Standards for Rangeland Health and Guidelines for Grazing Administration
Implementation Project: Allotment Assessment
For

Mainstreet

I. Introduction

The Mainstreet Allotment Assessment was conducted in accordance with directions set forth in the Washington Office Instruction Memorandum No. 98-91 and Arizona State Instruction Memorandum No. 99-012 for implementation of Standards for Rangeland Health and Guidelines for Grazing Administration (Standards and Guides).

The purpose of Standards and Guides is to insure the health of public rangelands. These standards help the Bureau of Land Management (BLM), rangeland users, and interested members of the public achieve a common understanding of acceptable resource conditions and work together to implement that vision (see Appendices for a copy of the Standards and Guidelines).

Arizona's Standards and Guides were developed by the BLM State Standards and Guides Team and the Arizona Resource Advisory Council (RAC), a state level council appointed by the Secretary of the Interior.

The Secretary of the Interior approved the Standards and Guides in April 1997. The Decision Record, signed by the BLM State Director (April 1997) provides for full implementation of the Standards and Guides in all Arizona Land Use Plans.

This assessment was conducted by an interdisciplinary assessment team (IAT) of resource specialists from:

- BLM
- Natural Resource Conservation Service (NRCS)
- Arizona Game and Fish Department (AGFD)
- Mohave County Extension

The IAT was assisted by the Rangeland Resource Team (RRT), a diverse group of local residents formed and appointed under the RAC charter (see Appendices for a list of members on both teams). The RRT may provide informal advice to the BLM Field Manager regarding implementation of Standards and Guides, and "will have opportunities to raise any matter of concern with the resource advisory council and ... to provide information and options to the council for their consideration" as provided for by regulations at 43 CFR 1784.6-2(a)(2)(iv)(A).

The BLM/RAC Implementation Strategy for Arizona states that the RRTs primary role is to assist BLM managers in assuring the S&Gs are consistently applied and technically sound. The IAT analyzed all available information in cooperation with the RRT. Based on field observations, team members determined whether rangeland conditions were meeting, progressing toward meeting, or not meeting the Standards for Rangeland Health.

The RRT, IAT, permittees and other interested parties were invited to attend an issue scoping meeting on January 14, 2003, and a field visit on September 17, 2003. In cases where standards were not being met, the group identified which resource uses needed to be addressed, and teams presented recommendations to improve resource conditions.

After consultation with interested persons, permittees, and the IAT, the authorized officer will select the appropriate actions. The selected management actions will be analyzed through the National Environmental Policy Act (NEPA) process and a proposed decision will be issued.

II. Grazing Use

A. Total grazing privileges

Active Grazing Use: 14535 AUMs
Suspended Non-use: 0 AUMs

(Note: an AUM, or Animal Unit Month, is a unit of measurement indicating how much forage is eaten by a cow/calf pair in one month.)

B. Season(s) of use: Yearlong

C. Kind and class of livestock: 1558 cattle
15 horses

D. Percent federal range: 77%

III. Allotment Profile

A. Description: The Mainstreet Allotment is located in the west central portion of the Arizona Strip approximately 30 miles south of St. George, Utah. It stretches from the desert grasslands in Hurricane Valley underneath the Hurricane Rim on the east to the sagebrush flats of Sullivan Draw and the pinyon-juniper hills of the Hidden Rim on the west. Poverty Mountain and the private lands around the town of Mt. Trumbull are along its southern boundary. The three major vegetative types on the allotment are the desert grassland, sagebrush, and pinyon-juniper. It is one of the largest allotments on the Arizona Strip.

B. Acreage

The allotment contains:

- 157,869 acres of federal land
- 23,406 acres of state land
- 10,806 acres of private land

C. Objectives

1. Land Use Plan Objectives

Arizona Strip Resource Management Plan, 1992 p. II-2

Manage public lands in a manner that responds to the nation's need for domestic sources of energy, minerals, and livestock products from the public lands and the importance of these industries to local and regional economies.

Manage livestock grazing to maintain productive rangelands which meet forage, watershed, and wildlife needs.

Shivwits Resource Area Implementation Plan

GZ17 Allowable use on key forage species is 50% on allotments with rotational grazing systems.

RR-01 Continue authorizing the organized recreational events now occurring on the Resource Area.

RR-06 Implement actions to restore and/or maintain natural conditions or appearance in all areas.

RR-07 Maintain primary access roads, particularly Quail Hill Road, on a year round basis.

