

LAND and RESOURCE MANAGEMENT PLAN

MONITORING REPORT

Fiscal Year 2001



This Monitoring Report assesses implementation of the Land and Resource Management Plan (Plan) for the Pike and San Isabel National Forests, Comanche and Cimarron National Grasslands (PSICC). The Plan, which was approved in September 1984, lists the monitoring requirements in Chapter IV. This report discloses the monitoring that has been conducted.

TABLE OF CONTENTS

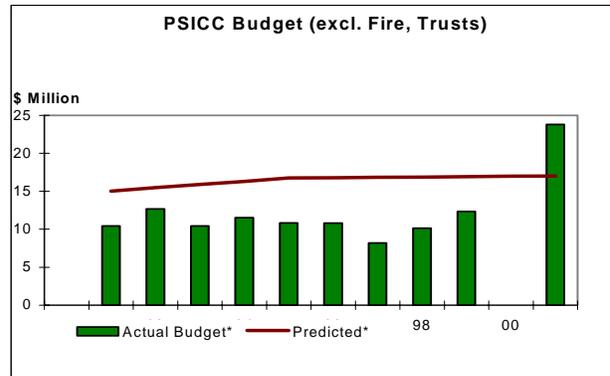
INTRODUCTION	3
PHYSICAL COMPONENTS	4
Soils and Water Resources.....	4
Air Resources.....	6
Mineral Resources	6
BIOLOGICAL COMPONENTS	7
Wildlife, Fisheries & Rare Plant Resources.....	7
Range Condition and Use	10
Forest Condition and Use.....	11
Fuel Treatment.....	13
SOCIAL COMPONENTS	14
Recreation	14
Developed Recreation.....	14
Winter Sports	16
General Forest Areas.....	16
Heritage Resources	17
Visual Quality Objectives.....	18
Transportation & Travel Management.....	18
ECONOMIC COMPONENTS	19
Capital Investments.....	19
Returns to U.S. Treasury.....	19
Payments to Counties.....	20
AMENDMENTS TO THE LAND MANAGEMENT PLAN	21
Existing Amendments.....	21
Potential Amendments/Need for Change.....	22
SUMMARY EVALUATION AND CONCLUSIONS	24
CERTIFICATION	24
REFERENCES	25
APPENDICES	26
PSICC Revenues.....	26
Timber Harvest History (<i>Cutting Method and Acres Harvested</i>)	27
COVER TYPE & CUTTING METHOD	27

INTRODUCTION

The Pike and San Isabel National Forests, Cimarron and Comanche National Grasslands (PSICC) includes 2.8 million acres of public lands. These units are located in central and southeastern Colorado, and in southwestern Kansas. Management of the PSICC is highly complex because its units span a variety of ecosystems, social settings, and economic spheres. Additionally, management of the PSICC must be integrated with the needs of two state governments and 17 counties.

The PSICC Land and Resource Management Plan (Plan) was developed with a focus on resource needs and the desires of the various publics being served. Predicted rates of accomplishment were assumed to be commensurate with the needs identified at that time (1984). As is apparent in many of the following sections, implementation has not kept pace with predicted rates. The accompanying chart shows a comparison of predicted budgets with funds actually received for National Forest System operations and construction. The discrepancy is striking, and future projections are not expected to show improvement. *The budget figures in the chart exclude fire and trust fund dollars, because these funds are extremely variable and are outside of the constrained budget for National Forest operations and maintenance.

The PSICC has compensated for fluctuating budgets by forming partnerships with others who are interested in the management of public lands. Within available funding, the Plan's goals are being pursued, though specific objectives are not being achieved at the expected rate.



A note on terminology: Various charts appear on the following pages. The following terms are used in the legends of some of those charts:

- Objective** - Plan Objective
- Prediction** - Predicted in Environmental Impact Statement (EIS) for the Plan
- AUM** - Animal Unit Month, describes grazing outputs (1AUM = 1 cow for 1 month)
- FY01** - The federal Fiscal Year (FY) is from October 1, 2000 – September 30, 2001
- MRVD** - Thousand Recreation Visitor-Days, describes use (1 visitor day = 12 hours)
- MPAOT** - Thousand Persons At One Time (PAOTs describes the capacity of campgrounds and other developed recreation sites, 1 campsite = 5 PAOTs)
- MMBF** - Million Board-Feet, used to describe timber program outputs (1 Board Foot = an area that is 1 foot long x 1foot wide x 1 inch thick)

A note on data gaps: Some of the following charts may appear to be missing outputs where some would be expected. These are data gaps caused by changes in reporting procedures, making data compilation for this report difficult. In addition, the FY2000 budget structure was updated in FY2001 – combining, creating, or eliminating certain funds. Only those changes that occurred are shown in the following table:

FY2000 Fund	FY2000 Program Name	FY2001 Fund	FY2001 Program Name
-------------	---------------------	-------------	---------------------

N/A	N/A	SPIA	Forest Resources Information & Analysis
NFRM	Recreation Management	NFRW	Recreation/Heritage/Wilderness
NFWM	Wilderness Management		
NFHR	Heritage Resource Management		
NFWL	Wildlife Habitat Management	NFWF	Wildlife and Fisheries Habitat Management
NFIF	Inland Fisheries Habitat Mgmt		
NFAF	Anadr. Fisheries Habitat Mgmt		
NFTE	TE&S Species Habitat Mgmt		
NFTM	Timber Sales Management	NFTM	Forest Products
NFRV	Rangeland Vegetation Mgmt	NFVW	Vegetation and Watershed Management
NFFV	Forestland Vegetation Mgmt		
NFSO	Soil, Water, Air Operations		
NFSI	Watershed Improvements		
NFLA	Real Estate Management	NFLM	Landownership Management
NFLL	Land Line Location		
PACF	Rec Facility Const	CMFC	Facilities Capital Improvements and Maintenance
PACF	Research Facility Const		
PACF	FA&O Facility Const		
PACF	Facility Const/Reconst Subtotal		
PAMF	Rec Facility Maintenance		
PAMF	Research Facility Maint.		
PAMF	FA&O Facility Maint		
PAMF	Facility Maintenance Subtotal		
PARD	Road Construction	CMRD	Roads Capital Improvements and Maintenance
PAMR	Road Maintenance		
PATC	Trail Construction	CMTL	Trails Capital Improvements and Maintenance
PAMT	Trail Maintenance		

PHYSICAL COMPONENTS

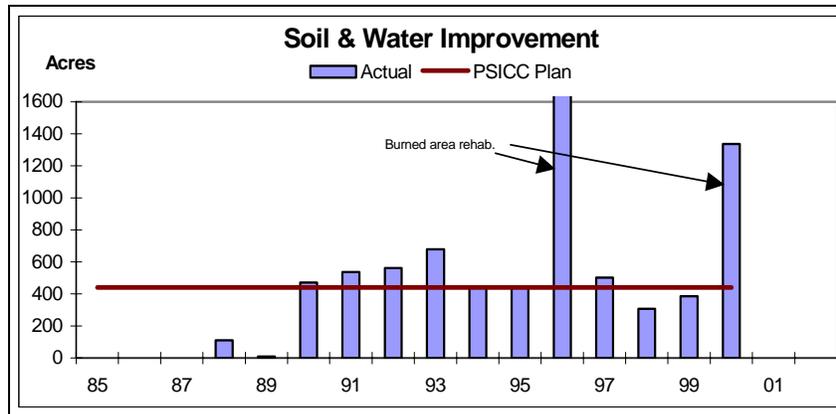
Soils and Water Resources

The soils resource program develops technical soils information for resource management and planning, to manage soils for sustained productivity as identified in the National Forest Management Act (NFMA). Most activities related to Plan implementation require the use of interpretative information to provide advice regarding the soils resource and its response to management and use. The monitoring of this program is divided into three major functions; soils inventory, soils and water improvement, and soil and water quality monitoring.

Soils Inventory – is recognized as a prerequisite to land management planning and implementation. Baseline data collection is a fundamental requirement to support the resource management mandates identified in NFMA. Modern soils inventories use an integrated approach to describe and map biotic and abiotic features consisting of geology, landforms, climate, vegetation and soils. Soil surveys in eight major areas on the PSICC have been conducted in cooperation with other Federal and State agencies. Each survey area differs in quality of mapping, available interpretations, and status. Three of the areas have modern published surveys. PSICC has completed the mapping, draft manuscripts, and interpretations for the remaining five survey areas.

Soil and Water Improvement Program - The future use of Federal lands depends upon the protection and maintenance of the soils and water resources. Improving the conditions of watersheds is important for maintaining the long-term health of the forests and grasslands. The goals of the program are to identify watershed condition, prescribe and implement land treatments, and in some cases to modify land management to: protect life and property, protect and improve water quality consistent with the Clean Water Act, reduce or minimize erosion

and sediment damage, improve species habitat, increase long-term soil productivity, and ensure long-term health and sustainability of watersheds given the variety of demands on the land. The Plan direction includes improving 440 treated or 1200 affected acres each year. The chart below shows treated acres. PSICC has implemented over 400 soil and water improvement projects since the Plan was signed in 1984. These improvements have led to more than 6000 acres of treated or improved land excluding burned area rehabilitation (see below).



Over the past 15 years, projects have emphasized improving watersheds and stream systems that are exceeding State and Federal water quality thresholds and standards for sedimentation. Although the PSICC is making progress in restoring degraded watersheds, much work remains to be done.

Burned Area Rehabilitation - There have been three wildfires approved since 1996 for burned area emergency rehabilitation (BAER) funding (Buffalo Creek, Big Turkey and Hi Meadow fires). The rehabilitation of these fires was in addition to Plan level of watershed improvement projects. More than 8000 acres have been rehabilitated with a variety of treatments, including scarification, revegetation and seeding, overland flow reduction, and sediment transport reduction treatments using straw wattles, log erosion barriers and directional felling. The largest of the three fires was the Buffalo Creek Fire, which burned 12,000 acres. The fire was followed by two major flood events that caused additional erosion and further degraded the watershed. The watersheds affected by these burns have been monitored for two to five years to determine if additional treatments are needed to reduce potential losses in downstream water quality.

