Law 94-567, and amended in 1978 by Public Law 95-625. The Sangre de Cristo Wilderness Area was established by the Colorado Wilderness Act of 1993 (Public Law 103-77). In the year 2000, the portion of the Sangre de Cristo Wilderness that is now within the national preserve was administratively transferred from the USFS to the National Park Service (Great Sand Dunes Act of 2000). Total designated wilderness in the national park and preserve amounts to about 75,584 acres.

Wilderness was one of several important resources identified in the Great Sand Dunes Act of 2000, which authorized expansion of the park. A decision was made to include a wilderness study with the GMP that would review new lands not already designated as wilderness for possible inclusion in the National Wilderness Preservation System. The study consisted of two phases: (1) determining which lands

within the expanded park were eligible for wilderness recommendation based on their characteristics, and (2) deciding which of the wilderness-eligible lands identified in the first phase should be recommended for wilderness designation.

### WILDERNESS DEFINITION

The Wilderness Act of 1964 (Public Law 88-577) describes and defines a wilderness area as follows:

*A wilderness, in contrast with those areas where man and his own works dominate the landscape, is hereby recognized as an area where the earth and its community of life are untrammeled by man, where man himself is a visitor who does not remain. An area of wilderness is further defined to mean in the Act an area of undeveloped Federal land retaining its primeval character and influence, without permanent improvements or human habitation, which is protected and managed so as to preserve its natural conditions and which 1) generally appears to have been affected primarily by the forces of nature, with the imprint of man's work substantially unnoticeable; 2) has outstanding opportunities for solitude or a primitive and unconfined type of recreation; 3) has at least five thousand acres of land or is of sufficient size as to make practicable its preservation and use in an unimpaired condition; and 4) may also contain ecological, geological, or other features of scientific, educational, scenic, or historical value.*

## BRIEF DESCRIPTION OF THE STUDY AREA

The study area, which is located to the immediate northwest, west, and southwest of the former Great Sand Dunes National Monument, consists of lands that were added to the park unit by the Great Sand Dunes Act of 2000. The area is bounded on the north by the expanded park boundary, on the south by County Road 6N and SH 150; on the west by the Baca National Wildlife Refuge; and on the east by the Sangre de Cristo and Great Sand Dunes Wilderness areas. Land cover types of the area include sand dune shrub complex, greasewood fans and flats, sandy areas, desert shrub, and foothills and mountain grassland.

Except for the narrow Medano Pass primitive road corridor and portions of the Hudson and Medano irrigation ditches, the entire Great Sand Dunes National Preserve, established in 2000, is part of the Sangre de Cristo Wilderness. Thus, there was no need to evaluate the national preserve for wilderness eligibility. Park lands that were originally assessed as unsuitable for wilderness because of nonconforming or incompatible uses must be re-evaluated if the nonconforming uses have been terminated or removed. Land uses within the pre-2000 national monument boundary have not changed appreciably since the Great Sand Dunes Wilderness was established in 1976, so the planning team did not reassess these lands.

The study area includes portions of Medano Ranch and the former Baca Ranch. Most of the study area has been grazed; bison grazing continues on the Medano Ranch portion. Historically there has been little to no public use of the land and there are few formal roads. With the exception of the Closed Basin Project, evidence of human use consists mainly of ranching-related

elements such as ranch buildings, fences, stock tanks, and windmills.

## WILDERNESS CRITERIA AND ELIGIBILITY

The first phase of the wilderness study was to conduct an initial determination of wilderness eligibility, which is a factual determination of whether a park contains lands that possess wilderness character. The Wilderness Act, departmental regulations at 43 CFR Part 19, secretarial orders, NPS management criteria, and NPS memoranda<sup>9</sup> prescribe the criteria that are used to make an objective determination of whether wilderness-eligible lands exist in a park. In general, roadless areas exhibiting characteristics of the Wilderness Act that are at least 5,000 acres in size (or of sufficient size to make management as wilderness practicable) are considered suitable for wilderness. Using these criteria, an evaluation of the study area was conducted by the National Park Service. The evaluation concluded that there are approximately 53,000 acres of wilderness-eligible lands within the study area. Details are provided in the paragraphs below.

### Nonfederal Lands or Interests

Nonfederal lands or interests in land within a roadless or undeveloped part of a park do not necessarily disqualify the area from eligibility. The wilderness eligibility assessment should consider whether the nonfederal lands are: (1) a small proportion of the roadless area, (2) dispersed throughout the roadless area, or can they be segregated by prospective boundary shifts, (3) inaccessible or subject to likely develop-

<sup>9</sup> A June 10, 2002, National Park Service memo from the associate director, Park Operations and Education, titled "Clarifying the Wilderness Review Process" provided detailed guidance on conducting a wilderness suitability assessment. This memo is an insert to Reference Manual 41: *Wilderness Preservation and Management*.

ment, and (4) likely to remain nonfederal indefinitely.

Most of the park expansion area south of the former Baca Ranch is state trust land or private land owned by The Nature Conservancy. This area is part of what is known as Medano Ranch. These nonfederal lands are not likely to remain so indefinitely. There's a good chance that The Nature Conservancy will donate or sell the portion of Medano Ranch within the park boundary to the National Park Service within the life of the GMP. Also, NPS managers are working with the state and the BLM on a land exchange that would transfer state lands within the park boundary to the National Park Service. For these reasons, the National Park Service concluded that most of the Medano Ranch lands located within the national park are wilderness-eligible. Exceptions are discussed in the sections that follow.

The northern portion of the study area is part of what was formerly the Baca Ranch. The National Park Service owns the surface rights, but subsurface mineral rights are held by a private entity, Lexam Explorations, Inc., which has engaged in gas and oil exploration activities during the past decade. Based on the land's geologic properties, the National Park Service Geologic Resources Division believes that the likelihood of gas and oil production occurring on these lands is relatively low. The National Park Service is likely to eventually pursue purchase of these mineral estates (24,092 acres). For this reason, and because the National Park Service owns the surface rights, the National Park Service concluded that most of this land is wilderness-eligible.

Three additional private parcels totaling 52 acres are located within the national park. One parcel is east of the former Baca Ranch

and north of the former national monument. The others are located near the park's main entrance. The National Park Service plans to pursue purchase of these parcels, assuming the owners are willing to sell. Thus, the National Park Service concluded that these lands are wilderness-eligible.

### **Closed Basin Project**

The Closed Basin Project pumps and delivers unconfined groundwater and available surface flows in the Closed Basin to the Rio Grande River via underground pipelines and a 42-mile conveyance channel. A portion of the Closed Basin Project is located within the southwestern part of the study area. The project is likely to remain in operation, and the Bureau of Reclamation will require continued access to pipelines and production/monitoring wells. New wells or pipelines may be needed in the future. The National Park Service concluded that the presence and ongoing operation of the Closed Basin Project renders the Closed Basin portion of the park ineligible for wilderness.

### **Roads**

For the purposes of wilderness eligibility, lands containing unimproved dirt roads or tracks are "roadless areas." Roadless areas include lands containing improved dirt roads that are not passable by four-wheeled vehicles (not four-wheel-*drive* vehicles) intended primarily for highways.

Not including roads associated with the Closed Basin Project (see above), there are two improved roads within the park expansion area that are passable by four-wheeled vehicles intended for highway use. The first, referred to in this document as Cow Camp Road, is located in the northwest corner of the park expansion area, south of the Baca Grande subdivision. This

road, which has an east-west orientation, is associated with oil and gas exploration activities on the former Baca Ranch. Because the area north of Cow Camp Road is less than 5,000 acres in size, the planning team concluded that this portion is not wilderness-eligible. The second road, which has a north-south orientation, bisects the southwest corner of the park expansion area. The southernmost portion of the road is located within the Closed Basin Project area. This road is associated with Medano Ranch and occurs in combination with ranch structures, corrals, above-ground electric lines, and human-made Closed Basin features. The National Park Service concluded that the southwest portion of the park expansion area is not wilderness eligible due to the presence of Medano Ranch Road and a concentration of other human-made features.

Several other roads exist on lands within the expanded park boundary. These roads are not generally passable by four-wheeled passenger vehicle. Most are no more than “two tracks,” and others are too sandy to remain passable with any more than occasional use. A small aircraft landing strip, no longer in use, parallels SH 150 in the southeastern corner of the park expansion area. The strip is unpaved and is substantially unnoticeable. The National Park Service concluded that these roads and the abandoned airstrip do not disqualify park expansion lands from wilderness eligibility.

### **Grazed Lands**

Lands that have been grazed may be considered eligible for wilderness designation if, at the time of the assessment, the effects of these activities are substantially unnoticeable or if their wilderness character could be maintained or restored through appropriate management actions. Most of the lands within the park expansion area have been

grazed by cattle and/or bison. In these areas, a number of stock tanks fed by flowing groundwater wells are present. One well pump is powered by a windmill. Grazing ended on the former Baca Ranch portion in late 2004 with its transfer to NPS management. Bison grazing continues on the Medano Ranch portion. The effects of grazing are substantially imperceptible and wilderness character could be restored through management actions (e.g., capping wells below ground and removing stock tanks), so the National Park Service concluded that grazing and associated features do not render these lands ineligible for wilderness.

### **Mined Lands, etc.**

Lands that have been mined may be considered eligible for wilderness designation if, at the time of the assessment, the effects of these activities are substantially imperceptible or if their wilderness character could be maintained or restored through appropriate management actions. Historic mine sites (e.g., Liberty) are located at the periphery, or northern edge, of the park expansion area. The mine/prospect sites and pond/quarry sites are located in the far northeast corner of the park expansion area. Although evidence of mining, prospecting, and quarrying is apparent, the effects are generally small in scale and are limited primarily to changes in landform. Structures, concrete foundations, and other obvious human-made features are generally absent. The National Park Service believes that the wilderness character of these areas could be restored if the land’s original contours were reestablished. The small flumes or weirs are part of the national park’s water rights quantification and monitoring program. The National Park Service concluded that the mine and prospect sites, ponds, quarries, and flumes/

weirs do not disqualify park expansion lands from wilderness eligibility.

### **Structures and Cultural Features**

Areas may contain cultural resource features such as historic buildings and still be included in wilderness, provided the features are not primary attractions for park visitors. Immediately adjacent to and south of Cow Camp Road is a small area called Alpine Camp. The camp, which dates to the mid-1900s, includes a small cabin, corrals, and fences. The camp does not disqualify the area from wilderness eligibility.

The only other buildings within the park expansion area are the Medano Ranch structures. Most structures on the ranch date to the late 1880s, but others (bison shed, barns, etc.) are much more recent. These structures do not necessarily render this corner of the park ineligible for wilderness. However, the structures occur in combination with an improved road, aboveground powerlines, and other human-made features. As discussed above, this combination and concentration of features renders this area of the park ineligible for wilderness eligibility.

Fences and earthen ditches are present on some portions of park expansion lands. As land uses change in the future due to park expansion, some or all of the fences and ditches may no longer be needed. Fences could be removed and earthen ditches could be filled so that wilderness character is restored. The National Park Service concluded that such features do not disqualify park expansion lands from wilderness eligibility.

### **WILDERNESS OPTIONS ANALYZED IN THIS STUDY**

Two wilderness options are analyzed in detail in this GMP: (1) recommend no new lands for wilderness, and (2) recommend most eligible lands for wilderness. A third wilderness option (recommend moderate amount of wilderness) was also considered during the planning process. However, this option was dismissed from further analysis when the matching GMP alternative was dropped because it was so similar to the NPS preferred alternative. The remaining two wilderness options in this study cover the range of impacts that would be expected; impacts of the dismissed option would be somewhere in between.

The two GMP alternatives that include no new wilderness recommendation are the no-action alternative and the three public nodes alternatives (see chapter two for alternative maps and descriptions). The no-action alternative includes this option because it portrays baseline (existing) conditions in December 2004, soon after the Baca Ranch became federally managed. The three public nodes—new dunes experiences alternative includes this option because it proposes more new facilities and public uses in various areas of the park.

The two GMP alternatives that do include a wilderness recommendation are the dune-field focus—maximize wilderness alternative and the NPS preferred alternative (see chapter two for alternative maps and descriptions). The dunefield focus—maximize wilderness alternative recommends wilderness for nearly all eligible lands because it offers the wildest conditions of the four GMP alternatives. The NPS preferred alternative recommends wilderness for most of the eligible lands because, after studying the various options, the National Park Service concluded that

wilderness designation is the best long-term management strategy for these lands. The draft GMP/WS/EIS proposed that 50,951 acres within the park be recommended as wilderness.

### **WILDERNESS HEARINGS AND PUBLIC COMMENT**

In accordance with the *Code of Federal Regulations* (36 CFR 19.5), public hearings on the wilderness proposal were held near the park and in Denver as part of the public meetings on the draft GMP for Great Sand Dunes National Park and Preserve. Part of each meeting was dedicated to the wilderness hearing, presided over by a hearing officer; a verbatim record was kept by a court reporter. Written public comments were also received during the 60-day public comment period on the draft GMP and wilderness study.

There was substantial support for the wilderness recommendation presented in the GMP. Most organizations, most unaffiliated individuals, Saguache County, and more than 3,000 form letters supported the recommendation. There was a significant amount of information provided related to the benefits of wilderness designation. Many organizations and 3,000-plus form letters supported additional lands (northwest and southwest corners of the park) be recommended for wilderness. CDOW and some individuals expressed concern about wilderness designation interfering with elk management. The USFS thought there should be more information on existing roads, wilderness conditions, and restoration needs. Backcountry equestrians and some unaffiliated individuals were opposed to wilderness designation for various reasons, as expressed in written comments and at the wilderness hearings.

As a result of public comments, some acreage that was previously assessed as “not eligible” for further study and recommendation as wilderness were re-evaluated and determined that they were eligible. Two areas have been added to the wilderness recommendation—one parcel in the northwest portion of the new park lands near Deadman Creek, and another parcel in the southwest portion between Big and Little springs.

The revised final preferred alternative proposes to realign a portion of backcountry access in the northwest portion of the new park lands, which allows a small area in the vicinity of Deadman Creek (257 acres) to be reclaimed and added to the proposed wilderness designation. The remaining land in the northwest portion of the park is segmented by the backcountry access zone and creates isolated parcels that are not appropriate sizes for wilderness management. The remaining area is zoned as backcountry adventure, which would allow the land to remain relatively natural, with minimal development.

In the southwest portion of the park, an additional parcel (1,705 acres) between Big and Little springs has been added to the proposed wilderness designation. The remaining remnants around Medano Creek, and including the sabkha, are not suitable for wilderness due to the Closed Basin Project, overhead powerlines, wells, irrigation and other structures that would need to be maintained for the foreseeable future and segment the land into parcels too small for wilderness designation. The remaining land would be protected by the natural/wild zone.

### **WILDERNESS RECOMMENDATION**

According to NPS *Management Policies* (2001), a wilderness recommendation may



include two categories: (1) lands recommended for immediate wilderness designation, and (2) potential wilderness additions. The former are lands that are wholly federally owned and are fully qualified to become wilderness. The latter are lands that are surrounded by or adjacent to lands proposed for wilderness designation, but that do not qualify for immediate designation due to temporary, nonconforming, or incompatible conditions. Potential wilderness additions, if so authorized by Congress, will become designated wilderness upon the Secretary of the Interior's determination that the nonconforming use has ended.