RR-08 Manage the majority of the resource area for extensive recreation while maintaining its naturalness/remoteness. The exception to this is the Cedar Pockets Campground.

RR-09 Commercial recreation permits would be issued to the extent that their cumulative impacts are consistent with the overall objectives of this plan and in the public interest.

WS01 Manage vegetation cover towards ecological stability and sound long-term protective soil cover using mechanical, biological or fire as tools for accomplishment.

WS22 Manage watershed areas according to watershed categorizations to achieve identified objectives.

The allotment was classified in three different categories according to the watershed categorizations on the Arizona Strip District.

Category I. This means that the watershed units currently are in satisfactory erosion condition, but are not especially susceptible to wind and water erosion.

Category II. This means that the watershed units currently are in satisfactory erosion condition, but are susceptible to wind and water erosion following disturbance.

Category IV. This means that the watershed units currently are in unsatisfactory erosion condition and the soils would be responsive to treatment.

TE01 Carry out management consistent with multiple use for conservation of candidate species and their habitats and ensure that actions authorized, funded, or carried out do not contribute to the need to list any of these species as threatened or endangered. Adverse impacts to listed species will be avoided.

WL02 Maintain productive wildlife habitat and ensure wildlife needs and considerations are incorporated into land use planning, National Environmental Policy Act documents, and management decisions.

WL06 Continue restoration of native wildlife into historic range by transplanting wildlife in cooperation with the Arizona Department of Game and Fish.

WL20 Manage pronghorn habitat through the Habitat Management Plan (HMP) process to achieve and maintain viable populations in accordance with HMP objectives. Initial target levels are 400 in the Shivwits Resource Area.

2. Specific Resource Objectives

California Condor Recovery Plan

Provide foraging habitat for California condors. Encourage livestock owners to leave dead livestock on rangelands.

Clayhole Habitat Management Plan

O2. Provide quality habitat for 400 pronghorn antelope and allow for their expansion and utilization of potential antelope habitat within the Clayhole Habitat Area.

O8. Provide for safe and yearlong wildlife use of all existing livestock waters within the CHA.

A2. Modify fences to allow free movement of pronghorn antelope within the CHA.

Black Rock Habitat Management Plan

VM1 Enhance wildlife forage conditions on all allotments with a downward or static trend to achieve DPC by 2010.

Mainstreet Allotment Management Plan, revised 1987

Little Joe Pasture

- Maintain squirreltail at 42% frequency
- Increase blue grama from 2% to 5% frequency by 1996

Sullivan Pasture

- Maintain the following key species at current levels:

  Squirreltail 35% frequency
  Blue grama 6.5% frequency
  Needle and thread .5% frequency
  Indian rice grass 1% frequency
  Sand dropseed 2% frequency
  Galleta 8% frequency
  Globemallow 11.5% frequency

Cox/Atkin Pasture

- Maintain the following key species at current levels:

  Squirreltail 21% frequency
  Blue grama 38% frequency
  Galleta 5% frequency
  Indian ricegrass 1% frequency
  Needle and thread 1% frequency
  Sand dropseed .5% frequency
  Globemallow 5% frequency

Englestead Pasture

- Maintain western wheat at 43% frequency
- Maintain blue grama at 6% frequency
- Increase Indian ricegrass from 3% to 6% frequency by 1996
- Increase squirrel tail from 6% to 9% frequency by 1996
- Increase winterfat from .5% to 3% frequency by 1996

Northwest Pasture

- Maintain squirreltail at 46.5% frequency
- Increase Indian ricegrass from 11% to 13% frequency by 1996
- Increase sand dropseed from 4% to 6% frequency by 1996
- Increase blue grama from 7% to 9% frequency by 1996
- Increase galleta from 11.5% to 13.5% frequency by 1996

Polygamist Pasture

- Maintain blue grama at 35% frequency
- Increase galleta from 3% to 6% frequency by 1996
- Increase Indian ricegrass from 1.5% to 5% frequency by 1996
- Increase globemallow from .5% to 2% frequency by 1996

Poverty Mountain Pasture

- Increase blue grama from 2% to 4% frequency by 1996
- Increase squirreltail from 3% to 6% frequency by 1996
- Increase green ephedra from 3% to 6% frequency by 1996
- Increase cliffrose from 9% to 12% frequency by 1996
- Increase buckwheat from .5% to 2% frequency by 1996