Soil and Water Quality Monitoring - Soil and water quality monitoring provides the resource manager with information regarding the effects of management decisions and activities on soils and water resources. The Plan standards and guidelines, and State and Federal regulations provide the long-term management objectives, direction and actions for protection of forest and grassland soils and water resources. Soils, Hydrology, and Fisheries specialists working on the Inland West Watershed Assessment (IWWI), completed this effort in 2000. Intensive sediment and flow data have been collected on three streams to determine sediment-flow relationships within three hydrographic regions on the PSICC. Ongoing monitoring of the 60+ Colorado Monitoring and Evaluation listed streams on the Forest, and of the 303d listed streams is occurring. Effort has been put into getting the NRIS database up and running on the Forest.

Soil Quality Standards have been established in Region 2 to provide threshold values to document major reductions in soil productivity potential. These threshold values serve as early warning signs to indicate when further alteration of soil properties would extensively change or impair soil productivity. Past monitoring efforts on the PSICC have typically involved visual assessments of contract provisions and mitigation designed to reduce degradation of soils and water resources. These include monitoring projects such as timber sales, roads, trails and facility construction and maintenance, and projects

conducted in recreation areas. More detailed quantitative soil monitoring is being conducted on selected resources issues, which focuses on soil erosion associated with management activities such as prescribed burning, compaction on grazing units, sedimentation from road systems, and burned area sediment transport. Future monitoring activities will include both qualitative project monitoring and more detailed studies of specific management uses and issues on the PSICC.

Water Rights – The goals of this program are to determine and obtain rights to instream flow volumes to protect and maintain the stream channel stability and capacity, and to accomplish any proposed increase in water use or resource activity. The United States filed for reserved instream flow water rights on the Pike and San Isabel National Forests (excluding the Grasslands units of the Forest) with the State of Colorado, in the Arkansas River basin in 1979. In FY98, the PSICC was actively involved in negotiating with interested parties, and collecting data for this adjudication. At the time of this report, communications with the State and opposing parties is still ongoing. This active court case involves approximately 120 streams. Another responsibility is to protest water rights applications of others when such uses will lower stream flows below levels acceptable for National Forest uses and purposes. The water resumes for the South Platte and Arkansas River drainages (Water Division 1 and 2) are reviewed each month. PSICC files a statement of opposition to those water applications that will injure the water rights of the United States or to those applying for any new water right on Forest lands. The Forest is also working on augmentation plans for Lake Isabel and Manitou Lake.

Air Resources

In response to requirements in the Clean Air Act, in 1994 PSICC initiated a long-term monitoring program to develop baseline data for evaluating air quality-related values in Wilderness areas. High-elevation lake chemistry is being monitored annually at various locations in the Mount Evans, Holy Cross, and Sangre De Cristo Wilderness areas. Visibility is being monitored for the Mount Evans Wilderness Area, and a camera was installed in 1997 to monitor visibility in the Collegiate Peaks and Mount Massive Wilderness areas. Those data collected will be used not only for evaluating current relationships between air quality and Wilderness values, but also for reviewing any future proposed projects proposed involving major air emissions that may affect PSICC's airsheds. Several years of data will be needed before firm conclusions can be made. In addition, all Forest Service prescribed fires are managed to comply with State and Federal Air Quality regulations.

Mineral Resources

Energy Minerals – Cimarron and Comanche National Grasslands support the majority of the oil and gas leasing, exploration, development, and production activities on the PSICC. However, there has been renewed leasing interest along the Front Range. San Carlos and Pikes Peak Districts now have areas under lease in the Wet Mountains south of Canon City and the Rampart Range northwest of Colorado Springs, respectively. Also, an exploratory well has been drilled on private land adjacent to the Forest boundary south of Canon City, and extensive seismic and other geophysical and geochemical exploration has taken place over the years in these areas.

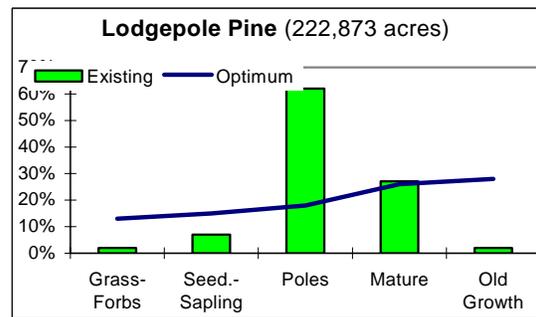
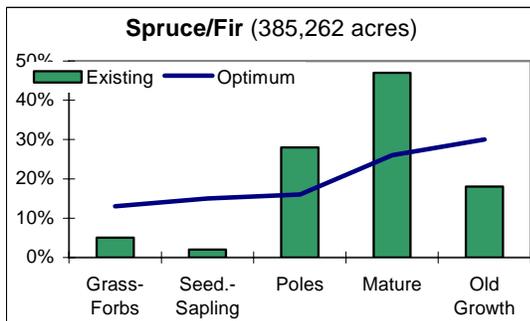
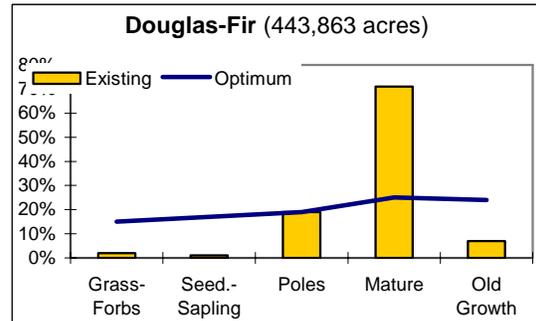
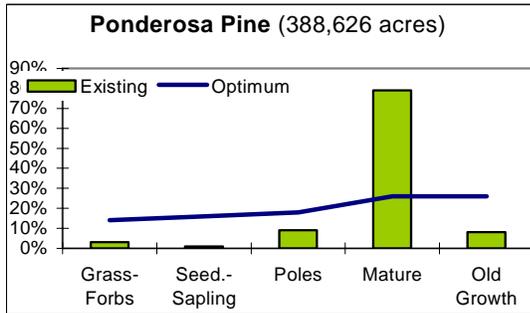
Locatable Minerals – The South Park District supports the majority of mining and exploration activities, with some mining taking place in the Leadville and Salida Districts. The bulk of the small commercial operations mine for amazonite and smokey quartz crystals, with some gold placer mining taking on the Leadville District as well. No major or moderate exploration, development or production operations have taken place. Recreational mining activities such as panning, dredging, and rock hounding are on a slight increase.

BIOLOGICAL COMPONENTS

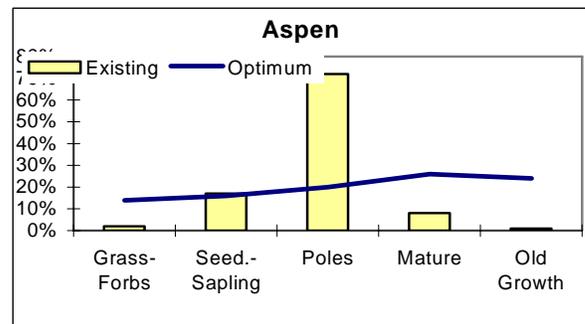
Wildlife, Fisheries & Rare Plant Resources

Accomplishment of joint wildlife objectives – Forest Service personnel meet regularly with the Colorado Division of Wildlife (DOW) regarding wildlife objectives and opportunities for projects that will help achieve shared objectives. Various other partners are also included where their resources could be made available for pursuit of mutual objectives. The main areas addressed to date have dealt with big game, particularly bighorn sheep and elk. The best example of agencies working together for wildlife is the DOW’s Habitat Partnership Program (HPP). Each HPP Committee includes representatives from DOW, The Forest Service, Bureau of Land Management, landowners, and sportsmen’s groups who meet to solve big game and forage conflicts on public and private lands. There are three HPP committees on the PSICC, one each for the Sangre De Cristo, Arkansas River, and South Park areas. There are also two Antelope Conflict Resolution (ACR) committees that include the Comanche National Grasslands.

Wildlife Habitat Diversity - Analyses made during development of the Plan compared existing diversity of forested lands with an optimum mix of ages that would support a wide variety of wildlife species. The results for PSICC’s major forested stands are shown below.

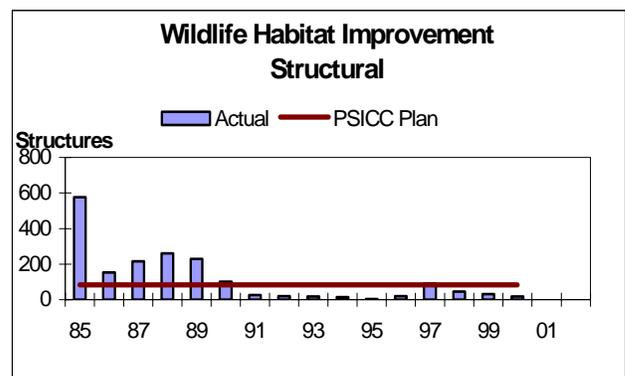
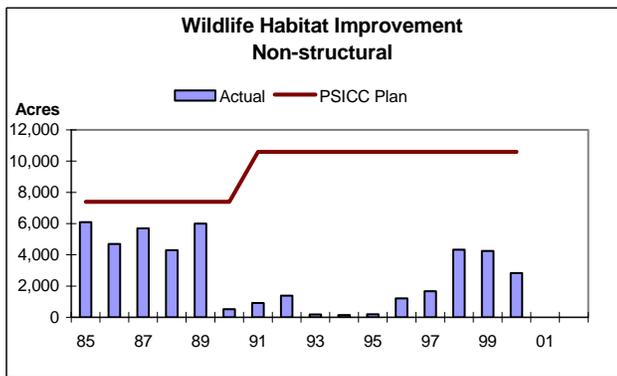


