

MANZANO MOUNTAINS STATE PARK

MANAGEMENT PLAN

2004 – 2008

APRIL 2004

MANZANO MOUNTAINS STATE PARK
MANAGEMENT and DEVELOPMENT PLAN

Director's Approval: _____ **Date:** _____

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Cabinet Secretary's Approval: _____ **Date:** _____

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PREFACE

Each state park administered and managed by the State Parks Division (Division) of the New Mexico Energy, Minerals and Natural Resources Department (EMNRD) is required to establish a Park Management and Development Plan. [Reference: Title 19, Chapter 5, Part 3 of the New Mexico Administrative Code (19.5.3 NMAC)] The objective of these plans is to provide direction for the management and development of the state parks in a manner that enhances recreational opportunities, protects park resources, provides for public input, and protects the natural environment. In essence, each plan will identify an overall management philosophy, and then outline a specific strategy for achieving management goals at the park over a five-year period. [Reference: Section 13 of the State Parks Division's Policy and Procedures Manual]

The planning process for Park Management and Development Plans consists of: establishing a planning team for each state park; conducting an on-site inspection/assessment of the park, its resources and facilities; analyzing all information compiled on the park; proposing goals and related activities to be completed over the next five years; developing a draft Management and Development Plan (Plan) for the park; soliciting public input on the draft Plan and revising it as appropriate; approval of the revised Plan by the State Parks Division Director; and implementation of the approved Plan by the Park Manager/Superintendent.

Any and all comments or recommendations concerning the Manzano Mountains State Park Management and Development Plan should be directed to:

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I. EXECUTIVE SUMMARY

A. INTRODUCTION

The State Parks Division's mission is to manage the State Park system to enrich the lives of New Mexicans and visitors to the state. At Manzano Mountains State Park, this mission is fulfilled through the protection and enhancement of the park's natural resources, and by providing an appealing setting of high mountain recreational activities, a relaxed atmosphere and camping. The overall goal is to continue offering high quality services in a safe and efficient manner, while making improvements to broaden our visitors' recreational and educational experience. This plan sets forth the specific objectives, policies, improvements and changes we will strive to implement through fiscal year 2008 (July 1, 2003-June 30, 2008) to achieve our goals and fulfill the Division's mission.

B. SUMMARY of PROPOSED ACTIONS and POLICIES

1. PROPOSED ACTIONS

Tables 1 through 5 provide a detailed list of the proposed actions for the planning period, fiscal year 2004 through fiscal year 2008. The Division has identified four major goals for which tasks are identified for completion. These goals are: a) public safety and handicapped accessibility, b) resource protection, c) development and maintenance of park facilities and d) interpretation and education. Each table identifies the priorities for each fiscal year, the time frame for completion and an estimate of financial resources required for the completion of each task. At Manzano Mountains State Park, the emphasis will be on improving the camping opportunities in the park, continuing to provide quality interpretive services and making improvements to the park infrastructure. In FY 04, the Plan calls for an expenditure of \$44,000. The tables also identify expenditures for FY 05 of \$85,000, for FY 06 of \$45,000, for FY 07 of \$41,000 and for FY 08 of \$153,000. None of these funds have yet been appropriated by the state legislature, the United State Congress, or awarded by State Forestry or YCC. The main focus of this Plan will be to fund projects, which will improve the infrastructure of the park and provide services to visitors.

MANZANO MOUNTAINS STATE PARK

TABLE I FY 2004

Goal	Priority	Task	Time frame (FY)	Estimated Costs (\$)	Funding Source*	Page #
1. Public Safety /ADA	1	Construct accessible parking with facilities at the group shelter	04	\$10,000	CIP	21
	2	Rehabilitate the sewer system	04	\$5,000	AOB	24
2. Resource Protection	3	Research, evaluate and develop a forest health plan including tree removal and thinning	04	\$5,000	AOB/ Forestry Division	17
	9	Complete a boundary survey of the park including the study of areas suitable for an emergency exit.	04	\$12,000	CIP	15
3. Develop/ Maintain Facilities	4	Purchase two bear proof trash receptacles and food storage bins for the main campground and the group area	04	\$3,000	AOB	21
	5	Level all sites and improve drainage throughout the park	04	\$3,000	CIP	22
	8	Add four sites to the main campground and eliminate two small sites	04	\$3,000	CIP	21
	7	Replace shelter beams	04	\$1,000	YCC	21
4. Interpretation/ Education	6	Update the trail brochure, construct a bluebird trail kiosk and map all existing trails	04	\$2,000	TRAILS	19
		Total Proposed Expenditures		\$44,000		

Funding source: **AOB** (Annual Operating Budget-Parks Division); **BOAT** (Boating Excise Tax/Motor Boat Fuel Tax/Coast Guard Grant); **BOR** (Bureau of Reclamation Funds); **CIP** (Capital Improvements Program-Parks Division); **DJ** (Dingell-Johnson: N.M. Dept. of Game and Fish); **TRAILS** (Federal Highway Administration Funds); **INM** (Inmate Parks); **IWC** (Inmate Work Camp Program); **PVT** (Private Sector/Volunteers/Friends Groups); **YCC** (Youth Conservation Corps Program); **RV** Electric, **TBD** (To Be Determined).

**MANZANO MOUNTAINS STATE PARK
TABLE II
FY 2005**

Goal	Priority	Task	Time frame (FY)	Estimated Costs (\$)	Funding Source*	Page #
1. Public Safety /ADA	1	Install a double Aspen Vault toilet in the group area, including accessible walks and paths.	05	\$28,000	CIP	21
	2	Install photovoltaic lights at the pay station.	05	\$5,000	RV Electric	23
2. Resource Protection	8	Define a group parking area at the group shelter.	05	\$5,000	CIP	23
	3	Implement the forest health plan on the north side of the park.	05	\$14,000	CIP/ Forestry Division	17
3. Develop/ Maintain Facilities	4	Add tables and grills at sites 33-37 and incorporate those sites into the group shelter.	05	\$5,000	AOB	21
	5	Continue trail upgrade.	05	\$20,000	YCC	19
	6	Replace benches on the trails and install 10 additional benches.	05	\$2,000	AOB	20
4. Interpretation/ Education	7	Construct an amphitheater for interpretive presentations and programs.	05	\$5,000	AOB	19
	9	Update the park bird guide and complete a butterfly survey.	05	\$1,000	TRAILS	18
Total Proposed Expenditures				\$85,000		

Funding Source: **AOB** (Annual Operating Budget-Parks Division); **BOAT** (Boating Excise Tax/Motor Boat Fuel Tax/Coast Guard Grant); **BOR** (Bureau of Reclamation Funds); **CIP** (Capital Improvements Program-Parks Division); **DJ** (Dingell-Johnson: N.M. Dept. of Game and Fish); **TRAILS** (Federal Highway Administration Funds); **INM** (Inmate Parks); **IWC** (Inmate Work Camp Program); **PVT** (Private Sector/Volunteers/Friends Groups); **YCC** (Youth Conservation Corps Program); **RV Electric**, **TBD** (To Be Determined).