Pump Station Pasture

- Maintain blue grama at 28% frequency
- Increase squirreltail from 3% to 5% frequencyby 1996

Hy Pond Pasture

- Maintain blue grama at 56% frequency
- Increase squirreltail from 10.5 % to 13% frequency by 1996
- Increase sand dropseed from 3% to 5% frequency
- Increase needle and thread from 1% to 3% frequency

Bishop & Burr Pasture

- Maintain the following key species at their current levels:

  Sand dropseed 16% frequency
  Blue grama 23% frequency
  Indian ricegrass 1% frequency
  Needle and thread 8.5% frequency
  Black grama 1% frequency
  Galleta 9.5% frequency
  Squirreltail .5% frequency
  Globemallow 10% frequency

Mustang Pasture

- Maintain the following key species at their current levels:

  Blue grama 37% frequency
  Squirreltail 18% frequency
  Sand dropseed 2% frequency
  Galleta 14% frequency
  Globemallow 4% frequency

Nutter Pasture

- Maintain the following key species at their current levels

  Galleta 35% frequency
  Squirreltail 20.5% frequency
  Blue grama 7.5% frequency
  Indian ricegrass 5% frequency
  Globemallow 12.5% frequency

Christman Pasture

- Maintain blue grama at 45% frequency
- Maintain galleta at 24% frequency
- Maintain black grama at 2% frequency
- Maintain sand dropseed at 4% frequency
- Increase squirreltail from .5% to 4% frequency by 1996
- Maintain globemallow at 9% frequency

Bull Pond Pasture

- Maintain the following key species at their current levels:

  Needle and thread 21% frequency
  Blue grama 73% frequency
  Indian ricegrass .5% frequency
  Squirreltail 14% frequency
  Galleta 21% frequency
  Sand dropseed 2% frequency
  Black grama .5% frequency
  Globemallow 9% frequency

Dave Pond Pasture

- Maintain blue grama at 54% frequency
- Maintain galleta at 5% frequency
- Maintain black grama at 7% frequency
- Maintain sand dropseed at 6% frequency
- Increase needle and thread from 2% to 4% frequency by 1996
- Increase Indian rice grass from .5% to 3% frequency by 1996
- Increase squirreltail from .5% to 3% frequency by 1996
- Maintain globemallow at 9.5% frequency

Mudhole Pasture

- Maintain galleta at 93% frequency
- Increase winterfat from 12% to 15% frequency by 1996
- Increase squirreltail from .5% to 3% frequency by 1996
- Increase Indian ricegrass from 4% to 6% frequency by 1996

Twin Tanks Pasture

- Maintain the following key species at their current levels

  Galleta at 57% frequency
  Blue grama at 16% frequency
  Squirreltail at 9% frequency
  Globemallow at 1.5% frequency

All Winter Pastures

The specific resource objective for the winter pastures in the allotment is to maintain the current (1987) percent frequency of key species.

Desired Plant Community Objectives

Desired Plant Community objectives (DPC) are developed for this evaluation by an interdisciplinary team of specialists. These DPCs are to replace the1987 AMP specific objectives which focus on livestock forage needs. These objectives focus on the ecological site and its potential which reflects the biodiversity of the area. The DPC objectives are expressed in terms of Composition by Weight (CBW) using the Dry Weight Ranking method to measure change. DPC is a variation of the Potential Natural Community (PNC) which identifies the plants capable of and most likely to be found growing on the site. Forbs are not listed as DPC objectives because they are exceedingly variable from year to year, depending on amounts and timing of precipitation. All objectives should be achieved by 2020. Following is a list of DPC objectives for twenty-six pastures based on the ecological or range site at the key area in each pasture.

Gypsum Upland 7"-11" precipitation zone range site: located at key areas in the Square Pond and South Cecil pastures in Lower Hurricane Valley.

Square Pond
Maintain winterfat at 5% to 10%
Maintain Mormon tea at10% to 20%
Maintain galleta grass at 35% to 45%
Maintain black grama at 15% to 20%
Maintain dropseed species at 5% to10%

South Cecil
Increase fourwing salt bush from 1% to 5% to 10%
Maintain Mormon tea at 1% to 5%
Maintain galleta grass at 10% to 25%
Maintain winter fat at 1%to 5%
Maintain dropseed species at 1% to 5%
Maintain black grama at 30% to 40%
Increase Indian ricegrass from 2% to 5 % to 10%

Rational: The gypsum upland range site guide identifies 5% to 15% shadscale and no winterfat. There is no shadscale in Hurricane Valley, but some winterfat does exist so is included in the DPC. Galleta grass and black grama exceed their expected ranges in Square Pond as does black grama in South Cecil, but they provide excellent ground cover and are desirable forage plants so they are being managed for their current CBW rather than that listed in the range site guide. However, if black grama remains at near 40% it may be difficult to increase Indian rice grass from its current 2% in the South Cecil pasture. Precipitation patterns will largely determine the relative abundance of these species because Indian ricegrass is a cool season grass, responding to spring moisture while black grama is a warm season grass responding to summer moisture.