This study recommends that approximately 53,013 acres within Great Sand Dunes National Park be ultimately recommended for wilderness. This includes 4,556 acres recommended for immediate wilderness designation, and 48,457 acres of potential wilderness additions (table G-1 and figure G-1). A narrow corridor of wilderness-eligible land was excluded from the recommendation because the National Park Service believes a setback (200 feet from the centerlines of County Lane 6 and SH 150) is needed to allow for potential future utility, drainage, fence, and roadway improvements.

Wilderness-eligible lands recommended for immediate wilderness designation are those that are wholly in National Park Service ownership (former BLM-managed lands transferred to the National Park Service in 2000).

Wilderness-eligible lands recommended for potential wilderness additions include:

1. Medano Ranch lands currently owned by The Nature Conservancy (possible transfer to the National Park Service within five to seven years)
2. former Baca Ranch lands owned by the federal government, but for which subsurface mineral rights are privately held (long-term objective for National Park Service to acquire)
3. Medano Ranch lands currently owned by the state of Colorado (land exchange underway; completion expected within one to two years)
4. lands held in other private ownership (three parcels, acquisition timeline varies)

### **Implications of Managing Lands Recommended for Wilderness**

Park lands that are recommended for wilderness designation in this GMP are to be managed as wilderness until such time as Congress specifically designates new wilderness for these lands (NPS *Management Policies* 2001). That is, management decisions for lands recommended for wilderness will be made in expectation of eventual wilderness designation. This also applies to potential wilderness, meaning it will be managed as wilderness to the extent that existing nonconforming conditions allow.

**Table G-1. Great Sand Dunes Wilderness Status and Recommendations**

	<b>Category Subtotals (approx. acres)</b>		<b>Area (approx. acres)</b>
<b>Designated by Congress</b>			<b>75,584</b>
Designated Wilderness		73,143	
Potential Wilderness – NPS ownership, not yet converted		750	
Potential Wilderness – private subsurface mineral ownership		1,691	
<b>Wilderness Recommendation</b>			<b>53,013</b>
Recommended Designated Wilderness – NPS ownership		4,556	
Recommended Potential Wilderness		48,457	
The Nature Conservancy ownership	6,393		
Private subsurface mineral ownership	24,092		
State ownership	17,920		
Other private ownership	52		
<b>Total Designated and Recommended Wilderness</b>			<b>128,597</b>

Wilderness management plans are typically developed to guide preservation, management, and use of NPS wilderness areas. Such plans are developed with public involvement and contain specific, measurable wilderness management objectives for preservation of wilderness values as specified in the Wilderness Act and NPS *Management Policies*. Wilderness management plans, which are often combined with backcountry management plans, articulate management actions such as regulations, monitoring, and permit systems.

Management decisions affecting wilderness must be consistent with the “minimum requirements” concept. This concept is a documented process used to determine whether administrative activities affecting wilderness resources or visitor experiences are necessary in wilderness, and if so, how to minimize impacts from such activities. Parks are to complete a minimum requirements analysis on administrative practices

and equipment uses that have the potential to affect wilderness character.

Recreational uses of NPS wilderness are to be of a type and nature that enable the areas to retain their primeval character and influence; protect and preserve natural conditions; leave the imprint of man’s work substantially unnoticeable; provide outstanding opportunities for solitude or primitive and unconfined types of recreation; and preserve wilderness in an unimpaired condition. Public use of motorized equipment or any form of mechanical transport is prohibited, except as provided for in specific legislation. Operating a motor vehicle or possessing a bicycle in wilderness is prohibited.

Scientific activities are to be encouraged in wilderness. Even scientific activities (including inventory, monitoring, and research) that involve a potential impact to wilderness resources or values (including

access, ground disturbance, use of equipment, and animal welfare) are allowed when the benefits of what can be learned outweigh the impacts on wilderness resources or values. However, all such activities must be evaluated using the minimum requirement concept.

Wilderness designation does not extinguish valid existing private rights such as ownership, grazing, or valid mineral interests. The validity of private rights within wilderness is determined on a case-by-case basis. Valid private rights in wilderness are administered in keeping with the specific conditions and requirements of the valid right.

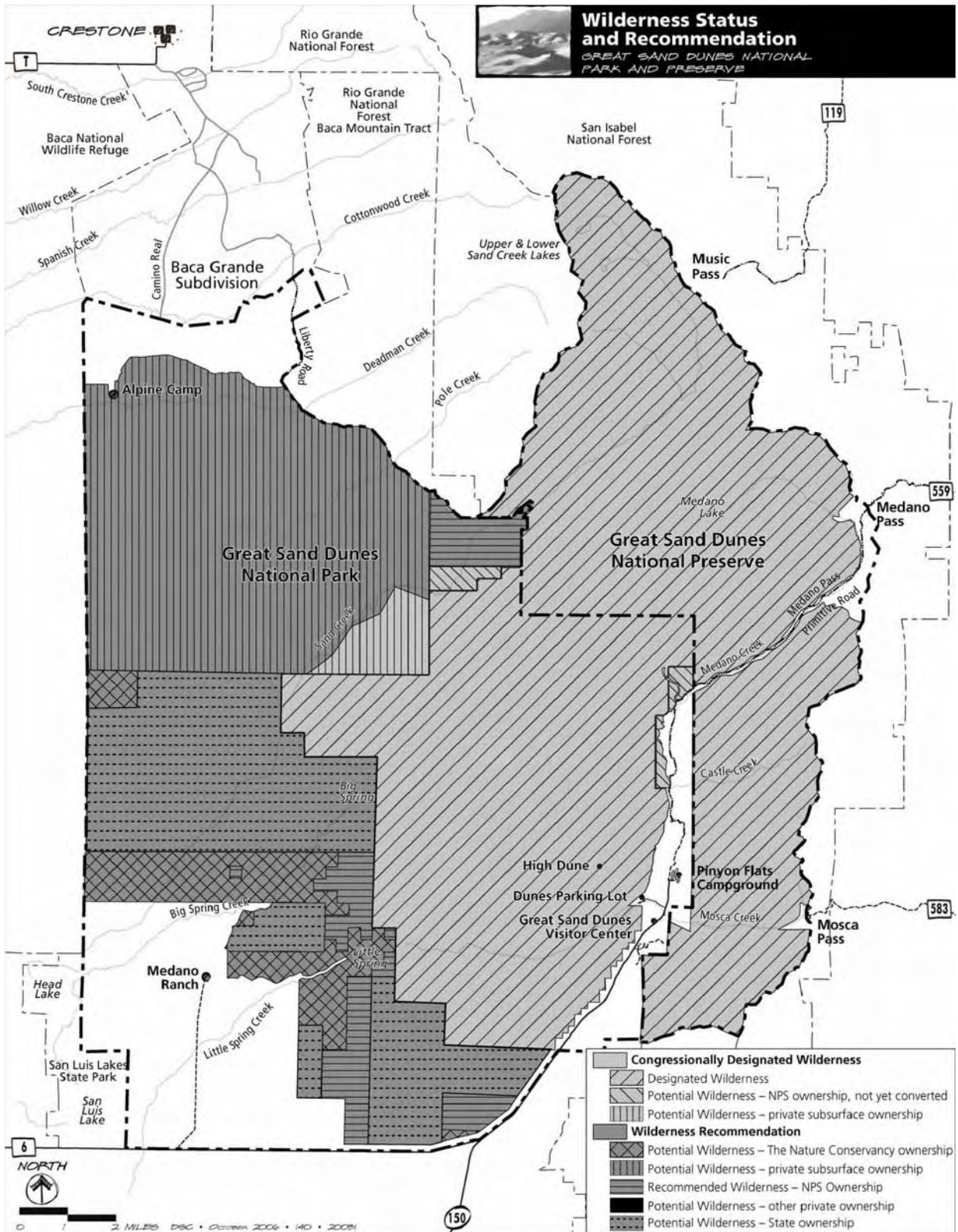
Grazing is not curtailed in wilderness areas simply because an area is designated as wilderness. Where practical alternatives do not exist, maintenance or other activities may be accomplished through the occasional use of motorized equipment. The use of motorized equipment should be based on a rule of practical necessity and reasonableness. Motorized equipment need not be allowed for activities that can reasonably be accomplished on foot or on horseback. Motorized equipment uses are normally permitted in those portions of a wilderness area where they had occurred prior to the area's designation as wilderness or are established by prior agreement, and where

such use would not have a significant adverse effect on the natural environment. (*Congressional Grazing Guidelines*, House Report 96-1126).

The National Park Service will seek to remove or extinguish valid mining claims and nonfederal mineral interests in wilderness through authorized processes, including purchasing valid rights. Unless and until mineral interests and mining claims within NPS wilderness are eliminated, they must be managed pursuant to existing NPS regulations, policies, and procedures. (See 36 CFR 9A, for mineral development on mining claims; 36 CFR 9B, for nonfederal oil and gas development; and 43 CFR 3100 and 3500, for federal mineral leasing.)

## Conclusion

Of the approximately 69,164 acres added to Great Sand Dunes National Park in the year 2000, roughly three-quarters was determined wilderness-eligible because it possesses wilderness characteristics and values. Of the wilderness-eligible land, most (53,013 acres total) is recommended for wilderness. This includes 4,556 acres (8.6%) for immediate wilderness designation, and 48,457 acres (91.4%) for potential wilderness additions.



## **APPENDIX H: WILD AND SCENIC RIVERS EVALUATION**



## WILD AND SCENIC RIVERS EVALUATION

### Introduction

This appendix presents the results of a NPS study of potential wild and scenic rivers in Great Sand Dunes National Park and Preserve. The purpose of this analysis was to determine if selected creeks, all or in part, should be recommended for inclusion in the national wild and scenic rivers system, based on their resources and Wild and Scenic Rivers Act eligibility guidelines.

In October 1968, the freshly penned Wild and Scenic Rivers Act pronounced “...that certain selected rivers of the Nation, which with their immediate environs, possess outstandingly remarkable scenic, recreational, geologic, fish and wildlife, historic, cultural, or other similar values, shall be preserved in free-flowing condition, and that they and their immediate environs shall be protected for the benefit and enjoyment of future generations.”

The wild and scenic river study process, as described in *the National Wild and Scenic Rivers System: Final Revised Guidelines for Eligibility, Classification, and Management of River Areas* (1982), is composed of three steps:

- determine if rivers are eligible as components of the national wild and scenic rivers system
- determine the appropriate classification of rivers
- determine whether the eligible segments would make suitable additions to the national wild and scenic rivers system

### Eligibility Evaluation

To be eligible for inclusion in the national wild and scenic rivers system, a study segment must be free flowing and the stream corridor must exhibit at least one outstandingly remarkable resource value.

“Free flowing” may be defined as existing in a largely natural condition without major impoundments, diversions, or other modifications of the waterway. It should be understood that there are no specific requirements for minimum flow for eligible segments. Flows are considered sufficient for eligibility if they sustain or complement the outstandingly remarkable values for which the segment would achieve designation. Rivers with intermittent flows have been included in the national system.

Outstandingly remarkable values are scenic, recreational, geologic, fish and wildlife, historic, cultural, or other similar values that are professionally judged to be regionally significant—those that stand out as among the best on a regional basis. All resources assessed should be directly river related, or owe their location or existence to the river. Features that are exemplary (outstanding examples of common types), as well as those that are rare or unique, should be considered.

### Outstandingly Remarkable Values

An assessment of potential outstandingly remarkable values was made by NPS professionals for the major creeks of the park: Mosca Creek, Medano Creek, Castle Creek, Sawmill Creek, Buck Creek, Little Medano Creek, Cold Creek, Sand Creek, Pole Creek, Deadman Creek, Big Spring Creek, and Little Spring Creek. Resources

evaluated include biological resources, paleontological resources, cultural resources, as well as scenic and recreational values. The following sections describing the outstandingly remarkable values are very brief. Other sections of this document (e.g., Chapter Three: Affected Environment) contain more comprehensive information about these streams.

### **Mosca Creek**

Mosca Creek headwaters originate on Mosca Pass and along the drainage there occur numerous prehistoric and historic cultural resources. These include archaeological sites, wickiups (temporary shelters made from tree saplings), culturally peeled ponderosa pine trees, ruins of a toll road, and the historic town site of Montville. Mosca Pass was a primary prehistoric and historic route in and out of the San Luis Valley from the east.

The scenic vistas of the Great Sand Dunes are excellent from the Mosca Creek corridor. This corridor also provides recreational opportunities for hiking, camping, birding, and photography.

Mosca Creek's water quality meets standards for the "Outstanding Waters" designation (USGS publication WRIR 02-4196). The National Park Service holds a federally reserved water right for a designated flow amount for Mosca Creek.

### **Medano Creek**

Medano Creek is essential to the formation, development, and recycling of sand to perpetuate the Great Sand Dunes system as both the impressive east and southeast faces of the Great Sand Dunes are the result of the interaction of Medano Creek and the dunes. Through "surge" or "pulsating flow," the waters return vast quantities of wind-blown sand back to the

valley floor. The transport of sand by Medano Creek is a key role of this aeolian/hydrologic system. The mechanism by which Medano Creek transports sand is quite unique and the surging behavior of Medano Creek is considered by USGS hydrologists to be one of the best examples of this phenomenon in the world. In addition, Medano Pass serves as a "funnel" for air flow and affects wind and sand deposition, which also influence dune formation.

There are numerous prehistoric and historic sites along Medano Creek. One of the largest stands of culturally scarred ponderosa pine tress grows in close proximity to the creek and this grove is listed in the NRHP. There are several pioneer homesteads along the creek including the Herard homestead, which was settled in the 1870s, and inhabited for many years. Medano Pass was another prehistoric and historic route into the San Luis Valley from the east.

Medano Creek and its floodplain support a diversity of wildlife habitats. CDOW has reclaimed the drainage for the native species of Rio Grande cutthroat trout and the federally endangered Rio Grande sucker. Since Medano Creek has no outlet, it represents an ideal drainage for a refuge for both rare fish species.

In addition to the plains pocket mouse (*Perognathus flavescens relictus*), which is a mammal subspecies considered rare for the Great Sand Dunes National Park and Preserve area, bighorn sheep, black bear, mountain lion, elk, deer, bobcat, and beaver are also observed along Medano Creek.

The world class surge flow of Medano Creek causes waves that create a beach-like environment for park visitors. During the spring and summer runoff, thousands of visitors derive great enjoyment from playing in the surging waters of the creek. The



corridor of Medano Creek provides outstanding recreational opportunities for hiking, camping, sightseeing, four-wheeling, photography, birding, fishing, and hunting in the preserve.

In addition to the recreational value of the creek's waters, the water quality of Medano Creek has been tested and identified by the USGS (National Water Quality Assessment Program) as attaining the highest water quality in the upper Rio Grande drainage. As such, Medano Creek's water quality meets standards for the "Outstanding Waters" designation (USGS Publication WRIR 02-4196). The National Park Service holds a federally reserved water right for a designated flow amount for Medano Creek.