The conclusion drawn in 1984 was that an imbalance existed, with relatively young stands and old growth being underrepresented. Consequently, one intention of the Plan was to focus forest management in over-represented

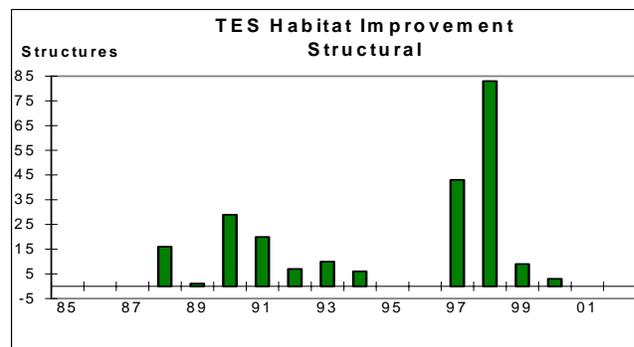
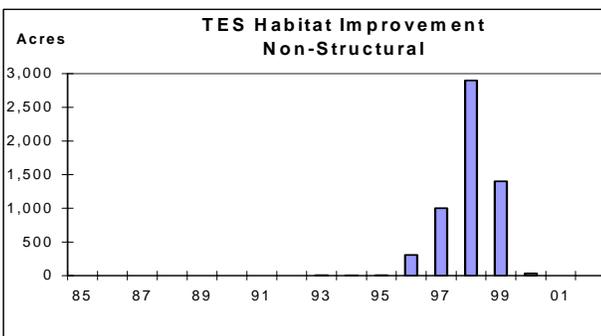


structural stages and produce a forest having a more optimal mix of habitat characteristics. Since very little forest management has occurred, the situation is about the same.

Habitat Modification and Improvement – Until recently, the wildlife habitat modification and improvement program has been declining. This was due to a shift in emphasis to mapping, inventory and landscape assessments. Financial resources were diverted to support habitat inventory, monitoring, and Ecosystem Management to gain a better understanding of PSICC’s habitats, in particular its riparian areas. With the shift to Ecosystem Management, better wildlife management decisions at the landscape level are possible. The new information will support better project designs in the future. Partners are now an important source of funding for projects, although more partnership money is available than PSICC funds can match and utilize. The amount of project work has nonetheless begun to increase in recent years. On the Forests and Grasslands, a key source of funding comes from other programs seeking expertise to mitigate adverse effects on wildlife.



Threatened, Endangered and Sensitive Species - Emphasis has focused on completing inventories to establish baseline species population and distribution information. Habitat improvement has primarily involved work necessary to support reintroduction of the greenback cutthroat trout and the peregrine falcon. Prescribed burning has been used to restore ecosystem structure and composition for both forest and grassland threatened, endangered and sensitive (TES) species. Partnerships are an important part of achieving these accomplishments.



Due to the importance of TES species, the Plan supports maintaining the ecological integrity of the systems (habitats) required to support these species, with increased emphasis on protecting biological diversity.

Aquatic and Riparian Assessment

Habitat Trends – Aquatic and riparian resources were described in the Final Environmental Impact Statement (EIS) for the PSICC (1984). In 1997, riparian area inventories and condition assessments of the 6th level watersheds on the PSICC was conducted by Winters and Gallagher. From these data, watersheds were categorized into three condition classes; Class I - pristine, Class II - moderately impacted, Class III - severely degraded. The following table summarizes the percentage of each of these classifications on the PSICC as of 1997.

Summary of the watershed condition analysis conducted on the PSICC in 1997

Unit	Class I (%)	Class II (%)	Class III (%)
Pike National Forest	2	51	47
San Isabel National Forest	5	66	29
Cimarron National Grasslands	0	60	40
Comanche National Grasslands	0	87	13

The results of this work indicate a wide range of riparian conditions on the PSICC. It is not surprising that the Class II category is the dominant class in this analysis, indicating that management activities have moderately impacted or altered the lands managed by the PSICC, both historically as well as currently.

Probably the most revealing aspect of this analysis is the relatively high percentage of Class III watersheds on the Pike National Forest. This is primarily the result of historic as well as present effects of elevated erosion and resulting sedimentation. Much of the Pike National Forest is located on soils that are composed of highly erodible granitics that are poorly developed, and contribute large amounts of sediment into stream systems along the Front Range. Although some sedimentation occurs naturally, erosion from roads and road maintenance, trails and flow modifications have resulted in considerable erosion. As mentioned previously, mining impacts also persist on the Pike National Forest, but to a lesser degree than the San Isabel National Forest.

Although almost one third of the San Isabel National Forest is categorized as Class III, most of these watersheds have been heavily influenced by historical mining activities and, to a lesser extent, current management activities. The toxic effluent from mine audits has been addressed, but technology is still limited for their treatment.

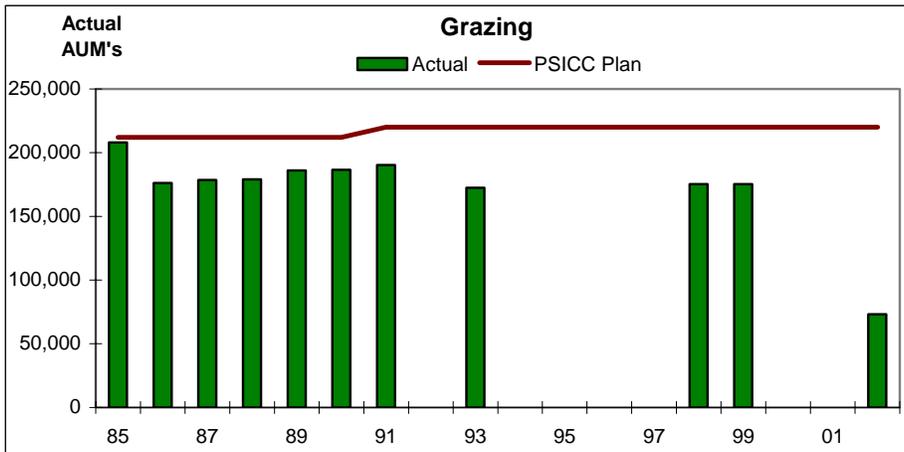
The Cimarron and Comanche National Grasslands present a different picture than the mountain Districts. Because management activities encompass practically the entire landmass of the grasslands, there are no pristine watersheds to be found. Moderately impacted areas comprise the majority of the grasslands, while severely degraded watersheds vary. The watersheds in the grasslands that exhibit permanently flowing streams have been altered by municipal and agricultural influences. Water quality and quantity in the Cimarron and Comanche Rivers has been seriously compromised due to upstream dewatering and agricultural runoff. Stream systems with their headwaters originating in or near the grasslands units exhibit excess sedimentation from erosion, nutrient input from cattle, and introduction of nonnative vegetation.

Habitat Modification and Enhancement - Impacts to riparian and aquatic ecosystems are derived from a number of human-related activities. Sedimentation from erosion has probably caused the most extensive amount of damage to riparian areas on the PSICC. Sedimentation can result in stream channel imbalance, increased water temperatures, reduction in aquatic habitat, and other indirect effects. Most human-caused erosion on the PSICC is related to ground disturbing activities, such as road and trail construction and maintenance, cattle grazing, and timber harvest. Other factors currently effecting aquatic and riparian ecosystems on the PSICC include elevated water temperatures, removal of riparian vegetation, mining effluent releases, and stream flow modifications.

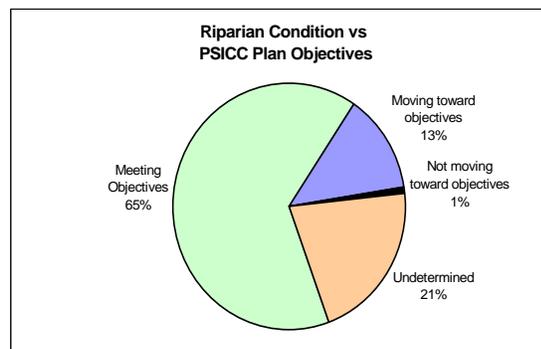
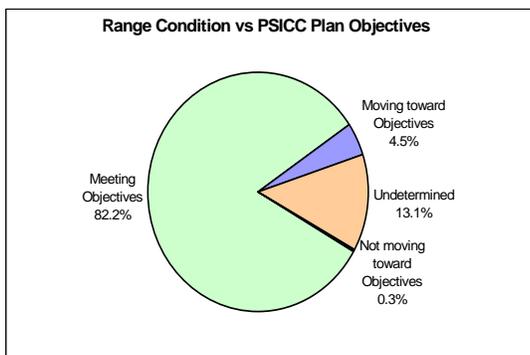
Recent adaptations of traditional habitat improvement methods have led to increased effectiveness for stream enhancements. More emphasis is placed on treating causes of dysfunction, rather than the symptoms. Channel and riparian re-establishment have focused on restoring the function and processes needed for sustainable habitat.

Range Condition and Use

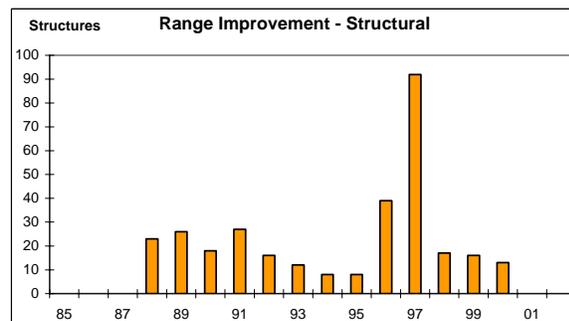
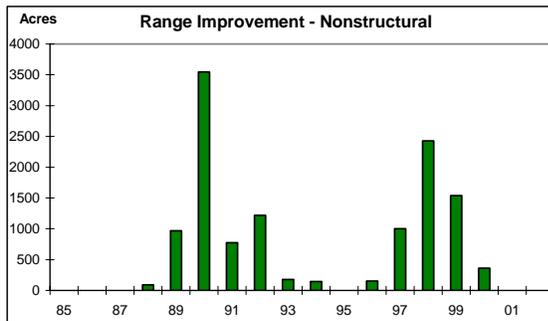
Most of PSICC’s grazing program, in terms of Animal Unit Months (AUMs) and allotments, occurs on the Comanche and Cimarron National Grasslands. As shown in the chart below, grazing levels have been relatively stable, with moderate reductions, rather than the increase predicted in the Plan.