Clay loam upland 7" - 11" precipitation zone range site: Located at Key Areas in the Cecil, Calving, and Marchant pastures of Hurricane Valley.

Cecil
Maintain fourwing saltbush at 5% to 10%
Maintain Mormon tea at 1% to 3%
Maintain galleta grass at no less than 30%
Maintain black grama at10% to15%
Maintain dropseed species at 2% to 7%

Calving
Increase fourwing saltbush from 1% to 5% to 10%
Increase winterfat from 1% to 5% to 10%
Maintain galleta grass at 15% to 30%
Maintain sand dropseed at 2% to 7%

Marchant

Maintain Mormon tea at 1% to 5%
Increase fourwing saltbush from 2% to 5% to 10%
Maintain galleta grass at 30% to 55%
Increase sand dropseed from 1% to 2% to 7%
Maintain black grama at 10% to 15%

Rational: The clay loam upland 7"-11" precipitation range site guide was used because there is no shadscale on these sites, but an abundance of burro grass (scleropogon brevifolius) which fits this range site. Most of the above listed key species fall within the CBW range identified in the site guide. Those key species identified for an increase in CBW are those that exist in the plant community in lesser amounts than are identified in the range site guide. The composition of galleta grass in both the Cecil and Marchant pastures is greater than that identified in the site guide. Because of its desirability as ground cover for watershed protection and value as a forage plant, it is identified to retain its current CBW. Black grama is not identified in the range site, but because it exists in the plant community and is a desirable ground cover and forage plant, it is identified to retain its current CBW.

Shallow loamy 7"-11" precipitation zone range site: Located at Key Areas in the Doolittle and Childers pastures of Hurricane Valley.

Doolittle

Increase fourwing saltbush from 8% to a range of 10%-15%
Increase winterfat from 2% to a range of 5%- 10%
Maintain Mormon tea at 10%-15%
Maintain galleta grass at 25%-35%
Maintain black grama at 10%-15%
Maintain sand dropseed at 5%-10%

Childers

Increase fourwing saltbush from 0% to 1%-5%
Increase winterfat from 0% to 1%-5%
Increase Mormon tea from 2% to 5%-10%
Maintain galleta grass at 5%-15%
Maintain sand dropseed at 5%-10%
Maintain black grama at 15%-20%

Rational: The range site guide identifies fourwing saltbush, winterfat and Mormon tea as all occurring between 10% and 15%. Fourwing and Mormon tea occur at about that rate in the Doolittle pasture and will be managed for that amount. They are not so abundant in the Childers pasture nor is winterfat in either pasture. The goal will be to increase these browse species in the composition. Maintaining the grasses will continue to protect watershed conditions and provide wildlife and livestock forage.

Shallow loamy 10"-14" precipitation zone range site: Located at Key Areas in the Mudhole, Bishop & Burr, Christman, Poverty Mountain, Dutchman, Little Joe, Bull Pond, Hy Pond, Mustang, and New Spring or Nutter pastures.

Mudhole

Maintain winterfat at 15%-20%
Maintain Mormon tea at 1%-5%
Increase needle and thread grass from 6% to a range of 10%-15%
Maintain galleta grass at 25%-35%
Maintain blue grama at 5%-15%
Maintain black grama at 5%-20%
Maintain sand dropseed at 1%-5%

Bishop & Burr

Increase fourwing saltbush from 2% to a range of 5%-10%
Maintain galleta grass at 5% to 15%
Maintain needle and thread grass at 10%-20%
Maintain sand dropseed at 20% -35%
Maintain blue grama at 5%-15%
Increase squirrel tail from 3% to a range of 5%-10%
Increase Indian rice grass from 3% to a range of 5%-10%

Christman

Maintain blue grama at 20%-35%
Maintain ring muhly at 1%-5%
Increase squirrel tail from 3% to a range of 5%-15%
Maintain galleta grass at 10%-15%
Increase western wheat grass from a trace to 1%-5%

Poverty Mountain

Decrease big sagebrush from 57% to a range of 5%-30%
Maintain cliff rose at 5%-10%
Increase grasses such as blue grama, galleta, and squirrel tail, which currently exist only in trace amounts, to a 5%-10% range for each.