### **Castle Creek**

Castle Creek flows into Medano Creek and, although Castle Creek is ephemeral, during periods of significant flow it displays remarkable surge flow. In fact, it is the site at which the explanation for surge flow was developed.

The Castle Creek corridor provides exceptional and unique opportunities to view the Great Sand Dunes. Recreation opportunities include hiking and sightseeing. However, these are typical activities for the region.

Castle Creek water quality meets standards for the "outstanding waters" designation (USGS Publication WRIR 02-4196). The National Park Service holds a federally reserved water right for a designated flow amount for Castle Creek.

### **Sawmill Creek**

The Sawmill Creek corridor provides exceptional and unique opportunities to view the Great Sand Dunes. Recreational

opportunities include hiking and sightseeing. However, these are typical activities for the region.

The water quality of Sawmill Creek meets standards for the "outstanding waters" designation (USGS Publication WRIR 02-4196). The National Park Service holds a federally reserved water right for a designated flow amount for Sawmill Creek.

### **Buck Creek**

The plains pocket mouse, which is a mammal subspecies considered rare and endemic for the Great Sand Dunes National Park and Preserve area, was observed by the CNHP at the confluence of Medano and Buck creeks.

The creek corridor provides exceptional and unique opportunities to view the Great Sand Dunes. Recreation opportunities include hiking and sightseeing. However, these are typical activities for the region.

The National Park Service holds a federally reserved water right for a designated flow amount for Buck Creek.

### **Little Medano Creek**

The channel of Little Medano Creek is located in a sand-filled valley. Therefore, the creek carries a large amount of sand to its confluence with Medano Creek, which has world class surge flows.

Little Medano Creek provides suitable habitat for the rare Rio Grande cutthroat trout. Although there are times of the year when the creek surface flows are disconnected from Medano Creek, there is a viable population of Rio Grande cutthroat trout in the drainage year-round. There are also frequent sightings of wildlife along Little Medano Creek.

Exceptional scenic values are present along Little Medano Creek, including a waterfall and outstanding views of the Great Sand Dunes. There are frequent opportunities for viewing wildlife along the creek drainage. Additional recreation opportunities include backpacking, hiking, photography, and camping. Natural quiet has been monitored along Little Medano Creek and found to be outstanding.

The water quality of Little Medano Creek meets standards for the “Outstanding Waters” designation (USGS Publication WRIR 02-4196). The National Park Service holds a federally reserved water right for a designated flow amount for Little Medano Creek.

### **Cold Creek**

The Cold Creek corridor provides outstanding scenic vistas of the Great Sand Dunes. There are frequent opportunities for viewing wildlife along Cold Creek. There are opportunities for wilderness recreation such as backpacking, hiking, horseback riding, photography, and camping due to the remoteness of the drainage.

The water quality of Cold Creek meets standards for the “Outstanding Waters” designation (USGS Publication WRIR 02-4196). The National Park Service holds a federally reserved water right for a designated flow amount for Cold Creek.

### **Sand Creek**

Sand Creek was evaluated in two segments because the character of the drainage changes significantly where it flows west from the Sangre de Cristo Mountain Range.

#### **Sand Creek (from the headwaters to the mountain front)**

Upper Sand Creek supports a narrowleaf cottonwood riparian community, designated by the CNHP as globally rare. The narrowleaf cottonwood trees along this drainage represent a pure strain and there is no hybridization with other cottonwoods. The trees are considered some of the oldest cottonwoods in the west, having been dated up to 340 years old. The upper Sand Creek corridor provides outstanding scenic vistas of the Great Sand Dunes. Recreation opportunities include backpacking, hiking, horseback riding, photography, fishing, and camping. Sand Creek’s water quality meets standards for the “Outstanding Waters” designation (USGS Publication WRIR #02-4196).

#### **Sand Creek (from the mountain front to where it exits the park)**

Sand Creek is the largest drainage in the park and, through the transport of sand, plays an important role in the development of the dunes. Surge flow does occur in Sand Creek, but not as consistently as in Medano Creek. Sand Creek borders the western and northwestern portion of the Great Sand Dunes, forming the western boundary of the dune mass.

There are also important historic resources along this stretch of Sand Creek (e.g., Stamp Mill).

There are frequent sightings of wildlife along lower Sand Creek, which supports high quality wildlife habitat. The lower Sand Creek corridor provides outstanding scenic vistas of the Great Sand Dunes. Recreation opportunities include backpacking, hiking, photography, fishing, and camping.

## Pole Creek

The status of Pole Creek was considered eligibility unknown, because there has not yet been enough information gathered to evaluate it for the wild and scenic rivers program.

## Deadman Creek

The CNHP has identified the Deadman Creek corridor as a potential conservation site with a biodiversity rank of B2 (very high significance). The Deadman Creek corridor provides outstanding scenic vistas of the Great Sand Dunes and Sangre de Cristo mountain front. Recreation opportunities include backpacking, hiking, photography, fishing, camping, and wildlife viewing.

## Big Spring Creek

Big Spring Creek flows from Indian Springs, a designated Colorado natural area administered by Colorado State Parks. It is a very unique hydrologic system and critical water source located in the sand sheet west of the Great Sand Dunes. Big Spring Creek is a gaining system in an area where most of the other drainages are losing systems. Groundwater, in the form of seeps and springs, contributes flows, and as a result, Big Spring Creek is a nonflooding creek with constant flow.

Big Spring Creek is also an important archeological area.

Big Spring Creek represents an exceptional focal point for wildlife, including waterfowl. Fathead minnow (*Pimphales promelus*) are found in Big Spring Creek. *Cleome multicaulus* (slender spiderflower), a wetlands plant identified as a globally rare species by the CNHP, is

found in the riparian habitat along Big Spring Creek.

The Big Spring Creek corridor provides outstanding scenic vistas of the Great Sand Dunes. Recreational opportunities include backpacking, hiking, photography, and camping. Wildlife viewing opportunities along Big Spring Creek are excellent.

## Little Spring Creek

*Cleome multicaulus* (slender spiderflower), a wetlands plant identified as a globally rare species by the CNHP, is found in the riparian habitat along Little Spring Creek. This creek is also an important archeological area. Little Spring Creek has been channelized along most of its length, from its spring origin to where it enters a playa lake, approximately 4 miles.

## Summary of Eligibility Evaluation

Ten of the 12 evaluated creeks, or segments thereof, were considered eligible for inclusion in the national wild and scenic river system: Mosca Creek, Medano Creek, Castle Creek, Sawmill Creek, Buck Creek, Little Medano Creek, Cold Creek, Sand Creek on and west of the mountain front, Deadman Creek, and Big Spring Creek. These creeks were found to be free flowing and exhibited at least one outstandingly remarkable value. They are further evaluated for classification and suitability below. The two that were not considered eligible are Pole Creek and Little Spring Creek. Pole Creek is located in the expansion area of Great Sand Dunes National Park. There has not yet been enough information gathered to evaluate its eligibility for wild and scenic river designation at this time. Little Spring Creek exhibits outstandingly remarkable values, but is considered ineligible for designation as a wild and scenic river because it has been channelized along most of its length.

## Classification

Classification is based on development conditions existing in the river corridor at the time of designation. The Wild and Scenic Rivers Act provides three classifications defined as follows:

- Wild river areas are generally inaccessible, except by trail. Wild river areas do not contain roads, railroads, or other provisions for vehicle travel within the river area. The existence of a few inconspicuous roads leading to the boundary of the river area at the time of study does not necessarily bar wild river classification. Wild rivers are free of impoundments with watersheds or shorelines essentially primitive and waters unpolluted. These represent the vestiges of primitive America.
- Scenic river areas are free of impoundments, with shorelines largely undeveloped, but accessible in places by roads.
- Recreational river areas are readily accessible by road or railroad, may have some development along their shorelines, and may have undergone some impoundment or diversion in the past.

Table H-1 lists the proposed classification for the 10 creeks considered eligible for inclusion in the national wild and scenic rivers system.

## Suitability

The suitability phase of the study evaluates whether designation as a national wild and scenic river would be the best way to manage eligible rivers. Suitability considerations include the environmental and economic consequences of designation and the manageability of the river, if designated.

Each of the above 10 eligible creeks has at least one exceptional natural, cultural, or recreational resource value, and most of the creeks have two to several of these values. Therefore, these creeks would make a valuable addition to the national wild and scenic rivers system.

## Conclusion

The above-listed eligible creeks within the Great Sand Dunes National Park are free flowing and contain outstandingly remarkable values that make them eligible for inclusion in the national wild and scenic rivers system. Their freedom from impoundments and relatively undeveloped character qualify them as either a wild or scenic river area, depending on each individual proposed classification.

**Table H-1. Proposed Classifications**

<b>Creek</b>	<b>Classification</b>
Mosca Creek	Scenic
Medano Creek	Scenic
Castle Creek	Wild
Sawmill Creek	Wild
Buck Creek	Wild
Little Medano Creek	Wild
Cold Creek	Wild
Sand Creek (from the headwaters to the mountain front)	Wild
Sand Creek (from the mountain front to where it exits the park)	Wild
Deadman Creek	Wild
Big Spring Creek	Scenic



## **APPENDIX I: CONSULTATION LETTERS**





United States Department of the Interior  
NATIONAL PARK SERVICE



Great Sand Dunes National Park and Preserve  
11500 Highway 150  
Mosca, Colorado 8146-9798  
Phone 719-378-6300 Fax 719-378-6310



In Reply Refer to:  
1470A16

January 5, 2005

Georgianna Contiguglia  
State Historic Preservation Office  
Colorado Historical Society  
The Colorado History Museum  
1300 Broadway  
Denver, CO 80203

Dear Ms. Contiguglia:

The National Park Service is in the process of developing a *general management plan* for Great Sand Dunes National Park and Preserve. We are just beginning our scoping and data gathering efforts for this plan. As set forth in 36 CFR 800 and the Programmatic Agreement between the Advisory Council on Historic Preservation, the National Conference of State Historic Preservation Officers and the National Park Service, we would like to initiate the consultation process.

The Great Sand Dunes *general management plan* will provide management direction for resource stewardship, visitor understanding and appreciation, partnerships, facilities, and operations for the next 15-20 years. As part of this planning effort the NPS will conduct a *wilderness review*, which is required by law and National Park Service policy. The *wilderness review* will examine areas within the expanded Great Sand Dunes boundary to determine whether they are suitable for, and should be proposed as, wilderness.

Great Sand Dunes National Monument was established in 1932 to preserve lands containing spectacular and unique sand dunes and additional features of scenic, scientific, and educational interest for the benefit and enjoyment of future generations. The Great Sand Dunes National Park and Preserve Act of 2000 enlarged Great Sand Dunes National Monument from 39,000 acres to over 100,000 acres, and also established Great Sand Dunes National Preserve, which exceeds 40,000 acres. The purpose of the 2000 legislation was to protect the entire Great Sand Dunes natural system.

In fulfillment of requirements of the National Environmental Policy Act, the National Park Service has initiated the preparation of an environmental impact statement (EIS) that will evaluate potential impacts of the planning alternatives on natural and cultural resources, and other relevant topics. The process and documentation required for preparing the EIS will be used to comply with Section 106 of the National Historic Preservation Act. In accordance with section 800(3)(c) of the Advisory Council on Historic Preservation's regulations (36 CFR 800), I am providing your office advance notification of the NPS intention to use the general management planning and EIS process to meet its Section 106 obligations.

To assist Great Sand Dunes National Park and Preserve and the National Park Service Intermountain Region staff in refining issues to be addressed in the *general management plan* and *wilderness review*, please provide us with written comments concerning interests within your agency's responsibilities. A copy of the most recent newsletter is enclosed for your information.

Your response within 30 days from receipt of this letter will be greatly appreciated. Should you have any questions regarding this request or would like to request a specific consultation, please contact me (719) 378-6311 or Fred Bunch at (719) 378-6361 or by electronic mail, at [fred\\_bunch@nps.gov](mailto:fred_bunch@nps.gov). Thank you for your participation in this planning effort.

Sincerely,

Steve W. Chaney  
Superintendent

Enclosure

United States Department of the Interior  
NATIONAL PARK SERVICE



Great Sand Dunes National Park and Preserve  
11500 Highway 150  
Mosca, Colorado 8146-9798  
Phone 719-378-6300 Fax 719-378-6310



In Reply Refer to:  
1470 A16

January 18, 2005

Ms. Jane Crisler  
Advisory Council on Historic Preservation  
12136 Bayaud Avenue  
Suite 330  
Lakewood, CO 80226

Subject: Consultation for the Great Sand Dunes National Park and Preserve Draft General Management Plan/Wilderness Review/Environmental Impact Statement

Dear Ms. Crisler:

The National Park Service has a *general management plan* and *wilderness review* underway for Great Sand Dunes National Park and Preserve. As set forth in 36 CFR 800 and the Programmatic Agreement between the Advisory Council on Historic Preservation, the National Conference of State Historic Preservation Officers and the National Park Service, we would like to continue the consultation process.

The Great Sand Dunes *general management plan* will provide management direction for resource stewardship, visitor understanding and appreciation, partnerships, facilities, and operations for the next 15-20 years. As part of this planning effort the NPS will conduct a *wilderness review*, which is required by law and National Park Service policy. The *wilderness review* will examine areas within the expanded Great Sand Dunes boundary to determine whether they are suitable for, and should be proposed as, wilderness. Preliminary scoping began in January, 2003. The planning team has been analyzing park resources and developing alternatives with public involvement. The enclosed newsletters document the effort to date. A draft General Management Plan /Wilderness Review/Environmental Impact Statement will be printed and distributed in January of 2006.

Great Sand Dunes National Monument was established in 1932 to preserve federal land containing spectacular and unique sand dunes and additional features of scenic, scientific, and educational interest for the benefit and enjoyment of future generations. The Great Sand Dunes National Park and Preserve Act of 2000 enlarged Great Sand Dunes National Monument from 39,000 acres to over 100,000 acres, and also established Great Sand Dunes National Preserve, which exceeds 40,000 acres. The purpose of the 2000 legislation was to protect the Great Sand Dunes natural system.

In fulfillment of requirements of the National Environmental Policy Act, the National Park Service has initiated the preparation of an environmental impact statement (EIS) that will evaluate potential impacts of the planning alternatives on natural and cultural resources, and other relevant topics. The process and documentation required for preparing the EIS will be used to comply with Section 106 of the National Historic Preservation Act. In accordance with section 800(3)(c) of the Advisory Council on Historic Preservation's regulations (36 CFR 800), I am providing your office advance notification of the NPS intention to use the general management planning and EIS process to meet its Section 106 obligations.

To assist Great Sand Dunes National Park and Preserve and the National Park Service Intermountain Region staff in refining issues to be addressed in the *general management plan* and *wilderness review*, please provide us with written comments concerning interests within your agency's responsibilities. We are continuing consultation with the Colorado State Historic Preservation Officer. Should you have any questions regarding this request or would like to request a specific consultation, please contact me at (719)-378-2312 or by electronic mail, [GRSA\\_Superintendent@nps.gov](mailto:GRSA_Superintendent@nps.gov). Thank you for your participation in these planning efforts.