Annual monitoring indicates that range and riparian conditions are generally meeting or moving toward Plan objectives, as shown in the charts below:



A history of range improvement work is shown below. Nonstructural range improvement activities usually involve prescribed burning projects. Structural improvements include stock ponds and fence construction.



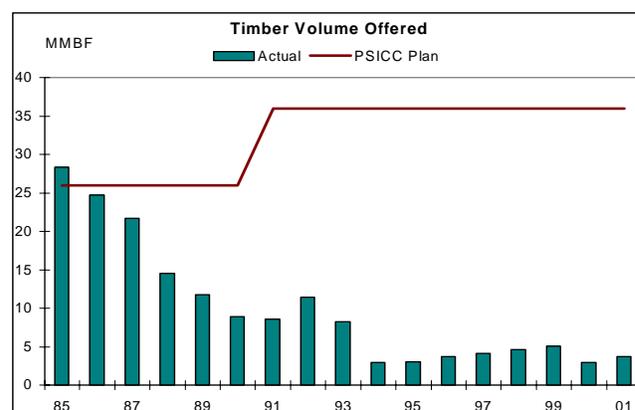
Allotment Management Planning - In accordance with the Recession Act of 1995, the PSICC and other National Forests have established schedules for updating allotment management plans. PSICC’s schedule initially focused on the Grasslands and South Park, but has now shifted to the Pike National Forest (Pikes Peak and Tarryall allotments).

Allotments on the Grasslands are managed through four grazing associations and one grazing district, which means that an individual grazing agreement for an association covers many allotments. Allotments managed by the Kim, Timpas, Campo and Pritchett Grazing Associations, located on the Comanche National Grasslands, have been reviewed and decisions on management and renewal of the agreements have been made. Analysis supporting this work has provided valuable new information on conditions found in the allotments. The key findings have been:

- 1) Range condition is generally meeting Plan objectives— largely due to improved management of the vegetative resources;
- 2) Some riparian areas are still moving towards Plan objectives and have required a modification in management to improve them to desired levels; and
- 3) Some resource conditions require improvement. However, the overall framework established by the Plan appears to be suitable. The major land allocations in the Plan are appropriate. Some modification of Plan standards and guidelines may be needed to better address certain habitat-related issues that are unique to the grasslands. For the most part, the Plan appears to be working reasonably well, especially for the range management program on the Comanche National Grasslands.

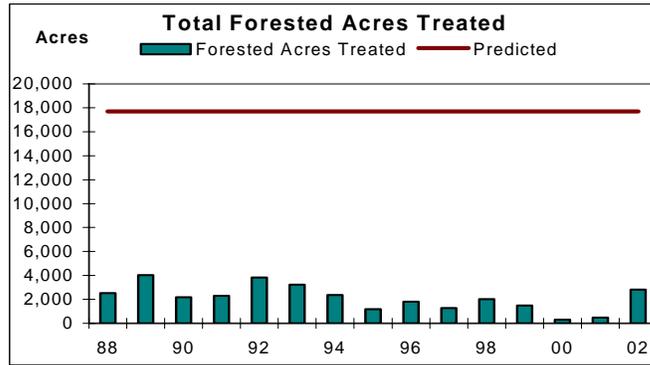
Forest Condition and Use

The Plan established an allowable sale quantity of 37 million board-feet (mmbf) per year, with timber offer targets gradually approaching that level as progressively more acres were put under management. In 1984, approximately 1,065,220 acres were considered suitable for commercial timber harvest. Much of the timber sold was being used for fuel wood in response to high energy prices. Eventually energy prices dropped, and so did the demand for fuel wood. In addition, the economics of harvesting timber on PSICC were such that, once the below-cost issue began affecting policy, funding for the commercial timber program was curtailed to a level well below Plan

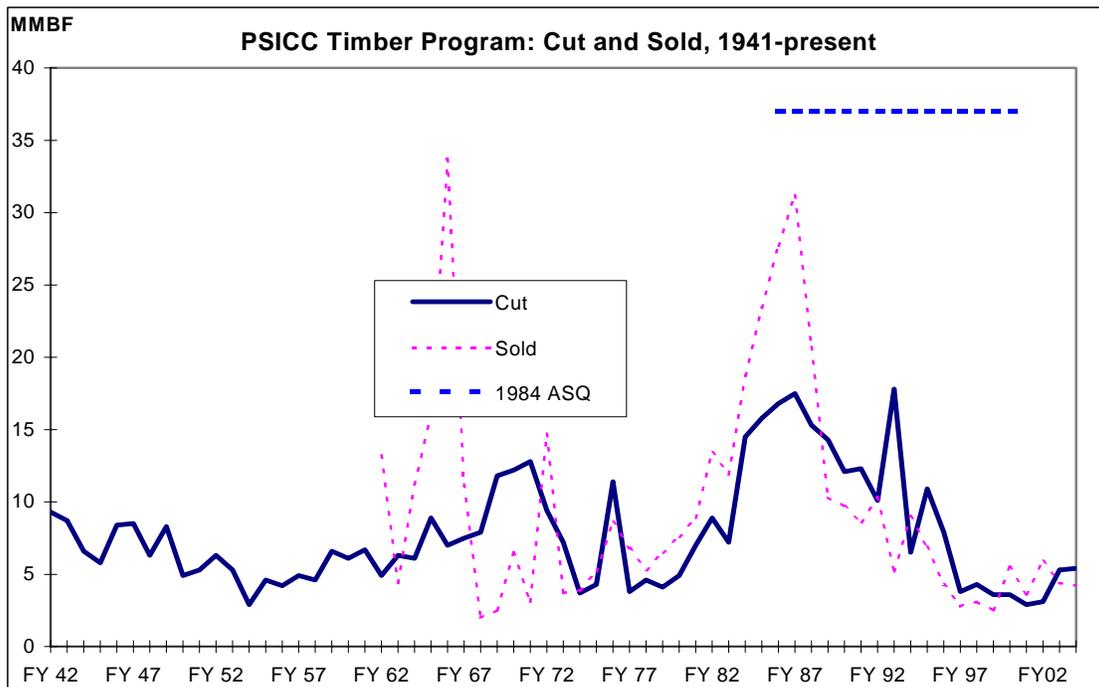


projections. By FY94, the timber program had declined to historically low levels, with most of the volume harvested still being sold for fuel wood.

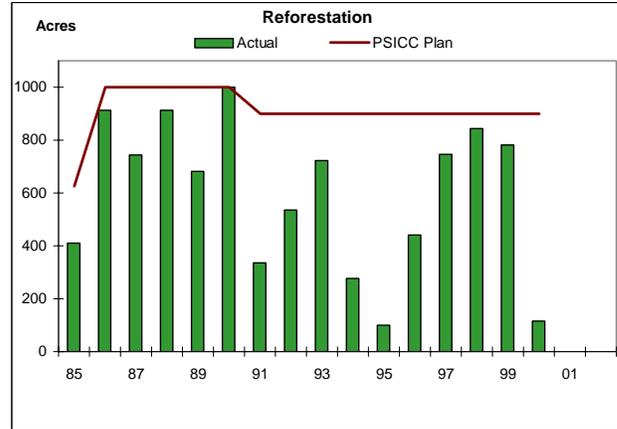
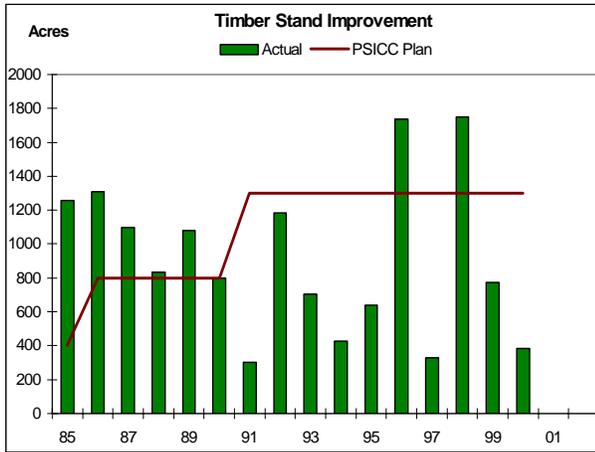
As shown in the chart below, the treatment rate of forested acres by all types of projects designed to modify forested vegetation, has not kept pace with predictions. (See also the table on acres treated in the Appendix of this report.) The net effect is that the situation in 1984 has not appreciably changed, except that most of the trees are about 21 years older.



Forest management on the PSICC is not keeping pace with the rate of growth occurring in the forests. This is resulting in increased insect and disease infestations, as well as ominous fuels build-up. A situation of increasing severity is emerging, particularly along the Front Range on the Pike National Forest, where the Buffalo Creek fire occurred. Steps are being taken to: 1) build a new and active forest management program; 2) seek possible markets for the types of smaller-sized wood products whose removal would best benefit forest health; and 3) use timber sales as a tool to achieve natural resource management goals. See also the discussion under **Fuel Treatment** below.