**MANZANO MOUNTAINS STATE PARK
TABLE III
FY 2006**

Goal	Priority	Task	Time frame (FY)	Estimated Costs (\$)	Funding Source*	Page #
1.Public Safety/ ADA	1	Install new boundary fence on the north boundary of the park.	06	\$5,000	CIP	15
	2	Reconfigure the park entrance. Remove the old gates and move the park entrance gate to the park boundary. Include a turn-around before the gate.	06	\$15,000	CIP	22
2. Resource Protection	3	Implement the forest health plan in the group shelter area.	06	\$10,000	CIP/ Forestry Division	17
4. Interpretation/ Education	5	Develop a park-wide sign plan.	06	\$10,000	TRAILS/CIP	19-20
	4	Develop an accessible loop nature trail with tactile interpretive signing.	06	\$5,000	YCC	20
Total Proposed Expenditures				\$45,000		

Funding source: **AOB** (Annual Operating Budget-Parks Division); **BOAT** (Boating Excise Tax/Motor Boat Fuel Tax/Coast Guard Grant); **BOR** (Bureau of Reclamation Funds); **CIP** (Capital Improvements Program-Parks Division); **DJ** (Dingell-Johnson: N.M. Dept. of Game and Fish); **TRAILS** (Federal Highway Administration Funds); **INM** (Inmate Parks); **IWC** (Inmate Work Camp Program); **PVT** (Private Sector/Volunteers/Friends Groups); **YCC** (Youth Conservation Corps program); **RV** Electric, **TBD** (To Be Determined).

**MANZANO MOUNTAINS STATE PARK
TABLE IV
FY 2007**

Goal	Priority	Task	Time frame (FY)	Estimated Costs (\$)	Funding Source*	Page #
1.Public Safety /ADA	3	Install improved lighting in the group shelter.	07	\$5,000	RV	21
2. Resource Protection	2	Implement forest health plan in the main campground.	07	\$10,000	AOB/ Forestry Division	17
	6	Perform cultural resource survey	07	\$5,000	TBD	18
3. Develop/ Maintain Facilities	4	Upgrade the existing maintenance shop.	07	\$20,000	CIP	20, 21
	1	Replace tables in the group shelter.	07	\$5,000	AOB	21
4. Interpretation/ Education	5	Inventory mammals, reptiles and arthropods in the park.	07	\$1,000	AOB	17
		Total Proposed Expenditures		\$46,000		

Funding source: **AOB** (Annual Operating Budget-Parks Division); **BOAT** (Boating Excise Tax/Motor Boat Fuel Tax/Coast Guard Grant); **BOR** (Bureau of Reclamation Funds); **CIP** (Capital Improvements Program-Parks Division); **DJ** (Dingell-Johnson: N.M. Dept. of Game and Fish); **TRAILS** (Federal Highway Administration Funds); **INM** (Inmate Parks); **IWC** (Inmate Work Camp Program); **PVT** (Private Sector/Volunteers/Friends Groups); **YCC** (Youth Conservation Corps Program); **RV** Electric, **TBD** (To Be Determined).

**MANZANO MOUNTAINS STATE PARK
TABLE V
FY 2008**

Goal	Priority	Task	Time frame (FY)	Estimated Costs (\$)	Funding Source*	Page #
2. Resource Protection	1	Plant grass, native shrubs and wildflowers in thinned areas.	08	\$3,000	YCC	17
3. Develop/Maintain Facilities	3	Replace existing residence with a double wide.	08	\$50,000	CIP	21
	2	Remodel the office and add a visitor center with exhibits.	08	\$100,000	CIP	20
		Total Proposed Expenditures		\$153,000		

Funding source: **AOB** (Annual Operating Budget-Parks Division); **BOAT** (Boating Excise Tax/Motor Boat Fuel Tax/Coast Guard Grant); **BOR** (Bureau of Reclamation Funds); **CIP** (Capital Improvements Program-Parks Division); **DJ** (Dingell-Johnson: N.M. Dept. of Game and Fish); **TRAILS** (Federal Highway Administration Funds); **INM** (Inmate Parks); **IWC** (Inmate Work Camp Program); **PVT** (Private Sector/Volunteers/Friends Groups); **YCC** (Youth Conservation Corps Program); **RV** Electric, **TBD** (To Be Determined).

2. POLICY DIRECTIVES

The policy directives summarized below have been developed to support and carry out Manzano Mountains State Park's overall mission during the planning period:

- Evaluate and address the health of the forest within Manzano Mountains State Park to reduce fuel loads and improve biodiversity.
- Continue to improve facilities and infrastructure to provide a consistent quality visitor experience.
- Continue to improve interpretive activities, developing Manzano as a mountain nature preserve and environmental education park.
- Continue to operate Manzano as a seasonal park under the management of the Park Manager at the Rio Grande Nature Center State Park (RGNCSP).

II. PARK DESCRIPTION

A. BACKGROUND

Manzano Mountains State Park was established in 1973 as a quiet, secluded mountain retreat, in close proximity to Albuquerque, yet far enough away to provide a relaxing camping or picnicking weekend away from home. The park contains 160 acres of heavily wooded terrain featuring ponderosa pine, alligator juniper and Gambel's oak. The park is located 13 miles north of the Town of Mountainair and three miles from the Village of Manzano (Appendix II).

The State Parks and Recreation Division purchased Manzano from the Candelaria family in 1973 for \$32,000.00. The purchase contained the 160 acres of park land and a 100-foot wide easement of ingress and egress from a public road to the park land.