Sincerely,

Steve Chaney, Superintendent  
Great Sand Dunes National Monument and Preserve  
11500 Highway 150  
Mosca, CO 81146

Encl. newsletters 1-5



**COLORADO  
HISTORICAL  
SOCIETY**

**The Colorado History Museum 1300 Broadway Denver, Colorado 80203-2137**

January 13, 2005

Steve W. Chaney  
National Park Service  
Great Sand Dunes National Park and Preserve  
11500 Highway 150  
Mosca, CO 81146-9798

Re: General Management Plan for Great Sand Dunes National Park and Preserve/1470A16.  
(CHS #24811)

Dear Mr. Chaney,

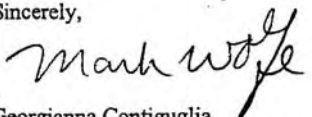
Thank you for your correspondence dated January 5, 2005 and received by our office on January 10, 2005 regarding the above-mentioned project.

After review of the submitted information, we concur with your intent to use the NEPA process and documentation to comply with Section 106, as stipulated in 36 CFR 800.8(c).

In regards to the Dunefield Focus-Maximum Wilderness Concept (page 8 of the National Park and Preserve General Management Plan Newsletter), two possible alternatives are listed for the Medano Ranch. Of the two alternatives, we recommend that the resource be documented and then removed.

If we may be of further assistance, please contact Amy Pallante, our Section 106 Compliance Coordinator, at (303) 866-4678.

Sincerely,

*for*   
Georgianna Contiguglia  
State Historic Preservation Officer



United States Department of the Interior  
NATIONAL PARK SERVICE



Great Sand Dunes National Park and Preserve  
11500 Highway 150  
Mosca, Colorado 8146- 9798  
Phone 719- 378- 6300 Fax 719- 378- 6310



In Reply Refer to:  
1470 A 16

January 5, 2005

Associate Regional Director  
Ecological Services  
U.S. Fish & Wildlife Service  
P. O. Box 25486, DFC  
Denver, CO 80225

Dear Sir/Madam:

The National Park Service is in the process of developing a *general management plan* for Great Sand Dunes National Park and Preserve. We are just beginning our scoping and data gathering efforts for this plan. We request the most current list of threatened, endangered, proposed, and candidate species, and designated critical habitat that may be present at the Great Sand Dunes and the surrounding area, which is located within Saguache and Alamosa counties, and adjacent to Huerfano and Custer Counties.

The Great Sand Dunes *general management plan* will provide management direction for resource stewardship, visitor understanding and appreciation, partnerships, facilities and operations for the next 15- 20 years. As part of this planning effort, the NPS will conduct a *wilderness review*, which is required by law and National Park Service policy. The *wilderness review* will examine areas within the expanded Great Sand Dunes boundary to determine whether they are suitable for, and should be proposed as, wilderness.

Great Sand Dunes National Monument was established in 1932 to preserve lands containing spectacular and unique sand dunes and additional features of scenic, scientific, and educational interest for the benefit and enjoyment of future generations. The Great Sand Dunes National Park and Preserve Act of 2000 enlarged Great Sand Dunes National Monument from 39,000 acres to over 100,000 acres, redesignated it as a national park, and established Great Sand Dunes National Preserve, which exceeds 40,000 acres. The purpose of the 2000 legislation was to protect the entire Great Sand Dunes natural system.

To assist Great Sand Dunes National Park and Preserve and the National Park Service Intermountain Region staff in refining issues to be addressed in the *general management plan* and *wilderness review*, please provide us with written comments concerning interests within

your agency's responsibilities. A copy of the most recent newsletter is enclosed for your information.

In fulfillment of requirements of the National Environmental Policy Act, the National Park Service has initiated the preparation of an environmental impact statement (EIS) that will evaluate potential impacts of the planning alternatives on natural and cultural resources, and other relevant topics. In accordance with Section 7 of the Endangered Species Act of 1973, as amended, we are requesting an official list of federally listed threatened or endangered species, which might be affected by the proposed action.

Your response within 30 days from receipt of this letter will be greatly appreciated. Should you have any questions regarding this request, please contact me at 719- 378- 6311 or by electronic mail, [GRSA\\_Superintendent@nps.gov](mailto:GRSA_Superintendent@nps.gov). Thank you for your participation in this planning effort.

Sincerely,

Steve W. Chaney  
Superintendent

Enclosure



02/15/05 12:14 FAX 303 275 2371

US FISH &amp; WILDLIFE

001



UNITED STATES DEPARTMENT OF THE INTERIOR  
FISH AND WILDLIFE SERVICE  
ECOLOGICAL SERVICES



COLORADO FIELD OFFICE  
755 PARFET STREET, SUITE 361  
LAKEWOOD, COLORADO 80215



Phone: (303) 275-2370

FAX: (303) 275-2371

SENT TO: <u>Steve Chang</u>	PHONE NO. <u>- - -</u>
SENT BY: <u>Danna</u>	FAX NO. <u>719 -378 -6310</u>
PAGES TO FOLLOW: <u>2</u>	
SUBJECT: <u>Spec list</u>	
COMMENTS:	

MAILING ADDRESS:  
755 PARFET STREET, SUITE 361  
LAKEWOOD, COLORADO 80215



Page 1/8

U. S. Fish and Wildlife Service  
Ecological Services  
Colorado Field Office  
(Effective August 16, 2004)

FEDERALLY LISTED AND CANDIDATE SPECIES & THEIR STATUS IN COLORADO

COUNTIES	A D A M O S	A L A M O S S A	A R A P A H O E	A R C H U L K T A	B A C C A	B E N N T	B O U L D E R	B R O O M F I E L D	C H A F F E E	C H E Y E N N E	C L E A R C R E E K	C O N E J O S	C O S T I L L A	C R O W L E Y	C U S T E R	D E L T A	D E N V E R
Bald eagle, <i>Haliaeetus leucocephalus</i> , Listed Threatened	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
✓Gunnison sage-grouse, <i>Centrocercus minimus</i> , Candidate for Listing		✓		✓					✓			✓	✓			✓	
✓Least tern (interior population), <i>Sterna onillanum</i> , Listed Endangered	▲		▲			✓	✓	▲		✓	▲			✓			▲
✓Lesser prairie chicken, <i>Tympanuchus pallidicinctus</i> , Candidate for Listing	✓	✓	✓	✓			✓		✓		✓	✓	✓	✓			
✓Mexican spotted owl, <i>Strix occidentalis lucida</i> , Listed Threatened	▲		▲			✓	▲	▲			▲						▲
✓Piping plover, <i>Charadrius melodus</i> , Listed Threatened		✓		✓								✓					
✓Southwestern willow flycatcher, <i>Empidonax traillii eximius</i> , Listed Endangered	▲		▲				▲	▲			▲						▲
✓Whooping crane, <i>Grus americana</i> , Listed Endangered		✓		✓								✓	✓			✓	
✓Yellow-billed cuckoo, <i>Coccyzus americanus</i> , Candidate for Listing	✓	✓	✓	✓	✓			✓		✓		✓	✓	✓		✓	
✓Black-footed ferret, <i>Mustela nigripes</i> , Listed Endangered		✓		✓								✓	✓				
✓Canada lynx, <i>Lynx canadensis</i> , Listed Threatened	✓			✓			✓	✓									✓
✓Pied-billed grebe, <i>Podilymbus podiceps</i> , Listed Threatened																	
✓Boreal toad, <i>Bufo boreas boreas</i> , Candidate for Listing				✓			✓	✓									✓

US FISH &amp; WILDLIFE

02/15/05 12:15 FAX 303 275 2371

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U. S. Fish and Wildlife Service  
Ecological Services  
Colorado Field Office  
(Effective August 16, 2004)

FEDERALLY LISTED AND CANDIDATE SPECIES & THEIR STATUS IN COLORADO

COUNTIES	DOLOR	DOUGLAS	EAGLE	ELBERT	EL PASO	FREMONT	GARFIELD	GILPIN	GRAND	GUNNISON	HINSDALE	HUERFANO	JACKSON	JEFFERSON	KIOWA	KIT CARSON
Bald eagle, <i>Haliaeetus leucocephalus</i> , Listed Threatened	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
Cornucopia sage-grouse, <i>Centrocercus minimus</i> , Candidate for Listing	✓		✓				✓									
Least tern (interior population), <i>Sterna autilarium</i> , Listed Endangered		✓		✓	✓			✓						✓		
Lesser prairie chicken, <i>Tympanuchus pallidirostris</i> , Candidate for Listing	✓	✓			✓	✓	✓	✓				✓		✓		
Mexican spotted owl, <i>Strix occidentalis lucida</i> , Listed Threatened		✓		✓	✓	✓		✓					✓			
Piping plover, <i>Charadrius melodus</i> , Listed Threatened	✓										✓					
Southwestern willow flycatcher, <i>Empidonax traillii eximius</i> , Listed Endangered		✓		✓	✓		✓	✓								
Whooping crane, <i>Grus americana</i> , Listed Endangered	✓		✓	✓	✓		✓		✓							
Yellow-billed cuckoo, <i>Coccyzus americanus</i> , Candidate for Listing		✓	✓	✓	✓	✓	✓					✓	✓	✓	✓	✓
Black-footed ferret, <i>Mustela nigripes</i> , Listed Endangered	✓		✓			✓	✓	✓								
Canada lynx, <i>Lynx canadensis</i> , Threatened		✓		✓	✓									✓		
Pueblo's meadow jumping mouse, <i>Zapus ludovicianus preblei</i> , Listed Threatened				✓	✓	✓						✓				
Arkansas darter, <i>Etheostoma caeruleum</i> , Candidate for Listing			*				✓		*	*	*					
Bonytail, <i>Gila elegans</i> , (presumed historical) Listed Endangered	*		*	*			✓	✓	*	*	*					
Colorado pikeminnow, <i>Ptychocheilus lucius</i> , Listed Endangered	*		*				✓	✓	*	*	*					
Greenback cutthroat trout, <i>Oncorhynchus clarki stansburii</i> , Listed Threatened	*	✓			✓		✓	✓	*	*	*					
Humpback chub, <i>Gila cypha</i> , Listed Endangered		*		*					*	*	*					

US FISH &amp; WILDLIFE

02/15/05 12:10 FAX 303 275 2371

U. S. Fish and Wildlife Service Ecological Services Colorado Field Office (Effective August 15, 2004) FEDERALLY LISTED AND CANDIDATE SPECIES & THEIR STATUS IN COLORADO													
COUNTRIES*													
	D O U G L A S	E A G L E	E L B E R T	E L L P A S S O	F R E M O N T	G A R F I E L D	G I L P I N	G R A N D	G U N N I S O N	H I N S D A L E	H U E R F A N O	J A C K S O N	J E F F E R S O N
Pallid sturgeon, <i>Scaphiodonichus albus</i> , Listed Endangered	▲	▲	▲	▲		⊕	▲					▲	▲
Razorback sucker, <i>Xyrauchen texanus</i> , Listed Endangered	*	*						*	*	*			✓
Pawnee montane skipper, <i>Hesperia leonardus montana</i> , Listed Threatened	✓								✓	✓			
Uncompagnie fritillary butterfly, <i>Boloria acrocnema</i> , Listed Endangered	✓	✓				✓						✓	
Boreal toad, <i>Bufo boreas boreas</i> , Candidate for Listing	✓	✓											✓
Colorado butterfly plant, <i>Gaura nasoneviana</i> ssp. <i>coloradensis</i> , Listed Threatened			✓			✓							
De Beque phacelia, <i>Phacelia submutica</i> , Candidate for Listing												✓	
North Park phacelia, <i>Phacelia formosula</i> , Listed Endangered								✓					
Osterhout milkvetch, <i>Astragalus osterhoutii</i> , Listed Endangered						✓							
Purshute beardtongue, <i>Penstemon debilis</i> , Candidate for Listing								✓					
Penland beardtongue, <i>Penstemon penlandii</i> , Listed Endangered				✓									
Slender moonwort, <i>Botrychium lineare</i> , Candidate for Listing						✓							
Utah Basin bookless cactus, <i>Sclerozactus glaucus</i> , Listed Threatened													✓
Yule ladies'-tresses, <i>Spiranthes diluvialis</i> , Listed Threatened	✓			✓									

COUNTRIES -		L A K E	L A P L A T A	L A R I M E R	L A S A N I M A S	L I N C O L N	L O G A N	M E S S A	M I N E R A L	M O F F A T	M O N T E Z U M A	M O N T R O S E	M O R G A N	O T E R O	O U R A Y	P A R K	P H I L L I P S
U. S. Fish and Wildlife Service Ecological Services Colorado Field Office (Effective August 14, 2004)																	
FEDERALLY LISTED AND CANDIDATE SPECIES & THEIR STATUS IN COLORADO																	
Bald eagle, <i>Haliaeetus leucocephalus</i> , Listed Threatened		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Gambel sage-grouse, <i>Centrocercus minimus</i> , Candidate for Listing			✓					✓			✓	✓	✓		✓		
Least tern (interior population), <i>Sterna antillarum</i> , Listed Endangered				✓		✓	✓									✓	
Lesser prairie chicken, <i>Tympanuchus pallidirostris</i> , Candidate for Listing			✓	✓	✓					✓	✓	✓				✓	
Mexican spotted owl, <i>Strix occidentalis lucida</i> , Listed Threatened				✓	✓	✓	✓						✓	✓		✓	
Piping plover, <i>Charadrius melodus</i> , Listed Threatened				✓					✓		✓					✓	
Southwestern willow flycatcher, <i>Empidonax traillii eximius</i> , Listed Endangered			✓	✓				✓	✓	✓	✓	✓		✓		✓	
Yellow-billed cuckoo, <i>Coccyzus americanus</i> , Candidate for Listing													✓			✓	
Whooping crane, <i>Grus americana</i> , Listed Endangered			✓	✓	✓	✓	✓			✓	✓	✓	✓	✓		✓	
Black-footed ferret, <i>Mustela nigripes</i> , Listed Endangered		✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓		✓	✓	
Canada lynx, <i>Lynx canadensis</i> , Listed Threatened		✓	✓	✓	✓	✓			✓	✓	✓	✓	✓		✓	✓	
Preble's meadow jumping mouse, <i>Zapus hudsonius preblei</i> , Listed Threatened				✓		✓								✓			
Arkansas darter, <i>Etheostoma caeruleum</i> , Candidate for Listing								✓		✓		✓					
Bonytail, <i>Gila elegans</i> , (presumed-historical) Listed Endangered								✓		✓		✓					
Colorado pikeminnow, <i>Ptychocheilus lucius</i> , Listed Endangered			*					✓	*	✓	*	*					
Greenback cutthroat trout, <i>Oncorhynchus clarkii stansburii</i> , Listed Threatened		✓		✓												✓	
Humpback chub, <i>Gila cypha</i> , Listed Endangered								✓	✓	✓	✓	✓			*		