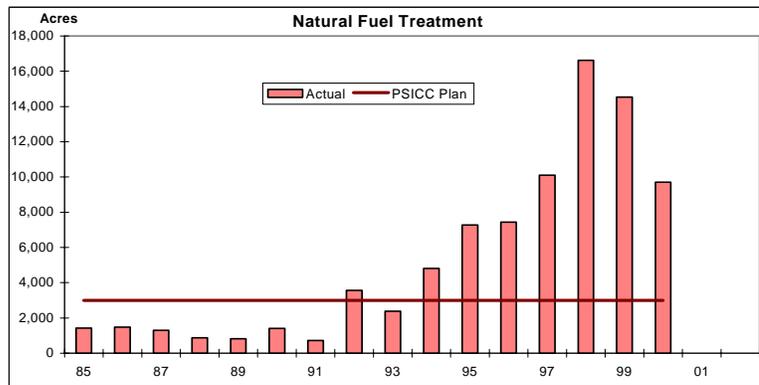
Reforestation and timber stand improvement activities have been quite variable over time, as shown below. Funds for these activities are primarily obtained from timber sale revenues. The more recent increases starting in FY96 are due to restoration efforts after the Buffalo Creek fire.



Acres harvested by cutting method are tabulated in the Appendix. All methods employed have been consistent with the Plan.

Fuel Treatment

Treatment of fuels has increased dramatically in recent years. This is in response to the growing recognition that fire suppression throughout the century has resulted in major fuels accumulations that increase the risk of catastrophic fires. Fuel treatment activity levels are thus increasing in an attempt to deal with this situation.



In May 1996, the Buffalo Creek fire burned over 10,000 acres of forested land (ponderosa pine/Douglas-fir) on the South Platte District. The fire was wind-driven and did most of its burning in a single afternoon, destroying six homes. At numerous locations throughout the Front Range, a similar fire could have destroyed hundreds of homes. The fire serves as a reminder of the growing need for projects that will reduce fuel levels and lessen the potential for catastrophic wildfires all along the Front Range. In order to meet the needs of forest health, wildland fire hazards, and firefighter and public safety, the Red Zone Strategy was developed. The Forest is working collaboratively with other agencies and local communities to start treating high development areas and those at the highest risk for insect outbreaks, disease or wildland fire.

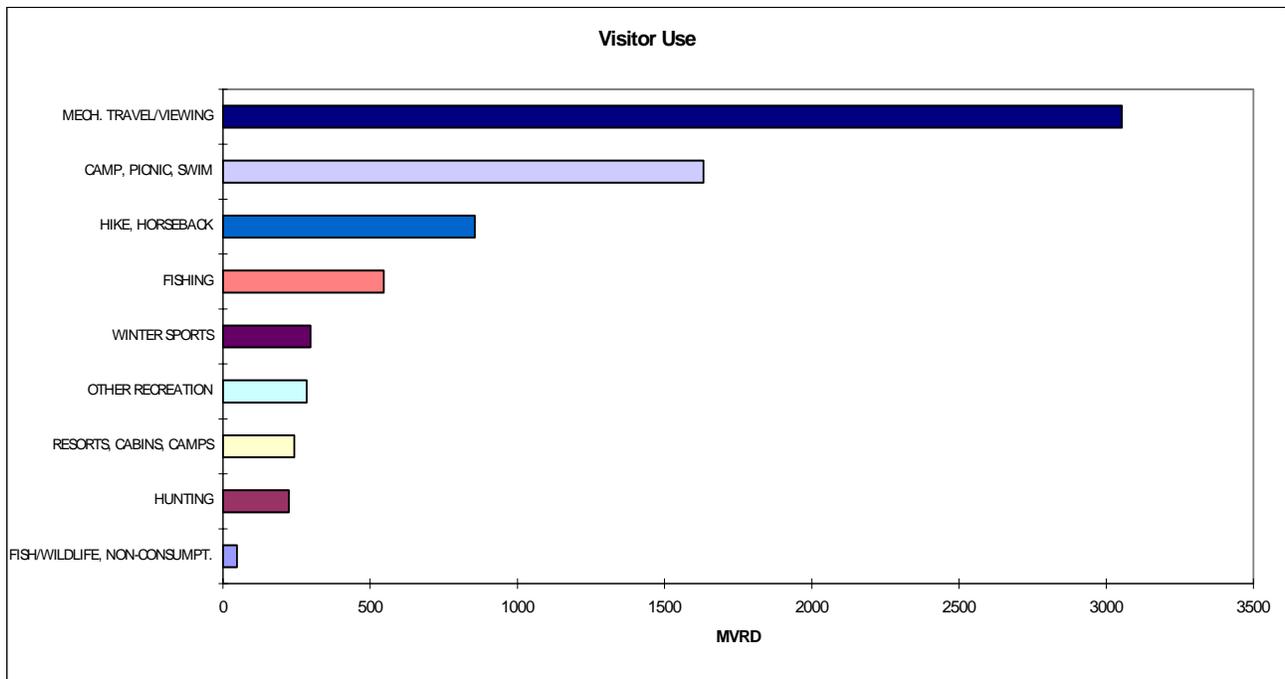
The Forest began preparing a fire management amendment to the Plan that would provide additional guidelines for ecosystem restoration. Given the backlog of restoration already facing the PSICC, this amendment would provide more flexibility in responding to wildfire situations, and establish priorities to restore natural fire regimes,

guide future wildfire prevention work, and assure that the PSICC's limited resources are being directed to realize the greatest benefit. This amendment has not been completed due to lack of resources.

SOCIAL COMPONENTS

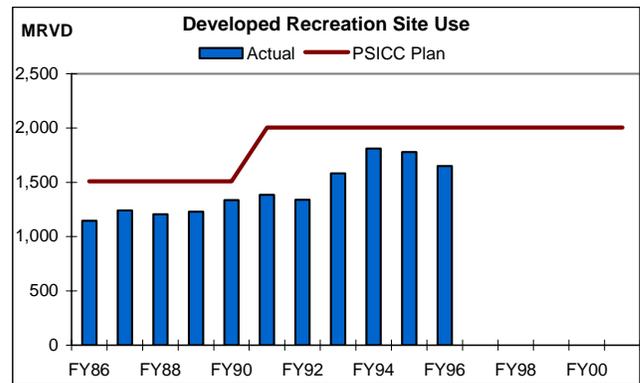
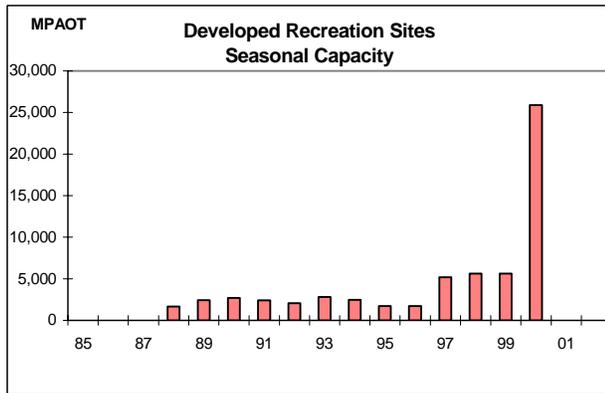
Recreation

PSICC has one of the heaviest recreation workloads in Region 2. Much of this stems from its location near the Denver/Colorado Springs/Pueblo metropolitan areas. The leading type of recreation is pleasure driving, using automobiles on highways or off-highway vehicles on lower-standard roads. The Visitor Use information available for this reported was compiled in FY96. The Final National Visitor Use Monitoring (NVUM) project survey data, compiled in FY01, were not available at the time this report was completed. This explains data gaps in some of the following graphs. Where preliminary FY01 data were available and correlations could be made between previous and more current survey results, those values are reported. Beginning with the FY02 Monitoring Report for the Plan, the following Recreation subsections will be completely updated with the FY01 NVUM results.



Developed Recreation

Many recreation visits occur at developed facilities, particularly campgrounds. In the past, these facilities were operated primarily by Forest Service personnel, but are now under concessionaire management. The increase in developed site capacity beginning in FY97 is primarily due to the addition of developed trailhead parking areas.



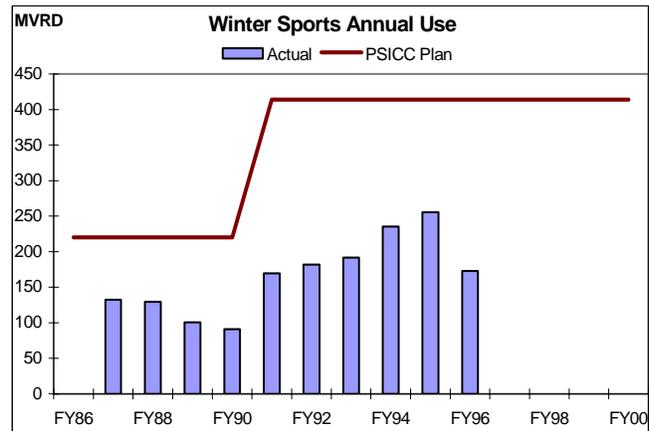
Recreation Facilities Backlog - PSICC has a strong recreation component to its overall program. It is also “urban” in character because more than 2 million people live within an easy weekend driving distance. Many of the developed campgrounds were built in the 1960’s and are deteriorating. Operation and maintenance dollars have not kept pace with this deterioration, creating an increasing backlog of work needed.