B. KEY FEATURES

Manzano Mountains State Park lies on the east slopes of the Manzano Mountains, 13 miles north of the Town of Mountainair at an elevation of 7,800 feet. The park contains several species of trees, shrubs and grasses and wildflowers. Numerous species of birds, mammals and invertebrates populate the park, making it an ideal wildlife viewing area. Tree species include the ponderosa pine, one-seed juniper and alligator juniper. Shrubs include the Gambel's oak. The park has a healthy population of Abert's squirrels and many bird species, including the Steller's jay, broad tailed hummingbirds, mountain and western bluebirds, ash-throated flycatchers and black-headed grosbeaks. In spring, many wildflowers carpet the ground and coyotes and bears are frequent visitors.

The primary recreation activities in the park are camping and hiking. Five miles of hiking trails lead from the park into the surrounding Cibola National Forest. The park's proximity to Salinas National Monument makes it a favored camping spot for amateur archaeologists and history buffs. The isolated mountain climate make it ideal for summer get-aways since temperatures generally do not go above 80 degrees during the warmest months.

III. VISITATION AND REVENUE

A. VISITATION

TABLE VI
Annual Visitation

FISCAL YEAR	VISITATION
02	16,268
01	14,712
00	8,793
99	11,498
98	14,052

Manzano became a seasonal park in 1997. Prior to 1997 the park was operated year round with a Manager, a Ranger I and two summer seasonals. As a seasonal park, visitation is limited to April 1 through October 31 each year. A formal survey conducted in 2001 determined that the park was primarily attractive to campers and had very little day use. During the 2002 season, the park conducted a number of interpretive activities and special events, hoping to attract the casual user who might travel from Albuquerque or Santa Fe to attend an activity. Approximately 40% of the park's users are from out-of-state, and use the park as a stopover. The park had a 40% occupancy rate of its reservation electric sites in 2002.

B. REVENUE

TABLE VII
Self-Generated Revenue

Fiscal Year	Revenue	Total
02	13,261	13,261
01	13,256	13,256
00	11,971	11,971
99	15,183	15,183
98	11,917	11,917
AVERAGE	13,117	

Manzano generates an average of \$13,117 annually, as depicted in Table VII above. The park's only source of revenue is through self-generated fees including day-use, overnight camping and the group shelter. Park fees are collected at the self-pay station located at the park entrance and by staff field collections. Day use revenues could be increased through continued expansion of the interpretive and educational programs.

IV. EXISTING OPERATIONS/FACILITIES and PROPOSED ACTIONS

A. OPERATIONS and MANAGEMENT

- **Lands/Realty**

The Candelaria family sold 160 acres to the state for the establishment of Manzano Mountains State Park at a cost of \$32,000. The original tract of land included 160 acres of mountain property and a 100-foot wide, one-mile easement for ingress and egress from the public road to the park boundary. An additional easement containing 2,500 feet was granted later in the year of purchase and provided for public use on the Park's west and south ends. The park is surrounded by private land to the east, north and south and by public land to the west. Since park boundaries are somewhat unclear from the available documents, this plan contains a provision for the survey of existing boundaries and comparison with the existing documents, plats, leases and deeds. The survey will be conducted in fiscal year **2004 at a cost of \$12,000**, using CIP funds. Once the survey is complete, boundary fences will be adjusted, beginning with the north side in fiscal year **2006, with CIP funds at a cost of \$5,000**. The survey will include study of possible areas that developed as emergency exits from the park.

Any adjacent private properties listed for sale in the future will be evaluated for possible acquisition. Factors guiding such acquisition include the protection of the purpose and integrity of the Park and the desire to minimize private development and access to the Park. In addition, all issues concerning land ownership, forest health and cultural resources will be addressed with cooperation and partnership by park neighbors including, EMNRD State Forestry, USFS, local Land Grant Organizations, private concerns and local town organization.

- **Hours of Operation**

Manzano Mountains State Park is open annually from April 1 until October 31. When the park is in operation the gates are open from 7:30 a.m. until dusk. Office hours are 8:00 a.m. to 4:00 p.m., with later hours on weekends when needed. Restrooms are open 24 hours.

- **Maintenance**

Manzano and RGNCSP staff uses the Division's Standards of Care Manual and the Park Operations and Maintenance Manual as the guidance for proper maintenance of the park facilities. The facilities are maintained in a safe and attractive condition for visitor and staff use. Additional maintenance guidance is provided in the Division's Policy and Procedures Manual, Section 11.

- **Emergencies**

Emergencies at Manzano are handled by the staff whenever possible. If additional assistance is needed, the first point of contact is the RGNCSP law enforcement ranger. Additional coverage is available through the Torrance County Sheriff's Office and, in some cases, the Mountainair Police Department and the U.S. Forest Service fire and law enforcement staff. Other emergency procedures may be found in Section 5 of the Parks Policy and Procedures Manual.

- **Regional Support Resources**

The Region I administrative office is located in Aztec, New Mexico. A Regional Manager, an Administrator, a Plant Operations Specialist and a Regional Mechanic support the parks in Region I in the following ways:

The Regional Manager and Administrator provide administrative support for the park.

The regional warehouse purchases supplies in bulk and distributes them to the parks in the region. Specialized tools and equipment are housed at the warehouse and maintained by the Regional Mechanic. The mechanic also assists the parks with vehicle and heavy equipment maintenance and operation when necessary.

The Regional Plant Operations Specialist assists the parks with water/waste water issues and needs.

- **Rules and Policies**

Manzano Mountains State Park uses the standard Division and Department Policies and Procedures manuals for operational guidance. These include the Energy, Minerals and Natural Resources Department Policy Manual, the Division Policy and Procedures Manual and Standards of Use and Care Manual and the Administrative Services Division Administrative and Procedures Manual. The State Personnel Board rules govern the park's personnel procedures. These manuals are updated regularly and are accessible to all park employees.

B. NATURAL RESOURCES

Geology

Manzano lies on the southern end of the Manzano Mountains. The west faces of both the Manzano and Sandia Mountain ranges are made up of Precambrian rock, mostly gneiss and schist. The eastern slopes consist of Pennsylvania sedimentary rock. In the Manzano Mountains, Precambrian rock is pushed up along a reverse fault so that it is partly over the Pennsylvanian rock. Established in the late Cretaceous time, the reverse fault is older than faults that border and shape the Rio Grande Rift. There are no Cambrian, Ordovician, Silurian or Mississippian strata here, having been removed by erosion before the Pennsylvanian rocks were

deposited. In these two mountain ranges there are four discernable periods of uplift. In addition, there were apparently many episodes of fault development.