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**U. S. Fish and Wildlife Service  
Ecological Services  
Colorado Field Office**

Effective August 16, 2004

**FEDERALLY LISTED AND CANDIDATE SPECIES & THEIR STATUS IN COLORADO**

COUNTIES -	LAKES	LAPLATA	LARIMER	LASANIMAS	LINCOLN	LOGAN	MESA	MINERAL	MOFFATT	MONTEZUMA	MONTEROSE	MORGAN	OTERO	PARK	PHILLIPS
Pallid sturgeon, <i>Scaphirhynchus albus</i> , Listed Endangered															
Razorback sucker, <i>Xyrauchen texanus</i> , Listed Endangered		*											*		
Boreal toad, <i>Bufo boreas boreas</i> , Candidate for Listing															
Pawnee montane skipper, <i>Hesperia leonardus montana</i> , Listed Threatened															
Uncompahgre fritillary butterfly, <i>Boloria actaonema</i> , Listed Endangered															
Clay-loving wild buckwheat, <i>Eriogonum peliopitulum</i> , Listed Endangered															
Colorado butterfly plant, <i>Gaura neomexicana</i> ssp. <i>coloradensis</i> , Listed Threatened															
De Beque phacelia, <i>Phacelia submissa</i> , Candidate for Listing															
Knowlton's cactus, <i>Pedrocelastus knowltonii</i> , Listed Endangered															
Manitou milkvetch, <i>Astragalus humifusus</i> , Listed Endangered															
Mesa Verde cactus, <i>Sclerocactus mesae-verdae</i> , Listed Threatened															
Penland alpine fen mustard, <i>Einreina penlandii</i> , Listed Threatened															
Sleeping Ute milk-vetch, <i>Astragalus toripes</i> , Candidate for Listing															
Slender monardella, <i>Botrychium lineare</i> , Candidate for Listing															
Uinta Basin hookless cactus, <i>Sclerocactus glaucus</i> , Listed Threatened															
Ute ladies'-tresses, <i>Spiranthes alvialis</i> , Listed Threatened															



Page 7/8	COUNTRIES +	P I T K I N	P R O W E R S	P U E B L O	R I O B L A N C O	R I O G R A N D E	P R O T T	S A G U A C H E	S A N J U A N	S A N M I G U E L	S E D W I C K	S U M M I T	T E L L E R	W A S H I N G T O N	W E L D	Y U M A
	U. S. Fish and Wildlife Service Ecological Services Colorado Field Office (Effective August 16, 2004)															
	FEDERALLY LISTED AND CANDIDATE SPECIES & THEIR STATUS IN COLORADO															
	Bald eagle, <i>Haliaeetus leucocephalus</i> , Listed Threatened	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Gambusia sage-grouse, <i>Centrocercus minimus</i> , Candidate for Listing	✓								✓						
	Least tern (interior population), <i>Sterna antillarum</i> , Listed Endangered		✓										✓	✓	✓	
	Lesser prairie chicken, <i>Tympanuchus pallidicinctus</i> , Candidate for Listing		✓									✓	✓			
	Mexican spotted owl, <i>Strix occidentalis lucida</i> , Listed Threatened	✓		✓		✓		✓		✓			✓	✓	✓	
	Piping plover, <i>Charadrius melodus</i> , Listed Threatened		✓			✓		✓		✓			✓	✓	✓	
	Southwestern willow flycatcher, <i>Empidonax traillii eximius</i> , Listed Endangered												✓	✓	✓	
	Whooping crane, <i>Grus americana</i> , Listed Endangered										✓					
	Yellow-billed cuckoo, <i>Coccyzus americanus</i> , Candidate for Listing	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓				
	Black-footed ferret, <i>Mustela nigripes</i> , Listed Endangered		✓	✓	✓	✓	✓	✓	✓	✓		✓				
	Canada lynx, <i>Lynx canadensis</i> , Listed Threatened	✓		✓	✓	✓	✓	✓	✓	✓		✓				
	Prairie meadow jumping mouse, <i>Zapus hudsonius preblei</i> , Listed Threatened												✓			
	Pawnee montane skipper, <i>Hesperia leonardus montana</i> , Listed Threatened											✓				
	Uncompahgre fritillary butterfly, <i>Boloria acrocrasus</i> , Listed Endangered	✓	✓	✓		✓		✓	✓	✓						
	Arkansas darter, <i>Etheostoma caeruleum</i> , Candidate for Listing		✓	✓												
	Boobytail, <i>Gila elegans</i> (presumed-historical) Listed Endangered	*			*	*	*	*	*	*		*				
	Colorado pikeminnow, <i>Ptychocheilus lucius</i> , Listed Endangered	*			*	*	*	*	*	*		*				

009

US FISH &amp; WILDLIFE

02/15/05 12:18 FAX 303 275 2371



U. S. Fish and Wildlife Service  
Ecological Services  
Colorado Field Office

EFFECTIVE August 16, 2004)

**COUNTIES -**

FEDERALLY LISTED AND CANDIDATE SPECIES & THEIR STATUS IN COLORADO

[illegible]

<p><b>TABLE TERMINOLOGY</b></p>	
✓	The check mark indicates that the species is present in that county or that the county is within the historical range of the species
*	Water depletions in the Upper Colorado River and San Juan River basins, in these counties may affect these species
▲	Water depletions in the North or South Platte rivers, in these counties may affect these species
⊕	The species is present in the county and there is designated critical habitat for the species within the county
Candidate	Means there is sufficient information indicating that formal listing under the ESA may be appropriate
Proposed	Means the species is proposed for possible addition to the Lists of Endangered and Threatened Wildlife and Plants under the ESA
Endangered	Means the species could become extinct
Threatened	Means the species could become endangered

010

US FISH & WILDLIFE

02/15/05 12:19 FAX 303 275 2371

M:\Kath\amr\CD\Species\County\en.doc August 16, 2004



## United States Department of the Interior

FISH AND WILDLIFE SERVICE  
Ecological Services  
Colorado Field Office  
P.O. Box 25486, DFC (65412)  
Denver, Colorado 80225-0486

IN REPLY REFER TO:  
F/S/CO: NPS/Sand Dunes  
Mail Stop: 65412-2006-I-0362

**JAN 24 2007**

Mr. Art Hutchinson  
Superintendent  
Great Sand Dunes National Park and Preserve  
11500 Highway 150  
Mosca, Colorado 81146-9798

Dear Mr. Hutchinson:

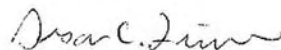
The U.S. Fish and Wildlife Service (Service) received your letter and draft General Management Plan/Wilderness Study/Environmental Impact Statement (GMP/EIS) for the Great Sand Dunes National Park and Preserve in Alamosa and Saguache Counties, Colorado, on December 19, 2006 (with a more recent version received by electronic mail on January 19, 2007). The December 19, 2006 letter was provided following the Service's response (July 24, 2006) in which we requested additional information regarding the effects on Federally-listed species. Your December 19, 2006 letter requested concurrence with the determinations that the proposed plan may affect, but is not likely to adversely affect the bald eagle (*Haliaeetus leucocephalus*), Canada lynx (*Lynx canadensis*), Mexican spotted owl (*Strix occidentalis lucida*), southwestern willow flycatcher (*Empidonax traillii extimus*), and the yellow-billed cuckoo (*Coccyzus americanus*). These following comments have been prepared under the authority of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 et. seq.) and the Interagency Cooperation Regulations (50 CFR 402).

Based on the information provided in the revised draft GMP/EIS received on December 19, 2006, and updated by electronic mail on January 19, 2007, the Service concurs with your determination that the proposed plan, the NPS preferred alternative, may affect, but is not likely to adversely affect the bald eagle, Canada lynx, Mexican spotted owl, southwestern willow flycatcher, and the yellow-billed cuckoo. The GMP describes the general path the NPS intends to follow in managing the park over the next 15 to 20 years. Potential impacts to Federally-listed species are anticipated to be relatively minor and may result from activities such as increased visitation and the construction of trails, parking lots, and other facilities. Mitigation measures included in the GMP/EIS provide the criteria for identifying if future section 7 consultation may be needed for actions implemented under this GMP.

Page 2

If the Service can be of further assistance, please contact Leslie Ellwood of my staff at (303) 236-4747.

Sincerely,



Susan C. Linner  
Colorado Field Supervisor

cc: FWS-ES-CO (T. Ireland)

Reference: Project\NPS\NPS\_SandDunesGMP\_FWSConcur



## U.S. Fish and Wildlife Service



*San Luis Valley National Wildlife Refuge Complex*  
 9383 El Rancho Lane • Alamosa, CO 81101  
 Phone (719)589-4021 • Fax (719)587-0595

January 28, 2005

Steve Chaney, Superintendent  
 Great Sand Dunes National Park and Preserve  
 11500 Highway 150  
 Mosca, Colorado 81146-9798

Dear Mr. Chaney:

Over the past year I have worked with the National Park Service and Great Sand Dunes National Park Advisory Council in preparation of the General Management Plan for the Great Sand Dunes National Park and Preserve (Park). Based on my participation in this planning process it is obvious that public access to the northern portion of the Park, that formerly owned by the Baca Ranch and Rio Grande National Forest, is an important topic to the public and consequently to your planning process. At least one of the routes that could be used to satisfy this desire crosses the Baca National Wildlife Refuge (Baca NWR). I want to share with you results of my recent discussions with the Regional Fish and Wildlife Service staff in Refuge Planning and Operations about this public access question.

At this time there are two National Wildlife Refuge System policies that will drive how we consider any proposal for access across the Baca NWR. I have spoken to you and the Advisory Council several times about the National Wildlife "Refuge Compatibility Policy." This rule basically requires assessment of a proposed use or activity on a National Wildlife Refuge against the purpose for which a refuge is acquired and managed. If the use is found to materially interfere with or detract from the fulfillment of the mission of the National Wildlife Refuge System or the purposes of the national wildlife refuge, it cannot be approved. A copy of this policy is enclosed.

At the last Advisory Council meeting we discussed the "Appropriate Refuge Uses Policy." This relatively new, draft policy describes several criteria that must be met prior to a refuge manager allowing any non-wildlife dependent recreational use, in addition to those described in the Refuge Compatibility rule. Proposals to access the Park and Rio Grande National Forest across the Baca Refuge need to clearly meet the criteria identified in the policy. Enclosed is a copy of this policy.

We have discussed that initiation of a Comprehensive Conservation Plan for the Baca NWR is not scheduled and is unlikely to be started until after 2012. It is during this planning process we hope to address all foreseeable public uses and assess their impacts on biotic and abiotic processes on the Refuge. The Fish and Wildlife Service recently decided to start the formal planning process in 2008. This will allow two years for baseline data collection to take place

before initiating the plan and provide the Park Service and public information that concerns potential use of the Baca NWR in much more timely fashion.

During this planning process we will assess potential public uses of Baca NWR. Any access to the Park or Rio Grande National Forest across Baca NWR must be consistent with Refuge purposes and goals stated in this plan. The plan will actively assess the potential for wildlife dependent public uses. These include hunting, fishing, wildlife observation, wildlife photography, environmental education and interpretation. It will also assess other non-wildlife dependent public uses foreseen and for which we have received requests for consideration. The plan will allow for uses determined appropriate and compatible, and could conceivably include a road or trail allowing access to the Park via some mode of travel if it did not materially interfere with the purpose of the Baca NWR and met standards described in the Appropriate Use Policy.

Much interest has been expressed in use of the "Lexam" or "Cow Camp" road as a means to allow public access to public lands east of the refuge. This road transects, what at this time we view as some of the most sensitive wetland habitats on Baca NWR. The use of this road appears problematic at this time due to its proximity to wetland habitat. We also have to question the very existence of this road and need to assess its impacts on hydrology, wildlife movement and habitat fragmentation. Removal of the road and restoration of the associated habitat will be considered in the planning process along with various modifications and potential uses.

In summary, U.S. Fish and Wildlife Service policies and lack of resources prevent serious consideration of public uses until we gather baseline information on the Baca NWR, have the opportunity to analyze this information and involve the public in formulating a management plan that addresses all aspects of refuge management. We do have serious concerns about the presence and use of the "Lexam" road. The Comprehensive Conservation Planning process for the Baca NWR will start in 2008 and will thoroughly assess this access question.

Thank you for your patience while working on this complex question and I continue to offer whatever help I can provide in your planning process. It has been a pleasure working with the National Park Service and meeting the challenges presented during the General Management Planning process. Please let me know if you have questions or concerns.

Sincerely,



Michael Blenden  
Project Leader

Cc: Peter Clark, Supervisor Rio Grande National Forest

Enclosures



United States  
Department of  
Agriculture

Forest  
Service

Rio Grande National Forest

1803 West Hwy 160  
Monte Vista, CO 81144  
719-852-5941

1565-1 ✓

File Code: 1900

Date: February 14, 2005

Steve W. Chaney  
Superintendent  
Great Sand Dunes National Park and Preserve  
11500 Hwy 150  
Mosca, CO 81146

Dear Steve,

Please consider this my official response to the request for comment on the Great Sand Dunes National Park and Preserve General Management Plan. Decisions made during this planning process could have significant impacts on our ability to manage adjoining National Forest System (NFS) lands and I appreciate the opportunity to comment.

In anticipation of acquisition of the Baca Ranch, we held several multi agency meetings at which potential issues were identified and discussed. I believe that two important issues are not addressed in the proposed alternatives and they both center on public access to NFS lands. The two issues not addressed are the type of access the public will have to NFS lands and the ability to manage the burgeoning elk population proximate to the newly acquired federal lands. These issues are intimately linked and should be addressed in the EIS. Although we have not started the planning process for the newly acquired mountain tract, we believe that the range of alternatives the National Park Service is proposing severely limits our options for managing this portion of the Rio Grande National Forest.

As a multiple use agency we must consider a broad range of objectives when deciding what type of public access to provide on NFS lands. In all alternatives provided, the National Park Service has restricted vehicular access to NFS lands to administrative use only. To better address some management concerns we have for the National Forest, I request you analyze the following in the EIS:

- 1) Unencumbered vehicular access through the National Park to the Liberty Road and development of a maintenance agreement between NPS and USFS.
- 2) The vehicle access corridor will allow for the possession of firearms and wild game without a special permit from the National Park Service.
- 3) Joint opportunities for long distance hiking and equestrian trails across public lands of both agencies.
- 4) Joint developed recreation sites with the USFS, such as trailhead and camping areas, to maximize visitor satisfaction to the dunes and mountain areas.
- 5) Providing administrative vehicular access through the National Park to the Rio Grande National Forest.
- 6) Unencumbered vehicular access to private in-holdings at Liberty, Short Creek and Pole Creek.



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1567 end

My staff and I have significant concerns with the overpopulation of elk in, and adjacent to the Sangre de Cristo range. We are currently experiencing alarming habitat degradation in portions of the Sangre de Cristo Wilderness. It appears that this over utilization has resulted in sharp declines in mule deer and bighorn sheep numbers in the area. According to the Colorado Division of Wildlife, the current post harvest elk population in Unit 82 is estimated at 6000 animals. This is four times the management objective of 1500 and approximately 80% of these elk winter within the new National Park boundary. The current bighorn sheep population estimate in Unit S-9 is 400, down from 600 over the past 3 years. The current mule deer estimate in Unit 82 is 4000, below the management objective of 4500.