The following inventory of maintenance backlog needs was initially made in FY94 and updated in FY97:

RECREATION FACILITIES BACKLOG	EST. COST
Health and Safety - costs needed for facility repair and reconstruction and resource treatment needed to comply with health and safety standards	6,530,500
Resource Protection - costs for resource treatment needs including vegetation treatment, soil and surface treatment, and cultural resource site protection & mitigation	9,527,564
Work Needed to Avoid Closing Sites - costs for facility repair and reconstruction and resource treatment needed to keep a site open in compliance with planned management standards	4,982,797
Site Work Needed to Return to or Continue a User Fee System - costs for facility repair and reconstruction and resource treatment needed to meet standards required for user fees	599,003
Facility Elimination - costs to remove facilities and restore the previously occupied area to a condition that meets planned management standards	3,356,815
Other Backlog Needs - costs for recreation facility backlog not included in the previous five categories.	10,098,533
Trail Maintenance and Reconstruction – costs for restoration, repair, and resource treatments needed to return trails to planned management standards; tasks are in addition to recurrent maintenance requirements.	4,210,828
Total Backlog Cost	\$41,306,040

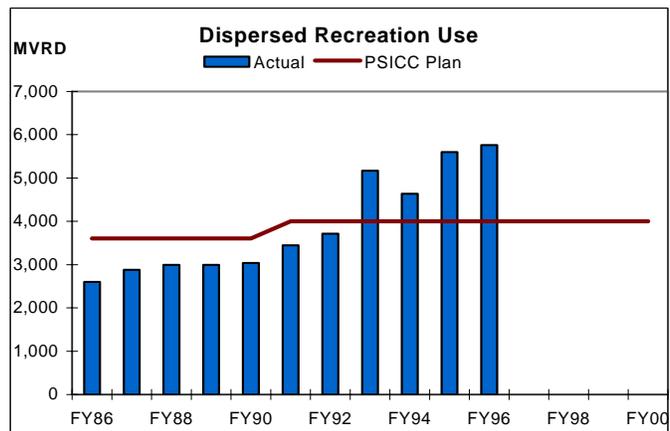
Winter Sports

PSICC has two operating ski areas: Ski Cooper and Monarch Resort. Three areas that were in operation when the Plan was approved are now in various stages of being closed: Pikes Peak (which has been reclaimed); Geneva Basin (which is mostly reclaimed); and Conquistador (aka Hermit Basin, which is being reclaimed). Quail Mountain, southwest of Leadville, was identified as a possible ski area development, but a facility has not been established. The current capacity for downhill skiing appears to be greater than the demand at most of the areas.



General Forest Areas

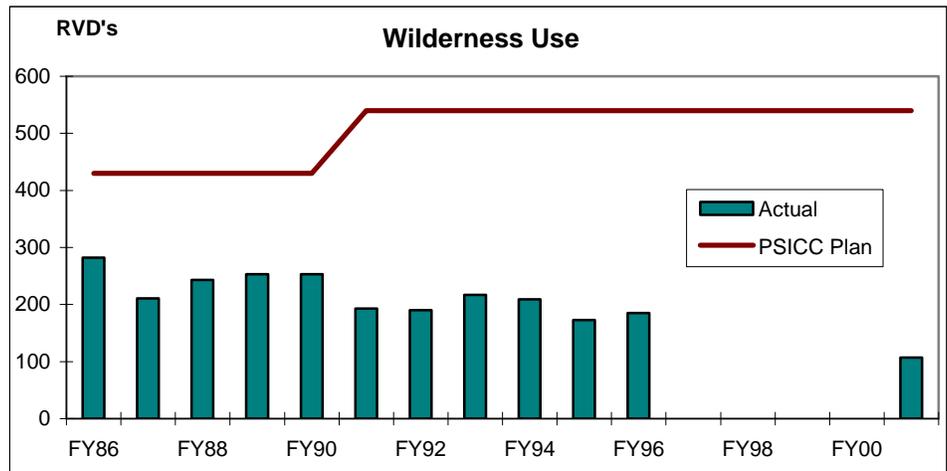
Dispersed recreation includes all activities that occur outside of developed facilities. Because of the proximity to the Denver/Colorado Springs/Pueblo metropolitan areas, PSICC receives a large amount of dispersed recreation use. Dispersed recreation constitutes the largest share of total recreation use. In recent years, visitor levels have exceeded projections made in the current Plan. Immediately following Plan approval, PSICC recognized the importance of implementing the travel management direction in the Plan. PSICC has used the White Arrow Program to restrict motorized travel to designated roads and trails, but is converting to the Colorado Standard Signing with two Districts completed. The job of maintaining Forest system roads and trails, and obliterating and rehabilitating illegal or unneeded routes continues to be a major workload.



Wilderness Recommendations - Four Wilderness Study Areas (WSA) and one Further Planning Area (FPA) were reviewed during development of the Plan and suitability findings were made in the Record of Decision. In 1993 Congress designated four new Wilderness areas on the PSICC. The following chart shows the current status of those areas.

<u>Area</u>	<u>Found Suitable?</u>	<u>Wilderness Today?</u>
Buffalo Peaks WSA	Portions	Yes
Greenhorn Mountain WSA	Yes	Yes
Spanish Peaks WSA	Yes	Yes
Sangre de Cristo WSA	Portions	Yes
Lost Creek Addition FPA	No recommendation made	Yes

Recreation Capacity Study - In response to concerns that certain areas on the Forest, particularly those in Wilderness, were being unacceptably impacted by increasing visitor use, in 1993 PSICC initiated a Forest-wide recreation capacity study. This study, completed in 1995, analyzed visitation and impact levels in comparison to Plan direction. Findings revealed that many areas were at or exceeding capacity. In the highest overuse areas, outfitter-guide permits were cut back, while in other areas no new permits were allowed.



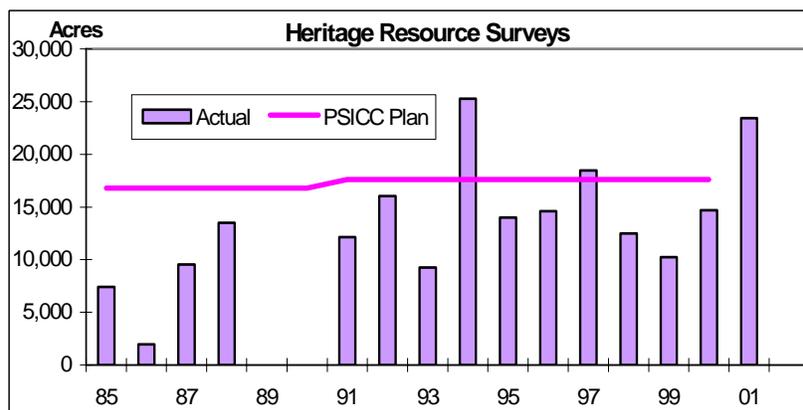
Steps are being taken to reduce public use in those problem areas as well. Ironically, even though Wilderness use has not been increasing, impacts to Wilderness were becoming more problematic due to concentrated use in certain areas. Routes for climbing the peaks over 14,000 feet have become particularly popular and heavily used. With four newly designated Wilderness areas, very high public use on most of the forest, and an increasing number of applications for outfitter-guide permits. As a follow up to the study, selected high use areas are being monitored and managed more strictly. Capacity refinements and use adjustments are being made as time and priorities allow. The 2001 NVUM survey estimated wilderness use at 67,000 visits with an average stay of 1.6 days per visit.

The study also revealed that: 1) management area direction in portions of some Wilderness areas was mismatched with current uses; and, 2) certain Plan standards and guidelines had become out-of-date with the current theory regarding management of dispersed recreation use in Wilderness. These corrections will be made during Plan revision.

Heritage Resources

Cultural Resources Compliance Inventory and Sites Recording – Inventories of cultural sites are conducted in areas where ground-disturbing projects are planned; discovered sites are recorded and evaluated.

In the mid- and late-1980s the bulk of this work was done to support timber sales and vegetation treatment projects on the mountain districts. In more recent years the focus has been on inventory of grazing allotments (primarily on the Grasslands), and on large prescribed fire projects designed by the fuels, wildlife, and range programs. Recent focus has been on inventory of two areas: 1) Picket Wire Canyonlands, a special management area with an extremely high density of archeological sites, and 2) Pikes Peak, a National Historic Landmark. In FY99, a total



of 235 previously unrecorded cultural properties (sites) were recorded. In FY00 and FY01, the PSICC was able to exceed compliance inventory acreage and site recording targets because of the initiation of large-scale assessments related to National Fire Plan projects. In a three-year period (1999-2001), 1,030 cultural sites were recorded and evaluated for eligibility to the National Register of Historic Places.

Interpretation, Protection, and Public Outreach - This part of the program consists of interpreting non-vulnerable heritage sites for the public, protecting important historic resources against natural deterioration and vandalism, and offering public opportunities to participate in heritage resource management. In recent years our interpretive efforts on the Grassland districts have focused on the Santa Fe Trail and the historic and prehistoric resources of Vogel Canyon. For the mountain districts, interpretation has focused on historic mining regions, railroad and homestead sites, in areas such as Chalk Creek, Twin Lakes, Boreas Pass, and Pikes Peak. Also, protection efforts in FY01 included areas with known high densities of prehistoric sites including Picket Wire Canyonlands and Pony Park. In FY01, 152 cultural properties were inspected for changing conditions or repaired. Public outreach opportunities included seven Passport In Time (PIT) projects including paleontological survey in the Picket Wire Canyonlands, and site surveys in the Aspen Ridge and Pikes Peak areas. PIT projects are designed to use volunteers to accomplish work that the Forest Service could not do using regular appropriated funds. Also, the Forest opened and placed on the National Reservation system two historic cabins for public rental.

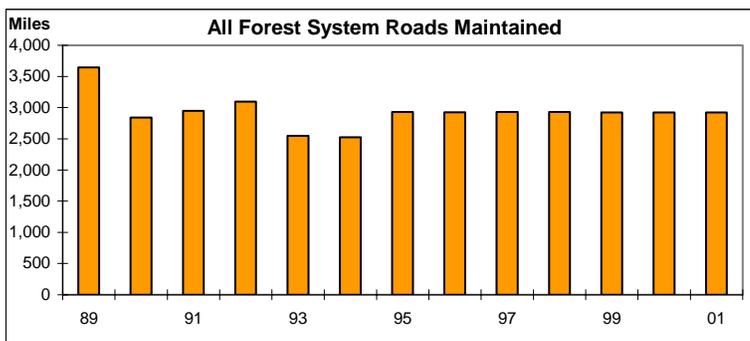
Heritage Activity	FY94	FY95	FY96	FY97	FY98	FY99	FY00	FY01
Heritage sites interpreted	10	18	10	16	40	12	24	14
Public participation projects		12		6	9	8	7	7
Number of properties (cumulative)	1,276	2,158	2,343	2,741	2,823	3,056	3,406	3,766
Heritage sites preserved & protected	10		45	50	69	156	174	152
Heritage sites evaluated	28	475	173	150	240	265	437	360
Resource facilitation projects	121	92	67	113	155	158	142	137
Inventory/acres surveyed	25,285	14,000	14,600	18,460	12,491	10,246	14,700	23,435

Visual Quality Objectives

Visual quality objectives (VQOs) are being maintained. Activities having the potential to adversely affect VQOs have been designed to avoid such effects. New methods of inventory and management for scenic quality have been developed, and will be used for Plan revision.