Within the park, a thin veneer of unconsolidated materials eroded from upslope covers reddish sandstones of the Permian Abo Formation. Boulders of various ages are scattered throughout the park. Some are metamorphic rocks, 1.7 billion years old; others are limestone from the Pennsylvanian Madera Group. The boulders are older than the Abo, on which they now rest. They were moved down slope from the high ridge of the Manzano Mountains, where the older rocks are exposed at the land surface as a result of faulting.

West of the Manzano Mountains, a broad, gently sloping alluvial apron is partly stream-deposited and partly eroded into the mountain base. Visible from the park to the east is the Estancia Basin, the remnants of Pleistocene Lake Estancia, with marks of the old shoreline still visible from the air. Once farmed by early Salinas Pueblo settlers, the basin now continues to deepen as wind erodes what is left of the lake.

Vegetation and Landscaping

Manzano Mountains State Park lies at an elevation of 7,800 feet above sea level. Heavy forest growth in and around the park has created a concern about the lack of biodiversity and the need for forest management to increase plant diversity and improve general forest health.

Dominant plant species identified in the park are ponderosa pine, alligator juniper, one-seed juniper and Gambel's oak. In spring, many wildflowers carpet the ground, even though the thick forest canopy allows little sunlight to reach the forest floor. Sunflowers abound in the open areas around the park in late summer. Flower species include the dwarf lousewort, milkweed, nightshade, sand verbena, and several species of penstemon, scarlet gilia, prairie coneflower and New Mexico locust. Grasses include side-oats grama, blue grama and sheep fescue (Appendix IV).

Because of the heavy forest growth in the park, a four-year program has been undertaken, in conjunction with the EMNRD Forestry Division, to thin the trees throughout the park, beginning with the north side in 2004. The thinning will remove one-seed juniper and thin other trees to allow light to reach the forest floor and reduce the danger of wildfire. Other parts of the park will be thinned in subsequent years. Once the thinning is complete, native grasses, shrubs and wildflowers will be planted in thinned areas. The project is scheduled to begin in the winter of 2004 and will continue for the next three fiscal years funded by the Forestry Division and CIP. **FY 2005 will be completed at a cost of \$14,000, FY 2006 at a cost of \$10,000, and FY 2007 at a cost of \$10,000.** The final phase will consist of a planting project by the YCC in **FY 2008 at a cost of \$3,000.**

Wildlife

Manzano supports a healthy population of birds, insects and mammals. Mammals routinely sighted in and around the park include coyotes, black bear, cougars, Abert's squirrels, white-footed mouse, raccoons, deer and elk. A complete survey

of the mammals, reptiles and arthropods will be completed in fiscal year 2007, through the park budget at a **cost of \$1,000**.

The park bird list includes a variety of raptors including Cooper's hawk, northern goshawk, Swainson's hawk, red-tailed hawk and American kestrel. Wild turkey have also been sighted in the area. Hummingbirds are a great draw for visitors in summer with the broad-tailed and migrant rufous the most numerous. The park features a bluebird trail and visitors are treated to weekly birding trips to count and document the contents of bluebird nesting boxes throughout the park. Western scrub jays, Steller's jays, crows, Say's phoebes, western tanager, black-headed and evening grosbeaks, mountain chickadee and nuthatches are also regular visitors to the park bird feeders. A new park birding guide will be completed and published in fiscal year 2005, through the trails grant, in conjunction with a butterfly survey, at a total **cost of \$1,000**.

Butterflies and moths are another area of wildlife which has special significance at Manzano. Although no systematic inventory of these species has been done, butterfly counts have been conducted over several summers (see Appendix V). One positive result of these counts has been the discovery of the southeastern most sighting of the Spalding's buckwheat blue butterfly. There are several other species of butterflies and many fascinating species of moths sighted in the park. Volunteers will be recruited to document these residents through a survey identified for completion in fiscal year 2005, as noted above.

Natural Resource Inventory

It is obvious that a comprehensive inventory of the plant and animal life in Manzano is needed. A baseline inventory should be completed before the thinning project to document the current condition and monitor the changes over time as the park improves in forest health and biodiversity.

C. CULTURAL RESOURCES

Cultural Resource Management

Cultural resources within the park boundaries are subject to state cultural resource protection laws. Development within the park will be coordinated with the State Park Cultural Resources Planner to avoid any impact to any significant cultural resources. Recent cultural resource surveys have produced no significant cultural resources within the park boundaries.

Cultural Resource Inventory and Archaeological Remains

A cultural resource survey of a total of 80 acres has been conducted at the park in fiscal year 2000 and fiscal year 2002. A Cultural resource survey for the rest of the park will be completed in FY07 at a cost of \$5,000 funded through TBD.

Although no culturally significant sites or remains have been identified within the park boundaries, the potential exists for such discoveries. The Manzano area has a long history of population dating back to the Archaic period from 6,000 B.C. to 400 A.D. During this time period the upland regions of the Rio Grande valley

experienced an increase in population resulting in expansion of populations through Tijeras Canyon and along Abo Pass at the Manzano Mountains southern periphery. The actual history of the Mountainair area from 400 A.D. to 1325 A.D. is not well documented, but some material evidence indicates that the communities such as Tijique, Chilili and Quarai were established sometime during this time period.

In the late 1580s, Don Antonio de Espejo explored the east side of the Manzano Mountains and visited several pueblos. He documented extensive agricultural fields, woven cotton and the presence of domestic turkeys in the small villages. As early as 1820, Spanish and European homesteaders left the expanding communities in the Rio Grande valley and sought out less populated areas. In the 1800s, the Spanish government designated many land allotments in the form of land grants. Along the eastern edge of the Manzano Mountains, three such grants are still in existence today at Chilili, Torreon and Manzano. By 1850 the community of Manzano was the largest settlement on the eastern slopes. At least three mines were in operation near Manzano Mountains at that time, producing silver, copper and iron. Much of the Manzano Mountains were declared federal lands in 1931 and are managed by the Cibola National Forest.

The ruins of the Salinas civilizations are located within a twenty-mile radius of Manzano Mountains State Park. The Salinas Pueblos were the thriving settlements of Tiwa and Tompiro speaking Puebloan cultures in Central New Mexico. These pueblos became Spanish colonial missions in the Salinas Pueblos Mission National Monument, encompassing the pueblos of Abo, Quari and Grande Quivira. This monument and the Spanish settlements at Manzano and other surrounding towns point to the long history of settlement in the Manzano Mountains.