Elk are having obvious negative impacts on other species dependent upon this landscape. We cannot in good conscience tolerate habitat degradation by elk that we would not tolerate from permitted livestock grazing. This shift to elk dominating the landscape at the expense of bighorn sheep and mule deer are of great concern to us.

The Rio Grande National Forest relies on the Colorado Division of Wildlife to manage wildlife numbers. However, their ability is extremely limited if the elk can use the park as a refuge. For all land management agencies, the management of wildlife populations is essential to habitat management.

To help mitigate the current situation of habitat degradation and hopefully strike a balance between ungulate species, I am requesting you consider the following:

- 1) Unencumbered vehicle access across the park for hunters to the NFS lands on the Liberty Road, Mosca Pass Road, and Medano Pass Road.
- 2) Having the vehicle access corridor allow for the possession of firearms and wild game without a special permit from the National Park Service.
- 3) Making the proposed wilderness area of the Dunefield Focus alternative a national preserve to allow hunting.
- 4) In lieu of item 3) above, consider eliminating this area from wilderness recommendation. This would allow the Colorado Division of Wildlife to employ tools such as hazing to prevent an unreasonable buildup of elk not available for harvest.

I know you are concerned about all public lands both in and around the National Park and Preserve. I appreciate the good working relationship we have enjoyed and I expect that relationship to grow in the future. Thanks you for the opportunity to comment and please contact me if you have any questions or concerns.

Sincerely,



PETER L. CLARK  
Forest Supervisor/Center Manager

cc: Suzy Stutzman

• •



United States Department of the Interior  
NATIONAL PARK SERVICE



Great Sand Dunes National Park and Preserve  
11500 Highway 150  
Mosca, Colorado 8146- 9798  
Phone 719- 378- 6300 Fax 719- 378- 6310



In reply refer to:  
File Code (1470)L76

November 30, 2004

Ms. Catherine Wilson, Area Conservationist  
Natural Resources Conservation Service  
Monte Vista Area Office  
0881 North Highway 285  
Monte Vista, CO 81444

Re: Identification of prime or unique farmland request under the Farmland Protection Policy Act (PL 97- 98; U.S.C. 4201 et seq.) and Prime and Unique Agricultural Lands Act (DOI-ESM94- 7) for the environmental impact statement: Great Sand Dunes National Park and Preserve General Management Plan and Wilderness Study.

Dear Ms. Wilson,

The National Park Service is developing a new general management plan and wilderness study for Great Sand Dunes National Park and Preserve. An environmental impact statement (EIS) will be prepared to address the impacts of the general management plan and wilderness study alternatives. The general management plan will guide resource stewardship, visitor use and services, partnerships, facilities, and operations in the park for the next 15- 20 years. Great Sand Dunes National Park and Preserve is located in the San Luis Valley, in Saguache and Alamosa Counties, Colorado.

We are requesting that the Natural Resources Conservation Service (NRCS) identify prime or unique farmland within the national park and preserve (please see attached map). The information provided by the NRCS will be presented in the environmental impact statement and evaluated relative to effects, alternatives, or mitigation, if warranted. We would appreciate it very much if you could provide your response by January 15, 2005. Please feel free to contact me by phone (719- 378- 6311) or electronic mail ([steve\\_chaney@nps.gov](mailto:steve_chaney@nps.gov)) if you need additional clarification. Thank you for your assistance.

Sincerely,

Steve W. Chaney  
Superintendent



United States Department of Agriculture



Natural Resources Conservation Service  
Alamosa Agricultural Service Center  
2205 State Avenue  
Alamosa, Colorado 81101  
ron.riggenbach@co.usda.gov

719-589-6432 - Office  
719-589-0613 - Fax  
719-588-2917 - Cell

12/27/2004

Mr. Steve W. Chaney, Superintendent  
Great Sand Dunes National Park and Preserve  
11500 Highway 150  
Mosca, CO 81146-9798

Re: File Code (1470)L76 Identification of prime or unique farmland request under the Farmland Protection Policy Act (PL 97-98; U.S.C. 4201 et seq.) and Prime and Unique Agricultural Lands Act (DOI-ESM94-7) for the environmental impact statement: Great Sand Dunes National Park and Preserve General Management Plan and Wilderness Study.

Dear Mr. Chaney:

Enclosed with this letter you will find a map outlining prime farmland and unique farmland as requested.

If you have any questions, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read 'Ronald Riggenbach', written in a cursive style.

Ronald Riggenbach  
District Conservationist  
Alamosa Field Office

cc: Catherine Wilson, Area Conservationist  
Robert McBride, District Conservationist Saguache County

The Natural Resources Conservation Service provides leadership in a partnership effort to help people conserve, maintain, and improve our natural resources and environment.

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United States Department of the Interior  
NATIONAL PARK SERVICE

Great Sand Dunes National Monument and Preserve  
11500 Highway 150  
Mosca, Colorado 81146-9798  
Phone 719-378-6300 Fax 719-378-6310



In Reply, Refer to:  
DI8 (1470)

January 5, 2004

Cheyenne & Arapaho Business Committee  
Cheyenne & Arapaho Tribes of Oklahoma  
Chairman Robert Taylor  
P.O. Box 38  
Concho, OK 73022

Dear Mr. Taylor,

Great Sand Dunes National Monument would like to consult with the Cheyenne & Arapaho Tribes of Oklahoma regarding a management plan that is now being started for the monument. The National Park Service recognizes that all the lands we now manage are part of the original homelands of many American Indian peoples. With this recognition in mind, it is our sincere desire to involve in the planning process tribal communities who consider the monument an important part of their heritage – both past and present. This initial contact letter is simply a notification of the beginning of this planning process. We will follow this letter with a phone call to discuss with you the tribe's interest in being consulted during all phases of the plan's development. The plan will take three to four years to complete and it is our view that involvement of affiliated tribal communities in this process is essential for its success.

A review of existing literature, and recent consultation with tribes on other issues have revealed that a number of American Indian tribes consider the San Luis Valley and the Great Sand Dunes important to their culture and traditions. The new plan will address a number of natural and cultural resources issues that are likely be of interest to these tribal communities. It is hoped that on- going consultation with your community, and with other tribal communities, will lead to a plan that fully takes into consideration tribal concerns. An overview of this planning project and the need for a new management plan is explained more fully in the enclosed newsletters.

As mentioned above, a member of the planning staff will contact your office soon to discuss the Cheyenne & Arapaho Tribes of Oklahoma's interest in being consulted on this plan. If you have any questions or concerns prior to our phone call to your office please do not hesitate to

call me at (719)- 378- 6311. Our planning team and the monument staff look forward to working with you on this important matter.

You are on the mailing list for the general management plan, and will receive newsletters and drafts of the plan. If you have additional interests or concerns regarding the general management plan or would like to request a specific consultation, please contact me at (719)- 378- 6311 or by electronic mail, [GRSA\\_Superintendent@nps.gov](mailto:GRSA_Superintendent@nps.gov). Thank you for your participation in these planning efforts.

Sincerely,

Steve W. Chaney  
Superintendent

Enclosures

Newsletter #1 and #2  
Park Brochure  
Region map w/physiography

United States Department of the Interior  
NATIONAL PARK SERVICE



Great Sand Dunes National Park and Preserve  
11500 Highway 150  
Mosca, Colorado 81146-9798  
Phone 719-378-6300 Fax 719-378-6310



In Reply Refer to:  
1470 A1619

January 11, 2005

Chairman Robert Taylor  
Cheyenne and Arapahoe Tribes of Oklahoma  
P. O. Box 38  
Concho, OK 73022

Dear Chairman Taylor:

We would like to invite two members of your tribe to participate in a meeting of the Great Sand Dunes National Park and Preserve Advisory Council in March. We would welcome both a representative of your government, as well as someone with particular traditional interest or knowledge of the Great Sand Dunes area. The Advisory Council was established by the legislation that expanded the park to advise on the general management plan, and members were appointed by the Secretary of the Interior. The National Park Service has a *general management plan* for Great Sand Dunes National Park and Preserve underway. We are developing alternatives for the management of the park and preserve, including the new lands that have been added. The advisory council will be discussing the draft alternatives and their possible impacts, and part of the meeting will be dedicated to listening to the interests and concerns of invited tribal members.

The meeting will be held on March 3, 2005, at the new visitor center for the national park near Mosca, Colorado. The advisory council will meet from 8:30 a.m. to 4:30 p.m., and time for tribal member discussion will be set aside between 2:00 p.m. and 4:00 p.m. We will provide appropriate travel and consultation costs.

Please contact me at (719)-378-6311 or by electronic mail, [GRSA\\_Superintendent@nps.gov](mailto:GRSA_Superintendent@nps.gov) with your reply. If you have additional interests or concerns regarding the general management plan or would like to request a specific consultation at another time, also feel free to contact me. Thank you for your participation in these planning efforts.

Sincerely,

Steve Chaney, Superintendent  
Great Sand Dunes National Monument and Preserve

***11999 Highway 150  
Mosca, CO 81146***

**Enclosures**

Newsletter #1, #2, #3, #4, #5  
Park Brochure



# Tribal Invitations List

Governor Simon Suina  
Pueblo of Cochiti  
P. O. Box 70  
Cochiti, NM 87072

Chairman Wayne Taylor  
Hopi Indian Tribe  
Hopi Tribal Council  
P. O. Box 123  
Kykotsmovi, AZ 86039

President Leonard Atole  
Jicarilla Apache Indian Tribe  
Jicarilla Apache Tribal Council  
P. O. Box 507  
Dulce, NM 87528

President Albert Hale  
Navajo Nation  
Navajo Nation Tribal Council  
P. O. Box 308  
Window Rock, AZ 86515

President William Walksalong  
Northern Cheyenne Indian Tribe  
Northern Cheyenne Tribal Council  
P. O. Box 128  
Lame Deer, MT 59043

Governor Gerald Nailor  
Pueblo of Picuris  
Picuris Pueblo  
P. O. Box 127  
Penasco, NM 87553

Governor Stanley Pino  
Pueblo of Zia  
135 Capitol Square Drive  
Zia Pueblo, NM 87053

President Evelyn James  
San Juan Southern Paiute Tribe  
San Juan Southern Paiute Tribal Council  
P. O. Box 2656  
Tuba City, AZ 86045

Governor  
Pueblo of Taos  
P. O. Box 1846  
Taos, NM 87571

Chairperson Judy Knight- Frank  
Ute Mountain Ute Tribal Council  
General Delivery  
Towaoc, CO 81344

Chairman Robert Taylor  
Cheyenne and Arapahoe Tribes of  
Oklahoma  
P. O. Box 38  
Concho, OK 73022

Chairman Johnny Wauqua  
Comanche Indian Tribe of Oklahoma  
P. O. Box 908  
Lawton, OK 73052

Governor Randolph Padilla  
Pueblo of Jemez  
P. O. Box 100  
Jemez Pueblo, NM 87024

Chairman Billy Horse  
Kiowa Tribe of Oklahoma  
Kiowa Business Committee  
P. O. Box 369  
Carnegie, OK 73015

Chairman Burton Hutchinson  
Northern Arapaho Indian Tribe  
Northern Arapaho Business Council  
P. O. Box 217  
Fort Washaki, WY 82514

President John Steele  
Pine Ridge Oglala Lakota Indian Tribe  
Oglala Lakota Tribal Council  
Pine Ridge, South Dakota 57770

Governor Ron Shutiva  
Pueblo of Acoma  
P. O. Box 309

Acomita, NM 87034

Governor Earl Salazar  
Pueblo San Juan  
P. O. Box 1099  
San Juan, NM 87566  
Chairman Leonard Burch  
Southern Ute Indian Tribe  
P. O. Box 737  
Ignacio, CO 81137

Chairperson Ruby Atwin  
Unitah and Ouray Ute Tribe  
P. O. Box 190  
Fort Duchesne, UT 84026

Chairwoman Mary Yazzi  
White Mesa Ute  
White Mesa Ute Board  
P. O. Box 340  
Blanding, UT 84511

## STATE OF COLORADO

Bill Owens, Governor  
 DEPARTMENT OF NATURAL RESOURCES  
**DIVISION OF WILDLIFE**  
 AN EQUAL OPPORTUNITY EMPLOYER

Bruce McCloskey, Director  
 6060 Broadway  
 Denver, Colorado 80216  
 Telephone: (303) 297-1192



*For Wildlife-  
 For People*

Steve W. Chaney  
 Superintendent  
 Great Sand Dunes National Park and Preserve  
 11500 Hwy 150  
 Mosca, CO 81146

Dear Mr. Chaney,

On behalf of the Colorado Division of Wildlife (CDOW), I would like to thank you for the opportunity to comment on access issues in the Great Sand Dunes National Park and Preserve (GRSA).

My staff has reviewed the alternatives to the general management plan. Two primary concerns stand out: 1) The designation of areas as wilderness or backcountry adventure areas and; 2) Nodes for Public access.

GRSA lies within an area designated by the CDOW as Data Analysis Unit (DAU) E-11. DAU E-11 is a geographical elk management unit which is one of five DAU's that occur in the San Luis Valley. The population objective in E-11 was set at 1500 animals in 1995. Over the last decade, our ability to maintain this herd of animals at that objective has become compromised due to elk pioneering into areas where they had previously been less numerous. These areas include lands owned by the National Park Service, The Nature Conservancy and the Baca Grande Ranch which provide added refuge areas especially during hunting seasons. This has lead to very limited opportunity for harvest and a population of elk that is now at a level nearly four times that of the DAU plan objective.

It has become apparent that the excessive number of elk are having an impact on the habitat resources on both public and private lands. The DOW staff in the SLV has heard from both private landowners and the United States Forest Service regarding impacts they have realized. Private land damages result in a negative economic impact to the landowner and results in DOW liability for game damage caused to raw agricultural products by big game. Other impacts include, but are not limited to, possible competition with bighorn sheep for resources throughout the Sangre de Cristo Range and apparent competition with mule deer throughout E-11. A documented, downward trend in both species has been realized during the same time period that elk numbers have increased. As you are aware, the DOW is currently involved with the NPS in an Elk research effort designed to determine impacts to native vegetation by elk in the Park and to assess elk susceptibility to harvest.

#### *Issues*

- 1). Designating large areas as wilderness or "backcountry adventure", where vehicle access is severely limited or non-existent, will make it cumulatively more difficult to move elk out of the Park and into areas where access for hunters can affect some level of harvest.

DEPARTMENT OF NATURAL RESOURCES, Russell George, Executive Director  
 WILDLIFE COMMISSION, Philip James, Chair • Jeffrey Crawford, Vice-Chair • Brad Phelps, Secretary  
 Members, Bernard Black • Tom Burke • Rick Enstrom • Claire O'Neal • Robert Shoemaker • Ken Torres  
 Ex Officio Members, Russell George and Don Ament

2) Proposed access nodes limit public hunter access to the GRSA and public USFS lands. Adequate female (cow) elk harvest is critical to the management of elk population numbers within DAU E-11. With limited access and retrieval opportunities, hunters are less likely to harvest a female animal due to the distance they will have to travel to pursue elk and to move them back to their vehicle.