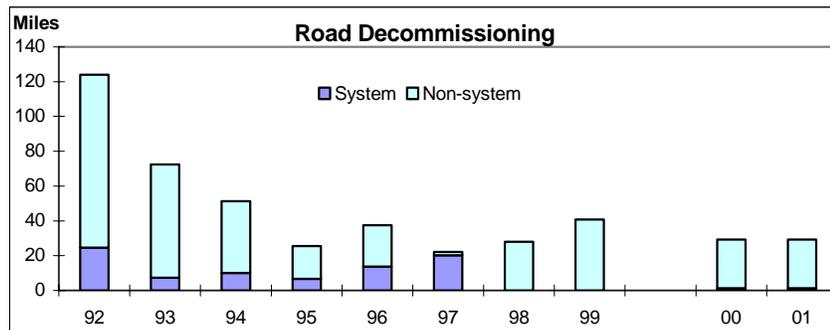
Transportation & Travel Management

The chart to the right shows the total miles of roads identified as system roads that are available for public use. This use can vary from full use by the public with vehicles, to administrative use only by the Forest Service and designated permittees, to walk-in use by the public on roads that are closed to vehicle use. Total miles does not include the Level 1 roads created and used primarily in conjunction with oil and gas operations, even though these roads are open for public use.



The general decrease in mileage over the timeframe shown can be attributed to the following: 1) a decision was made to remove roads from the system because they were no longer needed for management purposes; and, 2) more accurate inventories have shown that some mileages estimated for roads were in error.

Additional emphasis is being placed on travel management. Deferred maintenance condition surveys have been performed on a set schedule, and the findings have been entered into a national database to allow for more accurate assessments of the overall maintenance backlog. Formal system roads (referred to as “classified roads”) and informal, user-created or non-system roads (“unclassified”) are being inventoried. A roads analysis will be performed to determine the long-term disposition of each route.



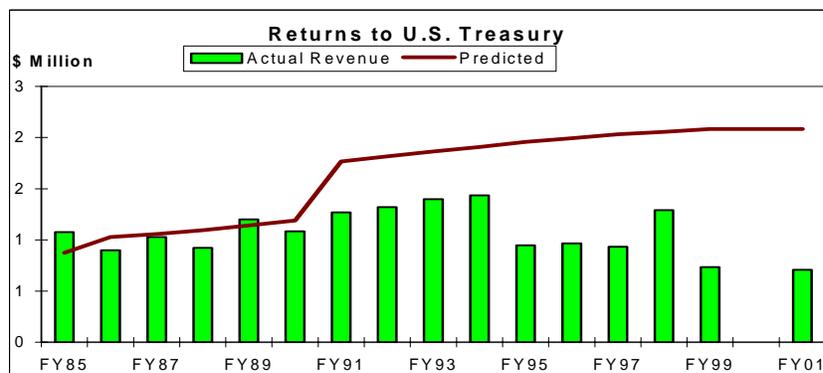
ECONOMIC COMPONENTS

Capital Investments

The Capital Investment Program (CIP) consists of two parts, one funded at the Regional level, and one funded at the Forest level. CIP used to be primarily for roads for general purpose, timber, and recreation use prior to FY92. After FY92 the emphasis shifted somewhat to include developed recreation areas and trail construction/reconstruction in addition to roads. The Forest part of the CIP has been funded in the \$250,000-\$500,000 range over the years since 1991. The Regional CIP has been funded in the \$700,000 to \$2,300,000 range, with the lowest funding in 1996 and the highest in 1992. As stated previously, the emphasis has shifted from roads in the early 1990s to developed recreation areas in the late 1990s.

Returns to U.S. Treasury

A wide range of activities generate revenues for the U.S. Treasury. These include special use permits (ski areas, roads, water lines, power lines, outfitter-guides, recreation residences, etc.), grazing permits, fuel wood permits, Christmas tree permits, transplant sales, and timber sales, among others. Revenues from oil and gas leases are not shown in the accompanying chart, but are included in the Appendix of this report.



Payments to Counties

In most cases, 25 percent of the revenues paid into the U.S. Treasury are returned to the counties within which the revenue-generating activities occurred. The flow of these funds to counties is shown in the table below. The most dramatic change occurred on the Cimarron National Grassland in 1987, when a number of oil and gas leases reverted to the United States. Revenues from those leases have declined in recent years as production has declined. Note that Grassland revenues and payments in the table below are reported by calendar year.

25% Fund Payments To Counties By Proclaimed Units
Nominal Year Dollars

Fiscal Year	Pike NF	San Isabel NF	Comanche NG	Cimarron NG	PSICC Total
FY85	115,898	123,019	145,707	77,852	462,476
FY86	103,787	107,703	103,185	39,027	353,702
FY87	105,173	130,414	72,730	4,240,391	4,548,708
FY88	92,751	119,698	45,236	3,028,349	3,286,034
FY89	127,780	149,169	47,240	1,514,045	1,838,234
FY90	122,124	127,901	64,605	1,007,529	1,322,159
FY91	134,263	149,236	111,347	541,837	936,683
FY92	117,394	172,006	106,777	428,047	824,224
FY93	157,919	152,076	106,463	737,839	1,154,297
FY94	162,181	175,534	59,587	785,574	1,182,876
FY95	91,038	134,596	117,975	503,049	846,658
FY96	94,520	142,053	221,394	627,538	1,085,505
FY97	92,591	120,173	632,708	170,706	1,016,178
FY98	157,857	149,073	71,530	473,494	851,954
FY99	92,481	90,829	0	0	183,310
FY00	94,249	73,177	0	0	167,426
FY01	127,424	180,922	71,617	516,309	896,272

Unit Costs and Efficiency – The PSICC as a unit has made tremendous progress toward improving customer service and reducing costs. Efficiencies have been gained through increased inter-agency cooperation and increased work with partners and volunteers.

Unit Costs are extremely variable on a large diverse unit such as the PSICC. Average unit costs tend to oversimplify the complexity of natural resource and ecosystem management work. Since they don't accurately portray effectiveness, unit costs have not been summarized in recent years. It is possible to do so by dividing outputs by either program or project costs. Unit costs have limited utility in Plan monitoring due to (1) the complexities of the budget allocation process, and (2) the diverse nature of many projects. Unit costs may be of some value in relating programs on different National Forests, but are less useful within an individual unit.

AMENDMENTS TO THE LAND MANAGEMENT PLAN

Existing Amendments

Existing amendments to the Plan are shown in the following table. For several years following approval of the Plan, it was thought that changes in the timber harvest schedule had to be reflected as amendments. When court decisions clarifying the purposes of Plans eventually established that this practice was not required, amendments of this nature were discontinued.

Amendment No.	Date Approved	Summary
1	9/23/85	Clarified intent of Plan implementation schedules (Appendices A, C & D) prepared as part of annual Forest Plan of Work. Rescinded by Amend. No. 9
2	7/24/87	Corrected omission and indicated that bridge construction and reconstruction activities under Management Activity L16 - L18 (Local Road Construction and Reconstruction) are included.
3	7/24/87	Revised boundary of the Comanche Lesser Prairie Chicken Habitat Zoological Area (designated a Colorado Natural Area February 13, 1987), Comanche National Grassland.
4	7/24/87	Included in the Forest Plan assessment of suitability and capability of Quail Mountain for proposed ski area development (Note: Amendment No. 4 Rescinded 10/5/87).
5	7/24/87	Incorporated in the Forest Plan, modified stipulations and supplements contained in FSM 2800 5/86 R-2 Supp. No. 25 for leases and permits issued on National Forest System lands.
6	7/24/87	Replaced fire management standards and guidelines with Regional fire management requirements that had been changed to provide greater flexibility to land managers.
7	7/24/87	Corrected a Forest Plan Map error to more accurately reflect Management Area Prescription application and changed acreage totals in Management Area Summary Table.
8	7/24/87	Corrected information in Forest Plan Appendix B; fuelwood products are not a part of the Allowable Sale Quantity.
9	7/24/87	Rescinds Forest Plan Amendment No. 1.
10	7/24/87	Assigned Management Area Prescription 1D (Provides For Utility Corridors) for certain lands within the Comanche National Grassland and changed Management Area Summary Table III-3 to show a change in the acreage of four Management Areas.
11	8/20/87	Replaced Appendix A (the Ten-Year Timber Sale Schedule) and established a three year schedule of planned vegetation treatment projects.
12	10/5/87	Replaced Appendix C (the Ten-Year Road Construction and Reconstruction Schedule) and established a three-year schedule of planned road construction/reconstruction projects.
13	12/9/88	Recommended establishment of the 373 acre Hoosier Ridge Research Natural Area, South Park District.
14	12/9/88	Assigned Management Area Prescriptions 2B and 4B to 10,290 acres of the Cimarron River corridor, Cimarron National Grassland.