D. INTERPRETATION and EDUCATION

In 1998 Manzano Mountains State Park was placed under the management of the RGNC State Park in Albuquerque. One reason for this administrative change was the opportunity for expanding the RGNCSP interpretive and educational programs into a mountain setting. The natural and cultural history of the river and the mountains in the area create an ideal educational opportunity for the two parks. Interpretive programs are held weekly throughout the summer at the park and focus on the cultural history of the area, the natural resources, birds and other wildlife. Because of the high incidence of bear sightings in the park, a bear safety program is also a regular feature.

The park does not have an ideal venue for program presentation. Over the past few years, programs have been presented on the grounds adjacent to the restrooms and office. Some have also been presented at the group shelter, but this is difficult if the shelter is reserved by a group. An amphitheater is planned for construction in fiscal year **2005 at a cost of \$5,000** through the park budget. It will be located to the south of the main campground adjacent to the nature trail.

The bluebird trail has been a very popular activity this summer and it will be expanded next year with the construction of a kiosk where results of the counts can be posted, along with information about the birds, their nesting habits and the habitat which supports them. Also needed is an improved birding guide. The trail and kiosk will be completed in fiscal year 2004, using trails grant funds, **at a cost of \$2,000.**

Since Manzano has no water resources within the park, the five miles of hiking trails are a major recreational draw for visitors. A Youth Conservation Corps (YCC) project in 2002 made significant improvements to the hiking trails within the park. In fiscal year 2005 this upgrade will continue using the YCC program at a **cost of \$20,000.** Signs are now needed to interpret the trails and to provide better directions along the pathways. In fiscal year 2006 a study will be completed that will evaluate the current signs within the park and determine which signs need to be replaced or upgraded to create uniform signs throughout the park and the trail system. The cost for this project is **estimated at \$10,000** and will use trails grant funds and CIP sign funds.

A trail guide to the entire area would make the walking area more interesting and educational. Because of the length of the trails and the terrain, several benches have been installed along the trails. Over the years these have become weathered and need to be replaced. In fiscal year 2005, the trail will be evaluated for location, replacement and installation of ten benches at a cost of 2,000 funded through the park budget.

Since these trails are difficult and are not accessible, a handicapped accessible loop is planned for the nature trail that will include tactile interpretive signing as well as written text. This project is scheduled for completion as a YCC project in fiscal year **2006 at a cost of \$5,000.**

E. FACILITIES and STRUCTURES

- **Concessions** – Manzano has no concessions and none are planned as part of this document.
- **Education** – Education is an important part of Manzano’s program. There is no formal visitor center, but part of the office has been developed into an informal visitor area with a sandbox containing animal tracks, plaster casts of animal tracks and other objects of interest found within the park. A book containing photographs of the park’s trees, flowers and animals is also available for visitor use. Brochures about State Parks, the surrounding forest and the Salinas National Monument are on display.

Outside there is a wildlife habitat area containing a small pond, a bird feeder and a hummingbird feeder. Visitors are encouraged to watch the birds and other wildlife in this area.

At the trailhead, a mailbox contains the self-guided trail brochures and the park bird list. A kiosk is planned to introduce visitors to the bluebird trail and provide information about the nesting boxes. It will be installed in fiscal year **2004 at a cost of \$2,000**, funded through the park budget.

- **Administration/Staff** – The park office and restroom building were renovated in the winter of 2002-2003 to improve handicapped accessibility and address drainage and flooding problems. The office, restrooms and storage should be adequate for the near future. There is a future need for a better visitor center. This project has been proposed for consideration as a CIP funded project in fiscal year 2008 at a **cost of \$100,000**.

The park shop is currently unheated and needs to be upgraded. The building, itself is adequate, but some changes are needed to make it more useable. This includes insulation, replacement of windows, a new worktable and new heater. Improvements to the shop will be funded through CIP and are scheduled for completion in fiscal year **2007 at an estimated cost of \$20,000**.

An old mobile home now serves as housing for the summer seasonal/winter caretaker. The house has inadequate plumbing and electrical fixtures and needs to be upgraded. Replacement of the mobile home with a doublewide is proposed for fiscal year **2008 at a cost of \$50,000** funded through CIP.

- **Group Camping Area** – The Park has a large group camping and overflow camping area with 20 campsites. These are developed with parking areas only and have no tables, grills or other amenities. In fiscal year 2004 an accessible parking area will be installed at the group shelter with CIP funds at a **cost of \$10,000** to facilitate wheelchair access to the shelter. The old grills will be replaced and bear-proof trashcans and food storage facilities are proposed for the same year at a **cost of \$3,000** funded through the park budget. There are currently fifteen sites in the group shelter area. Some of these are very small and are located closer to the main campground than to the group shelter. Four of these small sites on the east end of the group area will be added to the main campground as tent sites and two small, unusable sites will be eliminated. This project is scheduled for fiscal year 2004 at a **cost of \$3,000**, funded through CIP.

In fiscal year 2005, CIP will fund the following projects. A double Aspen Vault toilet will be installed in the group area at a cost of \$28,000 and a new parking area will be established, at a cost of \$5,000, combining two campsites into a six-car parking area. Tables and grills will be added to sites 33 through 37 in fiscal year 2005 at a cost of \$5,000. Lighting at the group shelter will be upgraded by the RV Electric crew at a cost of \$5,000 and the tables in the shelter will be replaced in fiscal year **2007 at a total cost of \$5,000**.

- **Main Campground** – In addition to the road drainage improvements noted elsewhere in this plan, work will continue to install timbers and gravel to the existing sites in the main campground and beams will be replaced on the shelters in fiscal year 2004 as a future YCC project. Total cost of the beam replacement project is **estimated at \$1,000**.