3) As proposed, access allowed to hunters along the Liberty Road would require a hunter to secure a permit to transport firearms and game prior to entering NPS lands. It is anticipated that access will primarily occur during hours when the NPS personnel are not available to issue such permits.

*Alternatives*

1) The DOW would like to propose to allow a designated area as "back country adventure" along with the designation of an area that allows for public vehicular access for the purpose hunting recreation and game retrieval. Specifically, to allow public access along the Liberty Road to allow access to USFS lands from a designated public parking area.

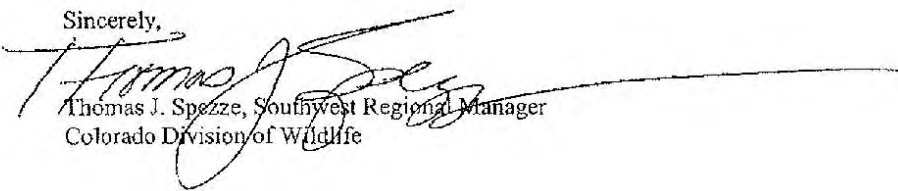
2) Public access allowed for hunting recreation and game retrieval will not require a NPS permit for firearms possession while engaged in hunting related activities.

The Division of Wildlife is very concerned with current language in the GRSA Management Plan which is expected to result in a limited opportunity for adequate elk harvest and retrieval within DAU E-11. Most importantly is the continued, apparent degradation of natural systems occurring on both public and private lands within DAU E-11 both within and adjacent to the Great Sand Dunes National Park. The Division of Wildlife greatly appreciates the joint collaboration occurring between the DOW and the NPS regarding elk research in the Park. We also look forward to a continued development of our working relationship with the NPS as future management of the GRSA unfolds.

If you have any questions, please let me know or contact Rick Basagoitia, Area Wildlife manager at the Monte Vista Service Center.

Again, thank you for the opportunity to comment on this important document!

Sincerely,

  
Thomas J. Spezze, Southwest Regional Manager  
Colorado Division of Wildlife



Wayne Taylor, Jr.  
CHAIRMAN

VICE-CHAIRMAN

March 16, 2005

Mr. Steve Chaney, Superintendent  
USDI-National Park Service  
Great Sand Dunes National Park and Preserve  
11500 Highway 150  
Mosca, CO 81146-9798

Dear Superintendent Chaney:

The Hopi Cultural Preservation Office received a copy of your letter date January 11, 2005 addressed to Hopi Tribal Chairman, Mr. Wayne Taylor, Jr., inviting the Hopi Tribe to send two tribal representatives to attend a meeting regarding the development of a Draft General Management Plan (GMP) for the Great Sand Dunes National Park and Preserve.

We apologize for the delay in providing you with our response and appreciate your invitation to come to Great Sand Dunes National Park and Preserve and consult with you and other tribal representatives on the GMP, and regret that we were not able to send representatives to the March 3<sup>rd</sup> meeting.

As you might be aware the Hopi Tribe has claimed cultural and ancestral affinity to the prehistoric Hisatsinom, whom are defined archaeologically as the Anasazi cultural group with Hopi Tribal Council Resolution, H-70-94 (enclosure). Furthermore the Hopi Tribe supports the avoidance and disturbance of archaeological sites attributed to the various archaeologically defined cultural groups contained in the resolution. Therefore we would like to request for a copy of the draft General Management Plan for review and comment.

Additionally, at this time the Hopi Cultural Preservation Office is unaware of any specific places which may be of cultural and religious importance to Hopi clans and religious societies. Such a determination would require a site visit to the park and preserve by knowledgeable individuals.

However, our office is aware that the "lakes" situated within the dunes are important to members of the Tewa people, whom were brought to Hopi by the Walpi Snake Clan, and currently resided at Hopi.

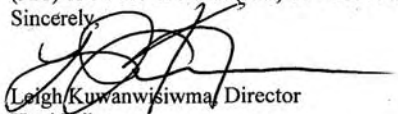
Therefore, the Hopi Cultural Preservation Office would also like to extend an invitation to you and staff members to attend our April Cultural Resource Advisory Task Team (CRATT) to present and discuss potential impacts to historic properties located within the park and reserve as a result of the development of the General Management Plan with Tewa Clan Leaders and our cultural advisors.

P.O. BOX 123 KYKOTSMOVI, AZ. 86039 (928) 734-3000

The meeting has been scheduled for April 21, 2005 in Kykotsmovi, AZ. Please contact Ms. Sharon Sockyma, Secretary at (928) 734-3613 for the place of the meeting and the time for your presentation.

Should you require additional information, please contact Clay Hamilton, Research Assistant at (928) 734-3617 or me at (928) 734-3611. Thank you for consulting with the Hopi Tribe.

Sincerely,



Leigh Kuwanwisiwma, Director  
Hopi Tribe  
Cultural Preservation Office



COLORADO  
HISTORICAL  
SOCIETY

The Colorado History Museum 1300 Broadway Denver, Colorado 80203-2137

January 18, 2007

Art Hutchinson  
Superintendent  
Great Sand Dunes National Park and Preserve  
11500 Highway 150  
Mosca, CO 81146-9798

Re: General Management Plan/Wilderness Study/EIS (GMP/WS/EIS) (CHS# 47837)

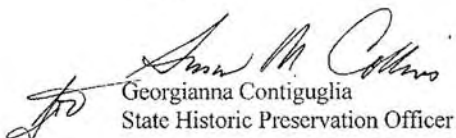
Dear Mr. Hutchinson:

Thank you for your correspondence dated January 16, 2007 and the revisions made to the cultural resources section of the GMP/WS/EIS.

After our review of the revisions, we find that they satisfy the concerns and comments we identified in our previous correspondence (dated May 8, 2006) and during our meeting on September 19, 2006 with NPS staff and the project consultants. We appreciate their efforts to address our concerns.

We look forward to consultation with your agency pursuant to the National Historic Preservation Act as appropriate. If we may be of further assistance please contact Greg Wolff, Section 106 Compliance Coordinator for Archaeology, at (303) 866-4674 and/or Amy Pallante, Section 106 Compliance Coordinator for Architecture, at (303) 866-4678.

Sincerely,

  
Georgianna Contiguglia  
State Historic Preservation Officer

GC/GAW





**APPENDIX J: WETLANDS STATEMENT OF FINDINGS**



General Management Plan / Wilderness Study

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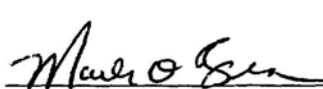
Great Sand Dunes National Park and Preserve

**Wetlands Statement of Findings for the  
General Management Plan / Wilderness Study**

Recommended:

 3/22/07  
Superintendent, Great Sand Dunes National Park and Preserve Date

Certification of Technical Adequacy and Servicewide Consistency:

 04/02/07  
FOR WILLIAM JACKSON  
(BY DIRECTION)  
Chief Water Resources Division Date

Approved:

 4/3/07  
Regional Director Intermountain Region, National Park Service Date



## INTRODUCTION

The National Park Service has prepared and made available the draft GMP/WS/EIS for Great Sand Dunes National Park and Preserve and has incorporated some changes as a result of public comments. The park, which was recently expanded nearly fourfold in size, is located in Alamosa and Saguache counties, Colorado.

Executive Order 11990 (*Protection of Wetlands*) requires the National Park Service and other federal agencies to evaluate the likely impacts of actions on wetlands. NPS Director's Order 77-1: *Wetland Protection* and Procedural Manual 77-1 provide NPS policies and procedures for complying with Executive Order 11990. This statement of findings (SOF) documents compliance with these NPS wetlands protection procedures.

### PURPOSE OF THIS STATEMENT OF FINDINGS

The purpose of this wetlands SOF is to document review of the draft GMP/WS for Great Sand Dunes National Park and Preserve relative to Executive Order 11990 (*Protection of Wetlands*) and NPS Procedural Manual 77-1: *Wetlands Protection*. Specifically, this wetlands SOF:

- describes effects on wetlands values associated with the NPS preferred alternative
- describes how the NPS preferred alternative avoids, to the extent possible, adverse impacts to wetlands

- describes mitigation measures developed to achieve compliance with Executive Order 11990 (*Protection of Wetlands*) and NPS Procedural Manual 77-1: *Wetland Protection*
- describes how the NPS preferred alternative ensures no net loss of wetlands functions or values

### AFFECTED WETLANDS

The Great Sand Dunes Act of 2000 authorized the expansion and redesignation of Great Sand Dunes National Monument to a national park and preserve that is four times larger in area (146,757 acres). To date, wetlands mapping efforts under the *National Wetlands Inventory* have focused on particular areas of the park such as the national park's southwestern portion, Sand Creek, and Medano Creek. Wetlands in many new areas of the park (e.g., along Deadman Creek, Cold Creek, and Pole Creek) do not appear on the *National Wetlands Inventory* map because wetlands surveys and photo-interpretation for these areas have not yet been conducted. The total area of wetlands within the park is not known.

The park contains 12 primary streams that flow westward from the Sangre de Cristo Mountains and provide wetlands hydrology. The water infiltrates quickly through the sand, adding to the high groundwater levels which typically lie 5 to 15 feet from the ground surface in the shallow aquifer beneath the park. The high water table of San Luis Valley creates an array of wetlands habitats, including

permanent ponds and lakes, playa lakes, seasonal ponds and marshes, seeps, wet meadows on pond edges, and salt flats. Groundwater flows primarily west and southwest across the park. It emerges in the southwestern portion of the park as a line of springs. The water flowing from these springs creates large areas of lush, productive wetlands around Big Spring Creek and ultimately flows into San Luis Lake, located immediately west of the park. In addition to these wetlands, wind erosion has removed sand to the elevation of the water table in places, allowing the establishment of interdune wetlands within the sand sheet life zone.

The largest wetlands acreages are distributed along Deadman, Medano, Sand, Big Spring, and Little Spring creeks and their tributaries. They range from sparsely vegetated playas and seasonal mudflats, to aquatic and emergent stands in shallow water and irrigated hay meadows, to streamside shrublands, woodlands, and forests, to high elevation ponds, seeps, and snow glades. Introduced wetlands have become established due to irrigation of natural meadows (which has occurred for over a century) on Medano Ranch and on banks of excavated ponds, ditches, and canals, which are located mostly at lower elevations on gentle slopes and flats. A particularly high concentration of irrigated wetlands occurs in the lower reaches of Sand, Big Spring, and Little Spring creeks on Medano Ranch (figure J-1).

Wetlands occur throughout the seven park life zones, are diverse, and can be broadly characterized by the Cowardin system as riverine (rivers, creeks, and streams), palustrine (shallow ponds, marshes, swamps, sloughs), and lacustrine (littoral zones of lakes and deep ponds). The

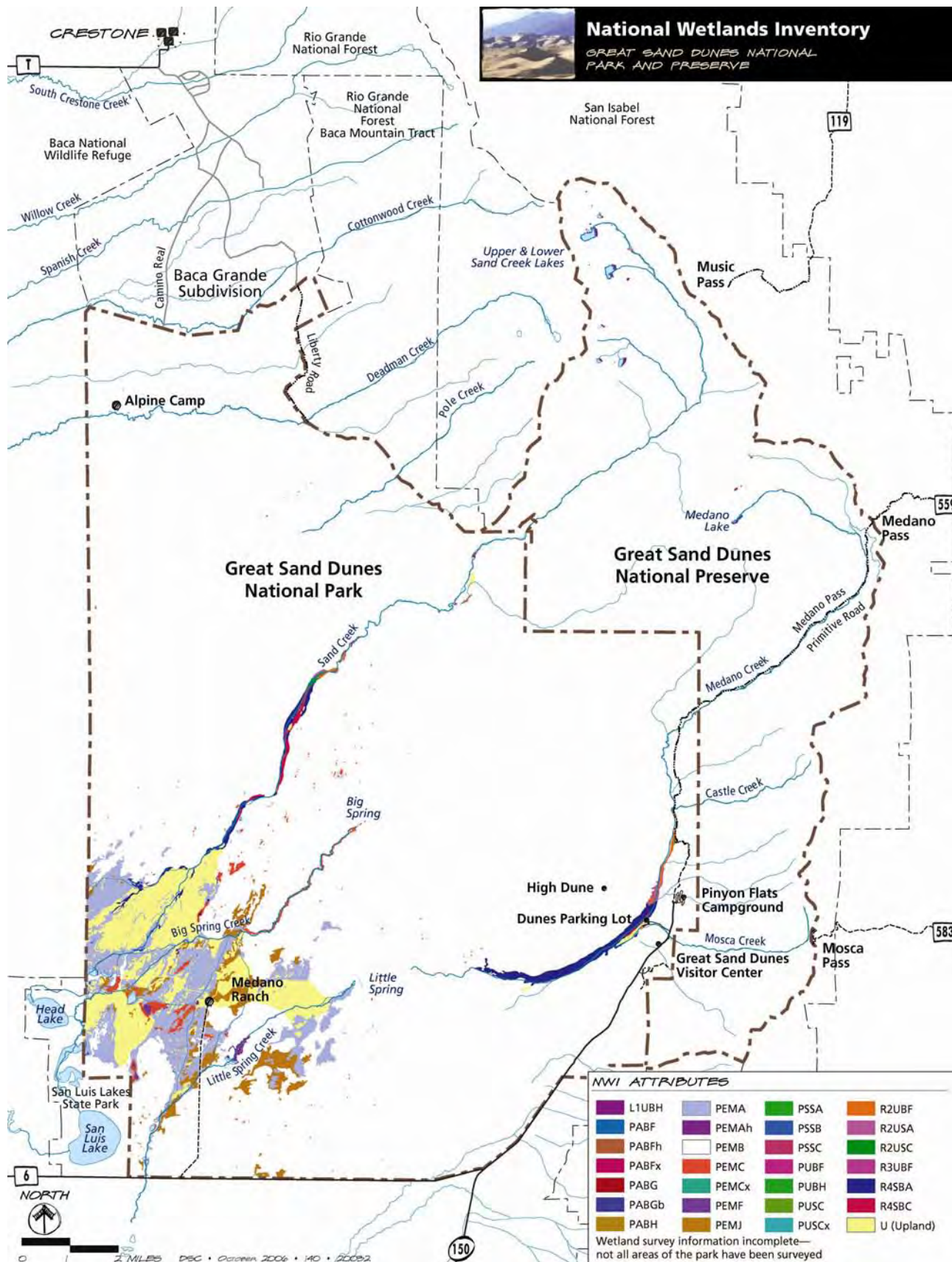
environmental impact statement section on wetlands (Chapter Three: Affected Environment) describes wetlands functions and values and specific wetlands types in more detail. Chapter three also provides wetlands-related information on vegetation, wildlife, ecologically critical areas, and water resources.