Amendment No.	Date Approved	Summary
15		
16	1/3/89	Established 3-Year Timber Sale and Road Construction/Reconstruction Schedules (revised Appendices A & C). (FSM 1920, R-2 Supp. No.8, 3/86) (FSH 1909.12, R-2 Supp. No.1, 8/88).
17	1/3/89	Assigned Management Area Prescription 5B to Babcock Hole, San Carlos District (9,021 acres).
18	1/3/89	Assigned Management Area Prescription 1D to Methodist Mountain, Salida District (53 acres).
19	3/2/89	Assigned Management Area Prescription 5B (Emphasis on Big Game Winter Range) in the Dry Union Gulch area, Leadville Ranger District. Change from a 7D Prescription (5,114 acres).
20	12/6/89	Replaced 3-Year Timber Sale and Road Construction/Reconstruction Schedules (revised Appendices A & C). (FSM 1920, R-2 Supp. No.8, 3/86) (FSH 1909.12, R-2 Supp. No. 1, 8/88).
21	6/11/90	Established Scenic Highway of Legends as a Scenic Byway on the San Carlos Ranger District. Incorporated new management direction for Scenic Byways in the Plan.
22	10/4/90	Replaced 3-Year Timber Sale and Road Construction/Reconstruction Schedules (revised Appendices A & C).
23	2/12/92	Oil & Gas Leasing - Incorporated decision made 2/92 to consent to oil and gas leasing. See EIS and ROD.
24	4/9/92	Added Picket Wire Canyonlands per PL 101-501. Also established management area direction.
25	9/21/94	Revised Forest Plan map to establish a utility corridor for the Divide Power Line between Divide and Lake George.
26	03/00	Changes VQO within Ski Cooper permit area to Modification
27	02/01	Establishes Stanley Canyon expansion to the Northfield Multi-User Communications Site
28	08/01	Amends suitable timber base and certain standards and guidelines in the area of the Upper South Platte Watershed Protection and Restoration Project.

Potential Amendments/Need for Change

Wilderness - Congress established additional Wilderness areas on PSICC in 1993. The Plan Record of Decision (ROD) identified certain lands as suitable for Wilderness and the Plan's map was accordingly drawn to reflect that finding. When additional Wilderness was established, the final boundaries did not match those shown as recommended on the Plan's map. For this reason, some changes to the Plan's map are needed. In addition, one outcome of the recreation capacity study (see the discussion under Dispersed Recreation) was the conclusion that the pattern of management prescriptions in certain areas was not consistent with sustainable levels of use. This has led to a modification of outfitter guide permits and some modifications in public use management. In some areas, however, Plan standards and guidelines are still not being met. Both the boundary changes and any needed changes in prescriptions need to be addressed.

Wildfire Hazard - The Buffalo Creek fire (see Fuels Treatment, Soil and Water) served as a reminder that forested lands are becoming more and more susceptible to catastrophic fires. As reviewed earlier in this report

(see Forest Condition and Use), the activity that historically had the greatest effect on this situation—timber harvest--has greatly declined in recent years. The net effect is that forested areas throughout the mountains are becoming more susceptible to catastrophic wildfires and are not meeting desired conditions identified in the Plan.

This situation is not unique to PSICC--it is widespread throughout the National Forests. Because of this, increased funding is anticipated to help work on the situation. Fuels treatment projects have already increased in recent years in an attempt to address the situation, but much more work—embracing a variety of types of projects—is needed. Many years of effort will be involved. Not only are steady-state levels of fuels treatment appreciably above those of recent years, but a major backlog also exists. To help ensure that projects are designed to produce the most effective results, the Plan could be modified to: 1) clarify the desired condition of forested lands; 2) establish priorities for the types of areas where treatment would produce the most beneficial results; and, 3) modify Forest Direction regarding fuels treatment to provide greater flexibility in prescribed fire management.

Travel Management - A pervasive issue on most National Forests is travel management. In FY97 PSICC began an informal assessment to gain a clearer understanding of the issues involved. The assessment was completed in FY98, and determined that most of the issues have to do with the local administration and enforcement of the broad travel management decisions reflected in the Plan. Those local issues are best resolved at the local or District level. Where the issues relate to land allocation, such as Wilderness, semi-primitive non-motorized and semi-primitive motorized prescriptions, they are appropriate questions to address at the Plan level. These and other land allocation decisions will be addressed as part of Plan revision.

SUMMARY EVALUATION AND CONCLUSIONS

Are the Plan's goals and objectives being met? Most of PSICC's goals are being pursued to some degree, but in most cases not at the rate envisioned in 1984. The ambitiousness of the overall program has proven to exceed the funding levels made available.

Are the Plan standards and guidelines being followed? Decision documents being signed by responsible officials are certifying that projects are being designed to be consistent with the Plan. Monitoring results support those findings.

CERTIFICATION

The Plan, as currently written, is sufficient to guide implementation for the next year. There are several improvements that can be made to the Plan, but they are not required to meet the goals and objectives. Plan revision is expected to begin in FY2003.

Joe Meade
(Acting) FOREST SUPERVISOR

Date

List of Preparers

This report was prepared by: John Hill, Planning Staff Officer; Liz Ohlrogge, Physical Resources Staff Officer; Rick Brazell, Renewable Resources Staff Officer; Lance Tyler, Recreation & Wilderness; Nancy Ryke, Wildlife Biologist; Theresa Wagner, Fisheries Biologist; Tom Hudson, Timber; Al Kane, Heritage Resources Specialist, Charlie Marsh, Hydrologist; Ken Kanaan, Soils Scientist; Larry Klock, Range Staff, Neal Weirbach, Landscape Architect; Norma Palider, INFRA; Ted Moore, Fire Management Officer; and Barb Masinton, Land Management Planner.

REFERENCES

The information in this report is based on PSICC Management Attainment Reports (MAR), Final Budget Documents, INFRA, Silva (Silviculture) Reports, Regional Revenue and 25% Payments to Counties Reports, and individual Program accomplishment reports. All reference documents are available for review at PSICC Supervisor's Office Headquarters at:

PSICC Supervisor's Office
2840 Kachina Drive
Pueblo, Colorado 81008

Additional copies of this report are available by writing the address above, by calling at 719-553-1475, or by visiting the PSICC internet website on the world wide web at: <http://www.fs.fed.us/r2/psicc/>

This document will be updated periodically as additional information becomes available.

APPENDICES

PSICC Revenues

PSICC Revenues 1985 – present <u>1/</u> Revenue Category												
	National Forest Funds (\$)						Trust Funds (\$)					
FY	Timber Sales	Special Uses <u>2/</u>	Mineral Leases <u>3/</u>	Rec. Revenue	Grazing Fees	Power	K-V Funds	Salvage Funds	Purchaser Credit	Timber Purchase	Special Road Const	Total \$
85	76,701	245,505	774,346	301,619	159,918		211,209	0	80,604			1,849,902
86	77,242	232,052	514,733	323,447	93,933		140,503	0	32,897			1,414,807
87	95,106	286,770	17,167,292	323,091	92,629		188,588	0	41,358			18,194,834
88	20,132	272,773	12,222,776	342,096	107,098		110,467	548	68,248			13,144,138
89	67,031	269,855	6,151,595	512,328	154,048		132,262	26,860	38,958			7,352,937
90	56,798	280,321	4,206,179	371,214	129,094		106,459	80,790	57,778			5,288,633
91	66,923	332,516	2,476,165	377,950	173,307		115,195	119,780	84,895			3,746,731
92	32,070	447,066	1,976,099	436,734	207,661		79,496	99,305	18,460			3,296,891
93	153,532	492,503	3,218,247	269,658	195,529		80,045	142,544	65,128			4,617,186
94	112,635	113,258	3,296,673	667,833	119,670		191,398	102,199	127,836			4,731,502
95	108,042	148,345	2,438,829	468,555	60,429		84,106	49,530	28,790			3,386,626
96	179,015	65,642	3,295,406	498,421	73,460		109,114	40,175	0			4,261,233
97	86,869	161,507	3,131,603	490,425	81,569		53,260	59,482	0			4,064,715
98	67,571	483,854	2,118,483	570,171	69,018		54,299	44,418	0			3,407,814
99	33,442	149,670	157	427,176	27,384		68,213	27,197	0			733,239
00	78,324	327,975	203,661	138,361	48,044	26,416	63,402	16,083	0	0	0	902,266
01	73,083	468,512	4,133,042	242,038	66,276	27,979	102,839	20,462	0	403	2,700	5,137,334

1/ Nominal year dollars

2/ Beginning in FY00, Special Uses includes Recreation Special Uses and Land Uses

3/ In FY00, mineral lease revenues were available for all units with the exception of the Cimarron NG (traditionally the bulk of these revenues comes from the Cimarron NG)

Timber Harvest History (Cutting Method and Acres Harvested)

<i>Cover Type & Cutting Method</i>	87	88	89	90	91	92	93	94	95	96	97	98	99	00	01	Total Acres
Ponderosa Pine																
Intermediate cuts, Sanitation/ Salvage, Commercial Thin	170	92	243	243	364	1,312	1,459	1,105	27	0	448	89	75			5,627
Clearcut	11	15	27													84
Preparatory Cut (Shelterwood)		26														26
Seed Cut (Shelterwood)	83	251	378	428		80	113					26				1,359
Removal Cut (Shelterwood)	47	38	176	67									300			628
Aspen																
Clearcut	40	101	81	85	140	69	73	49	13	7	9					677
Sanitation/Salvage								5	9			37				51
Lodgepole Pine																
Clearcut	57	151	43	38	176	47	156	102	54		130	14	25			993
Seed Cut					66	107	12									185
Removal Cut							13			16						29
Commercial Thin									50							50
Sanitation/Salvage							8									8
Englemann Spruce/Fir																
Clearcut	2	64	57		150	64	44									381
Preparatory Cut (Shelterwood)		255		54	30		27		108							474
Seed Cut (Shelterwood)			34		553		175	430			88	88				1,368
Removal Cut (Shelterwood)		7			82		72					23				184
Selection (Uneven-aged Mngt.)		286	164	150	27	152				41	65	7				892
Mixed Conifer (Douglas-fir)																
Intermediate Cut, Salvage, Commercial thin		15	1,689	229	47	416	232	232	278		208		290			3,636
Clearcut		10			31	13	4									58
Preparatory Cut (Shelterwood)		386														386
Seed Cut (Shelterwood)					56	389	51									496
Removal Cut (Shelterwood)			59	79	261											399
Other Species																
Sanitation Salvage, Special Cut, Selection, X-Mas Trees							93	16								109
Total Acres Cut	410	1,697	2,951	1,373	2,008	2,655	2,532	1,939	539	64	948	284	700			18,100