F. EQUIPMENT

- **Communications** – Communications equipment at Manzano is currently inadequate. A new base station has been ordered for the park but has not yet been installed. The park has one hand-held radio and a mobile in the park vehicle. There is a telephone/fax machine in the office, but there is no computer and no Internet access available. The phone is often affected by weather, especially heavy rain or snow, and is sometimes out of service for several days at a time. The park needs a good base station, adequate telephone lines and a computer with Internet access and e-mail. As things stand right now, the park is often out of touch with the administration at the RGNCSP and with available law enforcement personnel.
- **Field** – The Park has limited field equipment and is supported by equipment from the Region and the RGNCSP. A compressor and a utility vehicle are the only items in the park over \$500.00 in value. A new utility vehicle is needed as it is used for trash pickup and field collecting to save fuel and wear and tear on the park's only truck. The park also needs a vehicle operated pressure washer, an operable chain saw and other small power tools. These items will be provided through the Regional budget when funds are available.
- **Office** – The office currently has only one telephone/fax machine valued at less than \$500.00. The only need is for a computer with Internet access. The park has seven reservation sites and the seasonal and camp host must use their own computers and Internet providers to access the reservation information or rely on the RGNCSP staff to relay the information to them by fax.
- **Vehicles/Boats** – The Park uses a Chevrolet S-10 assigned to the RGNCSP when the park is open. The truck is kept at the RGNCSP during the winter months. A small trailer is used to haul trash to the dump and a Haulmaster utility vehicle is used for everyday work within the park. The utility vehicle needs to be replaced as it has been determined that it needs a motor. There are no boats, ATVs or other vehicles.

G. TRANSPORTATION and ACCESS

- **Roads** – The park entrance is located approximately one mile from County Road 331. When the park was purchased the Division obtained a 100-foot wide easement for ingress and egress from County Road 331 to

the park boundary. Since lands adjacent to the road are privately owned, there is a combination lock on the gate, rather than a Division lock. The park gates are located one mile from the actual park entrance. In fiscal year 2006 the gates will be relocated to the park entrance and a turn-around will be installed and funded by CIP at a **cost of \$15,000**. New directional signs will be added on County Road 331 to direct visitors to the park and to advise them when the park is closed. This project will be funded in fiscal year 2006 by CIP at a **cost of \$3,000**.

Within the park there is a loop road, a road into the group shelter and overflow camping area and a road to the shop and house. As a mountain park, Manzano often experiences heavy rains in the summer, which cause some erosion and drainage problems on the roads. These drainage problems will be addressed in fiscal year 2004 at a **cost of \$3,000** funded by CIP. The road is graded each spring before the park opens and the State Highway and Transportation Department grades the entrance road as requested.

The park Iron Ranger and pay station are located on the main entrance road. This area will be lighted in 2005 using a photovoltaic system at a **cost of \$5,000** funded by RV.

- **Parking** – No parking areas exist within the park, but this plan identifies a new area at the group shelter that will be developed for parking for the shelter. In fiscal year 2005, four campsites in the group area will be converted into a parking area large enough to accommodate about six cars. Cost for this project is **estimated at \$5,000** and will be funded by CIP.
- **Trails** – The Park currently has five miles of hiking trails that includes a short nature loop. In the summer of 2002 a YCC project made significant improvements to several sections of the trail, including replacement of eroded sections with switchbacks. The exact length of the trail is unknown and will be mapped in the fall of 2004 using a Global Positioning Satellite System. In early fiscal year 2004 a new map and signage will be added at a **cost of \$2,000** through the Trails Grant to more accurately reflect the direction and length of each trail. Additional work is needed to complete the trail upgrade and will be completed by future YCC projects.

H. UTILITIES

Water – Water is always an issue in New Mexico and Manzano is no exception. The park has two wells that provide water to a large storage tank behind the office. These wells and tanks have, so far, proved adequate in the supply of water, but continued drought could pose a threat to the park's water supply. There is a need to review the placement and adequacy of the wells and explore other areas in the park for additional water supplies.

Electricity – Electricity is provided by the Central New Mexico Electric Cooperative. Lines are above ground and extend over the entrance road. The system appears adequate for park needs and no significant problems have been encountered.

Sewage – Another area of concern is the dump station and sewage lagoon. The lagoon is no longer adequate and is being assessed in the winter of 2003 to determine its capacity and the capacity of the adjacent leach field.

Numerous problems have been encountered in recent years with the sewage lines from the park restrooms to the sewage lagoon. There is a 90-degree turn in the line that clogs on a regular basis, especially when the park is very busy. The turn is approximately 100 feet from the bathroom and can only be cleared with the use of a power snake. Since the park does not have a 100-foot snake, it is necessary to either borrow one from another park or call a commercial plumber. In fiscal year 2004, the lines will be dug up and a clean out added in the area of the turn in the line at a **cost of \$5,000**, funded through the park budget. This will eliminate the need for the park to have a power snake and make cleaning out the clogs easier.

Phone – The service provider for the telephone system is Qwest. The current telephone system is often affected by weather, particularly rain and snow. Sometimes the park phone may be down for days at a time until the phone company can address the outage. The telephone system needs to be assessed to replace and repair lines that are damaged or broken. Other avenues of communication, such as radios and cell phones, will be explored.

V. STAFFING and BUDGET

A. STAFFING

Staff at Manzano consists of two seasonal positions. One position is currently funded from April 1 to November 1, and the second from May 15 to September 15. Administration of the park is handled through the RGNCSP. The Park Manager at RGNCSP administers all funds, prepares cash remittance reports and manages inventory, purchasing, invoicing and personnel issues. Day to day operations in the park are performed by the seasonal staff with assistance from RGNCSP maintenance personnel. The seasonal staff conducts interpretive activities with assistance from the Regional Interpretive Ranger. The park has full hookups for two volunteer campground hosts. In the past several years these volunteers have been an integral part of the park operation and have managed the reservation system for the park. One seasonal remains in the park in the off-season as a volunteer/caretaker to provide protection and minor maintenance. A variance has been approved that will allow the seasonals and volunteers to pull the self-pay tubes on a daily basis and place the unopened envelopes in the safe. One seasonal will then deliver the envelopes to the RGNCSP every Sunday for preparation of the cash remittance report.

It has been recommended that one seasonal position be reclassified as a nine-month seasonal position to facilitate the preparation of the park for the opening and complete projects after the park closes.

B. BUDGET

The RGNC State Park staff manages Manzano Mountains State Park with two seasonal positions assigned to Manzano. The operating budget is approximately \$16,000 to \$18,000 per year, exclusive of salaries. Few capital improvements were been made in the park until fiscal year 2002, when electricity was added to several sites and the main campsites were graded and graveled. The YCC completed major trail work and the restrooms were remodeled for compliance with the Americans with Disabilities Act. Operating budgets will be impacted heavily in the first two years of this plan as improvements are made in the sewer system and the group camping area. The last three years of the plan will involve mostly capital improvement budgets and YCC projects. Future work will be dependent on the availability of CIP and YCC funds. The following table illustrates the budget for Manzano for fiscal years 1998 to 2002.