## **ENVIRONMENTAL CONSEQUENCES OF THE NATIONAL PARK SERVICE PREFERRED ALTERNATIVE ON WETLANDS**

### **Analysis**

Under the NPS preferred alternative, visitation in the frontcountry and dunes play management zones would increase over time, so Medano Creek wetlands in these zones would experience more use. Providing guided hiking and equestrian trails in the guided learning management zone would direct use around sensitive wetlands areas and prevent or minimize most direct wetlands impacts in this area. In general, however, visitation increases and visitor use (including horse use) in new park areas could increase the incidence of trampling, encourage establishment of nonnative species, and compact wetland soils and streambanks. Natural chemical and biological processes and wetlands species composition could be affected. The overall result would be minor to moderate adverse impacts to wetlands resources.

A new road segment, parking area, and trailhead in the northern portion of the national park would encourage more hiker and equestrian use. The mature narrowleaf cottonwood groves on the banks of Deadman Creek would likely attract some



hikers and horseback riders for resting, watering animals, and other passive pursuits. However, most visitors would probably hike designated trails and along Liberty Road, outside the Deadman Creek corridor. Improved hiking access to the mountain front might lead to increased use in the upper (USFS) portion of Deadman Creek, which includes a USFS designated research natural area; it includes high elevation wetlands and currently receives little visitation. Visitation increases and visitor use (including horse use) in new areas could increase trampling, introduce nonnative plant species, and compact wetland soils and streambanks. Natural chemical and biological processes and wetlands species composition could be affected. Effects would be long term, minor to moderate, and adverse.

Assuming Medano Ranch is eventually transferred to NPS management, irrigation of hay meadows for bison forage would be discontinued. Wetlands that are not supported by natural surface and groundwater flows (e.g., introduced or artificial wetlands) would be adversely affected by drying. Natural flows in Sand, Big Spring, and Little Spring creeks would increase, at least seasonally, when irrigation is discontinued, and other wetlands types (e.g., ephemeral ponds, playas, mudflats, etc.) would expand and/or become reestablished. Also, more water would probably be delivered to San Luis and Head lakes in San Luis Lakes State Park and Wildlife Area, stabilizing water levels and providing wetlands support in those areas. Overall, anticipated wetlands impacts would be long term, moderate to major, beneficial, and long term, moderate, and adverse. A future study would examine expected impacts in more detail.

Eliminating bison grazing from Medano Ranch lands within the park would benefit some wetlands plant species, particularly the most palatable grasses. Some areas of channel and streambank erosion might gradually stabilize, improving wetlands structure and function. Livestock watering ponds and structures would be removed; some introduced wetlands would probably dry up, but other naturally occurring wetlands would be re-established or expand from restoration of natural flows. The park would identify and manage nonnative plant populations in new park areas, reducing their effects on native wetlands communities or possibly eliminating some nonnative stands from the landscape. Wetlands species composition and habitat quality would improve as a result. Overall, these actions would have long-term, minor to moderate, beneficial, and negligible to minor adverse impacts on wetlands.

**Cumulative Impacts.** Livestock grazing typically adversely affects wetlands and riparian resources by causing shifts in species composition, erosion of streambanks and bottoms, and browsing of wetland grasses, shrubs, and tree seedlings. Cattle grazing was discontinued on the former Baca Ranch lands in 2004, and some past adverse livestock impacts may gradually be reversed in the future. Under the NPS preferred alternative, beneficial and adverse wetlands impacts would result from increased use, new trails and trailheads, establishment of the guided learning zone, removal of livestock-related water control structures, control of nonnative noxious plant populations, and discontinuation of bison grazing and hay meadow irrigation. Combined with past, present, and reasonably foreseeable future actions, the NPS preferred alternative would have long-term, moderate, beneficial impacts and minor to



moderate adverse effects on wetlands resources.

**Conclusion.** Visitation increases in new areas would affect chemical and biological processes and wetlands species composition, resulting in long-term, minor to moderate, adverse impacts to wetlands resources. Discontinuing irrigation of wet meadows on Medano Ranch is expected to have long-term, moderate to major, beneficial, and long-term, moderate, adverse impacts on wetlands. Eliminating bison grazing, removing livestock watering ponds and structures, and managing nonnative plants in new areas would have long-term, minor to moderate, beneficial, and negligible to minor, adverse impacts on wetlands.

## ALTERNATIVES CONSIDERED

Alternatives considered in the draft GMP/WS/EIS (Chapter Two: Alternatives) include no action, dunefield focus—maximize wildness, and three public nodes. These alternatives are briefly summarized below, along with elements that are common to all action alternatives.

### No-Action Alternative

The no-action alternative was developed to provide a baseline for evaluating the changes and impacts of the three action alternatives. This baseline is characterized primarily by conditions in December 2004, roughly two months after ownership and management of the Baca Ranch was transferred to the U.S. government, and by continuation of current management practices into the future. (There are funded projects planned for very near term; these are included in the no-action alternative). Most visitor use would continue to be focused in or near the eastern part of the dunefield. The developed area east of the

dunes (main park road, visitor center, and campground) would remain essentially the same. Some visitors would continue to explore backcountry areas of the park and preserve via designated trails and roads, and cross-country equestrian and hiking use would also continue. Some people would enter the northern portion of the park on foot from the Baca Grande subdivision, via the two county roads that end at the park boundary.

No new areas would be recommended for wilderness. New park lands that were not open to public use before December 2004 would be managed in a very conservative manner. That is, there would be no new development, and visitor use would be managed so as to not establish new practices for camping, types and routes of access, etc.

New park areas would be inventoried for natural and cultural resources and managed according to NPS policies that emphasize natural processes (for example, nonnative species, interior pasture fences, and artificial water holes and sources would be removed). Existing trails and trailheads in the park and preserve would be maintained, but there would be no new trails or trailheads. The Nature Conservancy would continue to manage Medano Ranch, including Medano Ranch headquarters. There would be no public use of Medano Ranch. Bison grazing would continue within the park on lands leased or owned by The Nature Conservancy. Leashed dogs would generally be allowed within the park and preserve.

### Elements Common to the Action Alternatives, including the NPS Preferred Alternative

If and when The Nature Conservancy ceased agricultural uses (e.g., bison grazing and forage production) on their owned and leased lands, and transferred the lands to

the National Park Service, surface irrigation of meadows would be discontinued and the bison fence would be removed. Before surface irrigation was discontinued, a study would be conducted to better understand how this action might affect wetlands, groundwater supplies, downstream water users, federal water rights, the Closed Basin Project, and other such factors. Roads that the National Park Service does not intend to use for public or administrative purposes would be abandoned and not maintained. Toilets would be installed if/when visitor use levels are high enough that human waste disposal and sanitation is a concern, and if a more suitable solution does not exist.

### **Dunefield Focus—Maximize Wildness Alternative**

In the dunefield focus—maximize wildness alternative, most visitor use and visitor activities would be focused in or near the eastern boundary of the dunefield. Most of the rest of the park and preserve would remain wild and undeveloped, allowing natural processes to continue with minimal human influence. Backcountry areas would be primitive and rugged, providing outstanding opportunities for solitude and adventure. A large portion of the park expansion lands would be recommended for future designation as wilderness.

Existing trails and trailheads would be maintained. Most visitors would continue to visit the main dunefield area (main park road, visitor center, dunes parking lot, and picnic area). Parking and related support facilities, such as restrooms, could be expanded in the frontcountry zone if dunes parking areas filled too often. A new multi-use trail for bicyclists and pedestrians would extend from near the park's main entrance to the visitor center, dunes parking lot/picnic area, and to the Pinyon Flats campground. A gate for horse access would be

provided on the northern boundary of the national park, and pedestrian access from the Baca Grande subdivision would continue.

The National Park Service would seek acquisition of Medano Ranch and would manage it as a natural/wild area. Ranch structures would not be maintained (or would be removed after documentation). Leashed dogs would be restricted to parking areas, picnic areas, and car campgrounds within the national park—they would not be permitted in the national preserve.

### **Three Public Nodes Alternative**

In the three public nodes alternative, most visitors would gain access to the park and preserve via three areas or “nodes.” Visitor facilities and trails would be concentrated in or near the three nodes, and the rest of the park and preserve would remain largely undeveloped. This alternative would provide fairly diverse options for visitors to experience different portions of the dunes system.

The first node, located at the existing developed area east of the dunes, would remain essentially the same. The second node would be located at the Medano Ranch headquarters. The National Park Service would seek acquisition of Medano Ranch and would manage the ranch headquarters as a public day-use area, most historic ranch structures would be maintained, and guided hiking and horseback tours to nearby high interest areas could be provided. The third node, located in the northern portion of the park, would include a backcountry trailhead and a primitive campground if an appropriate public vehicle access route could be identified via the Baca National Wildlife Refuge or the Baca Grande subdivision.

Dogs would not be permitted in areas where there is increased potential for or a history of conflicts with visitors or with wildlife; otherwise, leashed dogs would be allowed. No new wilderness would be recommended in this alternative. The USFS, in consultation with the National Park Service, may study the need for (and impacts of) providing public vehicle access to USFS lands via Liberty Road or via an extension of Cow Camp Road to the mountain front. These options would be studied in a separate NPS/USFS environmental analysis study.

### **JUSTIFICATION FOR SELECTING THE NATIONAL PARK SERVICE PREFERRED ALTERNATIVE: FACTORS AND TRADEOFFS**

Reasons for selecting the NPS preferred alternative are discussed in detail in the draft GMP, appendix E (see section titled “Rationale for the NPS Preferred Alternative”). In short, this alternative best supports and protects the fundamental resources and values of Great Sand Dunes National Park and Preserve. These resources and values are described in chapter one of the GMP. The NPS preferred alternative provides for visitor use in new areas of the park in a way that minimizes harm to wetlands to the greatest extent practicable. The NPS preferred alternative would have adverse impacts on some wetlands, as would all the GMP alternatives, including the no-action alternative. These impacts would be due primarily to visitor use in new areas of the park, and would be largely unavoidable (unless public use was not permitted at all). The NPS preferred alternative also provides wetlands benefits. Actions such as relocating a trailhead parking area 0.5 mile or more away from Deadman Creek, eliminating managed bison grazing, controlling non-native noxious plants, and reestablishing

more natural drainage regimes would have long-term benefits ranging from minor to major depending on wetlands type and location.

### **HOW THE NATIONAL PARK SERVICE PREFERRED ALTERNATIVE WAS DESIGNED TO MINIMIZE WETLANDS IMPACTS**

Various elements of the NPS preferred alternative were included, in whole or in part, to minimize adverse wetlands impacts. Because most adverse impacts would result from visitor use in new park areas, most of these elements are related to visitor use management.

The NPS preferred alternative apportions the park into different management zones (NPS “Preferred Alternative” map). For each management zone, specific resource concerns are described, preliminary indicators of resource condition are outlined, priority areas for monitoring are identified (most are wetlands areas), and potential management actions to address resource threats are listed.

In many cases, specific management zones were applied in particular locations, in whole or in part to minimize wetlands impacts. In the northern portion of the national park, the backcountry access (brown) zone is located well north of the Deadman Creek riparian corridor for most of the zone’s length. This means that proposed public vehicle use and the trailhead would be located to the north of (due to changes in the preferred alternative) rather than in or near the Deadman Creek corridor. The backcountry adventure (green) zone surrounds the Deadman Creek area, the upper portion of the Sand Creek riparian corridor, and Upper and Lower Sand Creek lakes. Unlike the yellow

(natural/wild) zone, the green zone permits new trails to be provided to direct hiking and horseback use away from wetlands areas and to discourage more dispersed use that often results in social trails, vegetation damage, and sedimentation of streams and lakes. Similarly, the guided learning zone was applied to an area that includes the Big and Little Spring wetlands areas. This management zone requires that visitors be accompanied by a certified guide or escort. The intent is to allow visitors to enjoy and learn about special resource areas while protecting such resources at the same time. Guides/escorts and carefully designed trails would help ensure that visitors are guided in a manner that would protect wetlands values.

The NPS preferred alternative includes a wilderness recommendation for nearly all wilderness-eligible lands, amounting to about 75% of lands added to the national park since 2000. Protection of wetlands was among the many considerations that led to this recommendation. Uses of NPS wilderness should ensure that these areas retain their primitive character; protect and preserve natural conditions; leave the imprint of humans barely discernible; provide outstanding opportunities for solitude and unconfined recreation; and preserve wilderness in an unimpaired condition. This means that key wetlands areas would be protected in perpetuity from many influences that typically result in adverse impacts. More information regarding the wilderness study and recommendation can be found in appendix G of the GMP.

Mitigation measures common to the action alternatives, some of which address wetlands areas, are detail in chapter two of the GMP.

## COMPENSATION

Two actions in the NPS preferred alternative would result in loss of *artificial* (introduced) wetlands. The NPS preferred alternative would remove livestock watering ponds and structures on Medano Ranch and former Baca Ranch lands, and it would discontinue hay meadow irrigation on Medano Ranch; both measures are intended to reestablish a more natural hydrologic regime in keeping with NPS management policies. The introduced wetlands that would be lost were created as long as a century ago, when surface water from Sand, Big Spring, and Little Spring creeks was diverted to irrigate natural upland meadows to improve forage production for cattle. According to Procedural Manual 77-1 (section 4.2A.1.e), activities with adverse impacts on artificial wetlands may be excepted from the SOF and compensation requirements if they are “designed specifically for the purpose of restoring degraded (or completely lost) natural wetlands, stream, riparian, or other aquatic habitats or ecological processes.”

The NPS preferred alternative would not result in *loss* of natural wetlands. However, all of the GMP alternatives (including the no-action alternative) would adversely affect some natural wetlands. In particular, natural chemical and biological processes and wetlands species composition could be affected due to unintentional introduction of nonnative plant species, and trampling (compaction) of wetland soils and stream-banks associated with visitor use. Short of prohibiting visitor use in areas added to the park since 2000, there are no alternatives that would avoid such impacts.

Restoring a more natural hydrologic regime would allow other wetlands (e.g., ephemeral ponds, playas, mudflats, etc.) to expand or become reestablished. Although the acreage

of wetlands habitats that would be expanded or reestablished is not known, the areas involved are large enough that beneficial impacts should more than compensate for minor to moderate adverse effects to wetlands from visitor use. Before surface irrigation of meadows was discontinued on Medano Ranch, a study would be conducted to allow park managers and others to better understand how this action would affect wetlands, wildlife, groundwater supplies, federal water rights, the Closed Basin Project, etc.

## CONCLUSION

The NPS preferred alternative was designed to avoid and minimize adverse impacts on

wetlands, and to restore lost natural wetlands habitats and ecological processes within Great Sand Dunes National Park and Preserve. No natural wetlands would be lost, although some would be unavoidably affected by visitor use. Restoring a more natural drainage regime in the southwestern (Medano Ranch) portion of the national park would allow natural wetlands to expand or become reestablished.

The National Park Service finds that this alternative is consistent with the policies and procedures of Director's Order 77 – 1: *Wetland Protection*, including the “no net loss of wetlands” policy.



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National Park Service  
U.S. Department of the Interior



## Great Sand Dunes National Park and Preserve

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