TABLE VIII

FISCAL YEAR	BUDGET	EXPENDITURES
98	46,287	46,277
99	34,507	34,463
00	22,945	22,636
01	27,595	27,207
02	24,676	24,324

**Manzano Mountains State Park
Cultural Resource Protection Laws
Appendix I**

The following cultural resource protection laws are applicable to Manzano Mountains State Park, which is owned by Energy, Minerals and Natural Resources Department, State Parks Division, a state agency. Each law has a direct bearing on the management of the park. Park personnel should reference the Cultural Resources Guidelines for New Mexico State Parks for more detail regarding the documentation, protection and preservation of cultural resources.

Federal

Native American Grave Protection and Repatriation Act of 1990 (25 USC § 3001). This act protects Native American human remains, funerary objects, sacred objects and objects of cultural patrimony. It prohibits the sale, purchase or use or transport for sale or profit, the human remains of a Native American. The law outlines the procedures in the event of an inadvertent discovery of a Native American burial as well as the relinquishment of control of such items to the appropriate Native American group.

National Register of Historic Places, 36 CFR Part 60. This is the official federal list of districts, sites, buildings, structures and objects significant in American history, architecture, archaeology, engineering and culture. These properties must have historic significance and integrity and must meet at least one of the following criteria: association with significant events; association with important persons; distinctive design or physical characteristics; or potential to yield information important in history or prehistory.

State

New Mexico Cultural Properties Act (NMSA 1978 §18-6-1 to 18-6-17). This act recognizes that the historical and cultural heritage of the state as one of the state's most valued and important assets. It indicates that the neglect, desecration and destruction of historical and cultural sites, structures, places and objects results in an irreplaceable loss to the public. It establishes the New Mexico Historic Preservation Division (HPD) to maintain the New Mexico Register of Cultural Properties (similar to the National Register) and to review of state projects to determine effect upon significant historic properties. This law prohibits unauthorized excavation, injury or damage to cultural properties located on state land. It requires excavation and burial permits and assesses criminal and/or civil penalties for unlawful excavation of cultural properties or burials. Finally, this law requires that site location remain confidential.

New Mexico Prehistoric and Historic Sites Preservation Act (NMSA 1978 §18-8-1 to 18-8-8). This law states that no public funds of the state shall be spent on any program that requires the use of any portion of land from a significant prehistoric or historic site unless there is no feasible and prudent alternative and unless the project includes all possible planning to preserve and protect the cultural property.

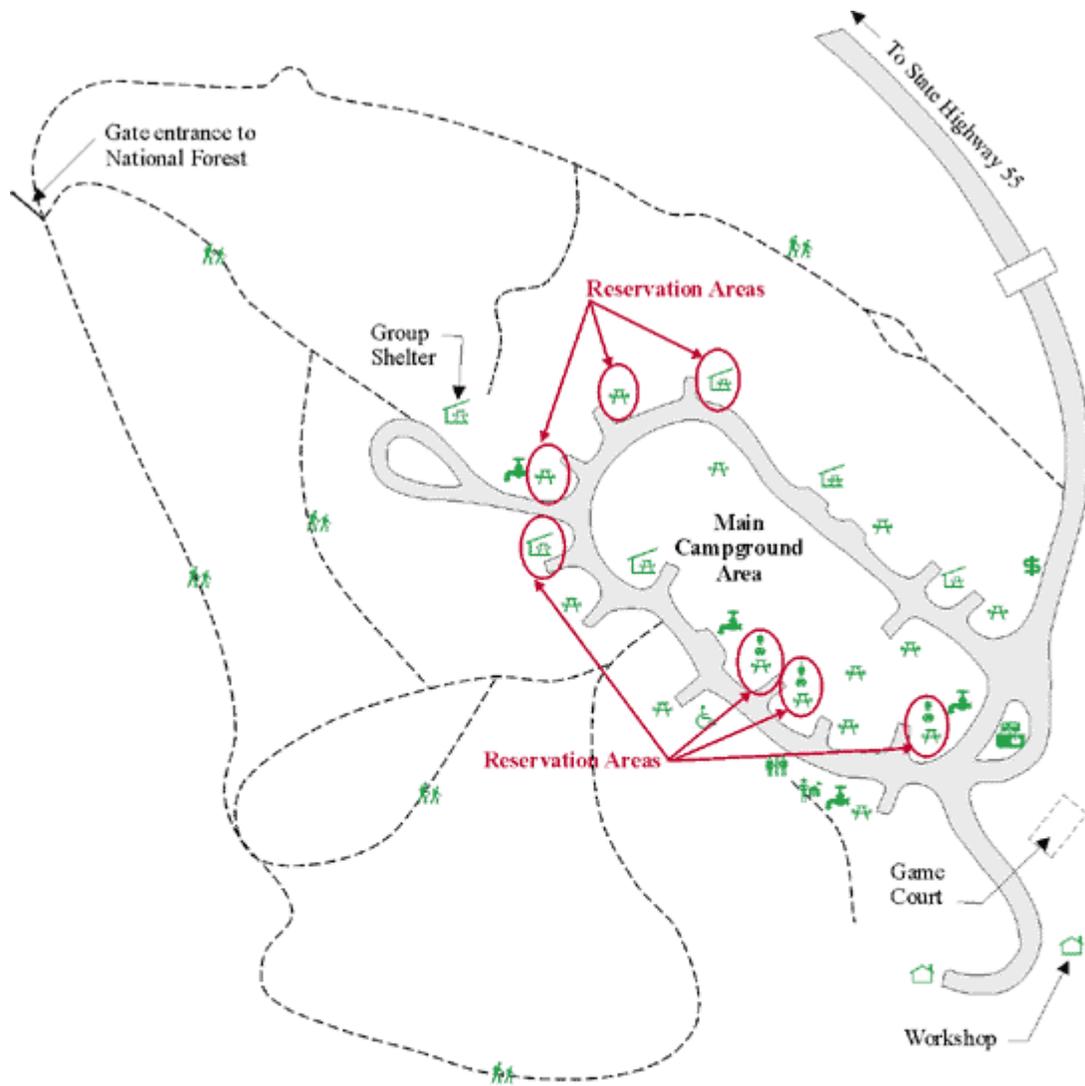
New Mexico Cultural Properties Protection Act (NMSA 1978 §18-16A-1 to 18-6A-6). This law requires state agencies to establish a system of professional surveys of cultural properties on state

lands. State agencies are required to cooperate with the Historic Preservation Division to ensure that cultural properties are not inadvertently damaged or destroyed.

**Manzano Mountains State Park
Location Map
Appendix II**

Manzano Mountains State Park
 Site Map
 Appendix III

MANZANO MOUNTAINS



Manzano Mountains
 State Park

Legend		N
	...Park Office	
	...Park Residence	
	...Shelters	
	...Tables	
	...Rest Rooms	
	...Water Hydrants	
	...Dump Station	
	...Electrical Hookup	
	...Handicap Site	
	...Pay Station	
	...Hiking Trail	

Manzano Mountains State Park
Appendix IV

Plant Species

Cholla
Prickly pear cactus
Pincushion cactus
Claret-cup cactus
Banana yucca

Cacti and Succulents

Opuntia imbricata
Opuntia polycantha
Mammalaria wrightii
Echinocereus triglochidiatus
Yucca bacata

Alligator juniper
One-seed juniper
Piñon
Ponderosa pine
Gambel's oak

Tree species

Juniperus deppeana
Juniperus monosperma
Pinus edulis
Pinus
Quercus gambeli

Hairy golden aster
Annual goldenweed
Perky Sue
Oregon grape
Mountain parsley
Snakeweed
Prairie coneflower
Western wallflower
Mullein
Purple mountain penstemon
Nightshade (horse nettle)
Nodding onion
New Mexico thistle
Richardson's penstemon
Dragonhead (mint)
Day flower
Sand verbena
Scarlet gilia
Fendler rose
New Mexico locust
Dwarf lousewort
Easter daisy
Apache plume
Fleabane
Alpine daisy
Four-wing saltbush
Algerita
Three-leaf sumac

Flowers and Shrubs

Heterotheca villosa
Macheranthera gracillus
Tetranneuris argentea
Berberis repens
Pseudocymopterus montanus
Gutierrezia sarothrae
Ratibida columifera
Erysimum capitatum
Verbascum thapus
Penstemon strictus
Solanum elaeagni-folium
Allium cernuum
Cirsium neomexicana
Penstemon spp.
Dracocephalum parviflorum
Commelina dianthifolia
Abronia fragrans
Ipomopsis aggragata
Rosa fendleri
Robina neomexicana
Pendicularis spp.
Townsendia excapa
Fallugia paradoxa
Erigeron divergens
Erigeron simplex
Atriplex canescens
Berberis fremontii
Rhus trilobata

Side-oats grama
Blue grama
Sheep fescue
Johnson grass
Foxtail barley
Ring Muhly

Grasses

Bouteloua
Bouteloua gracilis
Festuca ovina
Sorghum halepense
Hoedeum jubatum
Muhlenbergia torreyi

**Manzano Mountains State Park
Appendix V**

**Butterflies Recently Reported
from
Result of Count on July 9, 2000 and
Observations on August 13, 2002
Steven J. Cary**

Common Name	Scientific Name	No. Seen	Comments
Funereal duskywing	<i>Erynnis funeralis</i>	1	
Afranius duskywing	<i>Erynnis afranius</i>	8	
Common checkered skipper	<i>Pyrgus communis</i> complex	1	
Some sootywing	<i>Pholisora</i> sp.	2	
Golden skipper	<i>Poanes taxiles</i>	1	
Dun skipper	<i>Euphyes vestris</i>	1	
Oslar's roadside skipper	<i>Amblyscirtes oslari</i>	1	
Red-headed roadside skipper	<i>Amblyscirtes phylace</i>	2	
Eastern black swallowtail	<i>Neophasia menapia</i>	30	
Orange sulfur	<i>Colias eurytheme</i>	8	
Sleepy orange	<i>Eurema nicippe</i>	1	
Colorado hairstreak	<i>Hypaurotis crysalus</i>	1	
Juniper hairstreak	<i>Mitoura grynea siva</i>	1	
Gray hairstreak	<i>Strymon melinus</i>	1	
Marine blue	<i>Leptotes marina</i>	6	
Western tailed blue	<i>Everes amyntula</i>	2	
Spalding's buckwheat blue	<i>Euphilotes spaldingi</i>	1	southeastern most colony*
Melissa blue	<i>Lycaeides melissa</i>	1	
Acmon blue	<i>Plebejus acmon</i>	3	
Variiegated fritillary	<i>Euptoieta claudia</i>	1	
Fulvia checkerspot	<i>Thessalia fulvia</i>	1	+ 15 larvae
Mourning cloak	<i>Nymphalis antiopa</i>	1	
Large wood nymph	<i>Cercyonis pegala</i>	8	
Queen	<i>Danaus gilippus</i>	1	

*This blue was seen near the park entrance, nectaring at *Eriogonum racemosum*, a plant on which it also depends for its larval food. This plant occupies sunny, grassy meadows in piñon-juniper savannas. Long-term survival of this butterfly depends on periodic wildfires to clear areas overgrown with trees, thereby creating habitat for the racemose buckwheat, its caterpillar food. In the absence of fire, mechanical thinning of trees to create and maintain sunny meadows should be a routine part of park operations.

Manzano Mountains State Park
 E6SE Form
 Tools and Small Equipment (items \$200.00 to \$1,000.00)
 Appendix VI

				Replacement	Purchase	Current	Est. Hours	Condition	Estimated Replacement	Date Last PM	Other/ Deleted
	Make	Model #	Serial #	Cost	Date	Hours	Per Year	Good/Fair/Poor	Date	Completed	From Inv.
Shop Tools											
Battery Charger	Sears			\$250.00	UNK			Fair			
Air Compressor	Speedair	4YN50	L46001000	\$375.00	FY01		15	50New			
			76								
Ground Tools											
Mower - Push-Gas	Toro	TC5000	5D249181	\$250.00	1988	600		50Fair			
Weedeater - Gas	Speedair	32427	988704	\$300.00	UNK	NA	NA	Poor			
Traffic Counter	JR	Model 163			1999	NA	NA	Fair			

Net Value: \$1,175.00