Dutchman

Maintain squirrel tail at 10%-15%
Increase Indian rice grass from 2% to a range of 3%-5%
Maintain sand dropseed at 15%-25%
Increase blue grama from 2% to a range of 5%-10%
Maintain galleta grass at 15%-25%
Increase needle and thread grass from 2% to a range of 10% -15%

Little Joe

Reduce sagebrush from 81% to a range of 5%-30%
Maintain squirrel tail at 5%-10%
Increase blue grama from a trace to a range of 5%-15%
Increase galleta grass from a trace to a range of 5%-15%
Increase Indian rice grass from 2% to a range of 5%-10%
Increase sand drop seed from a trace to 1%-5%

Bull Pond

Maintain needle and thread grass at 20%-35%
Maintain blue grama at 35%-45%
Increase Indian rice grass from 2% to a range of 5%-10%
Increase galleta grass from 2% to a range of 5%-10%
Increase squirrel tail from 2% to a range of 5%-10%

Hy Pond

Maintain blue grama in a range of 40% to 50%
Maintain sand drop seed at 1% -5%
Increase needle and thread grass from 2% to a range of 10%-15%
Maintain squirrel tail at 5%-10%

Mustang

Maintain blue grama at 35%-45%
Maintain squirrel tail at 5%-10%
Increase galleta from 2% to a range of 5%-10%

Nutter or New Spring

Reduce sagebrush from 63% to a range of 5%-30%
Maintain squirrel tail at 10%-15%
Maintain galleta grass at 15%-25%
Increase blue grama from a trace to 10%-15%
Increase needle and thread from a trace to 5%-10%
Increase western wheat from a trace to 1%-5%

Rational:

While the Key Areas in the above ten pastures are all located in the shallow loamy 10"-14" precipitation zone range site, there is a great deal of variation in the vegetation between Key Areas. For instance, several Key Areas contain no sagebrush while others contain as much as 81%. The range site guide calls for a range of sagebrush between 5% and 30% composition by weight.

Objectives were set that are compatible with the key species found at each Key Area. In some instances the CBW of a key specie was greater than what the range site guide identified. Since these species are considered desirable both for forage and watershed cover the objective is to maintain them at the current level. On Key Areas with high levels of sagebrush an objective was set to reduce the sagebrush and increase the CBW of various key species with the knowledge that to achieve these objectives it will be necessary to either conduct a prescribed burn on the area or treat it with a herbicide such as Spike, which would reduce the sagebrush and allow the key species to increase.

Sandy loam upland 7"-11" precipitation zone range site: Located at Key Areas in the Higley and Salaratus pastures.

Higley

Maintain the CBW of winterfat at 1%-5%
Maintain galleta grass at 60%-80%
Maintain sand dropseed at 5%-15%
Increase blue grama from a trace up to 5%-10%

Salaratus

Maintain Mormon tea at 5%-15%
Maintain galleta grass at 20%-35%
Maintain sand dropseed at 30%-45%
Maintain black grama at 15%-20%
Maintain blue grama at 1%-5%

Rational: Most of these key species are at or above the range shown for them in the range site guide. Some, such as galleta grass in Highley and sand dropseed in Salaratus are considerably higher than what is called for in the range site guide. The objective is to maintain them at the higher level as they are desirable from a watershed protection standpoint as well as desirable for wildlife and livestock forage. Increasing blue grama from a trace to a percentage of the composition may be difficult. It will require the reduction of something else such as galleta grass which may be more adapted to the environment at that specific location and since galleta and blue grama are similar in growth requirements and palatability, management will have little influence on which one is more responsive.

Loamy Upland 10"-14" precipitation zone range site: Located at Key Areas in the Polyg, Sullivan or Cox Atkin, Twin Tank and Dave Pond pastures.

Polygamist

Maintain blue grama at 25%-40%
Maintain needle and thread grass at 5%-10%
Maintain galleta grass at 5%-15%
Maintain sand dropseed at 1%-3%

Sullivan

Reduce big sagebrush from 39% to a range of 5%-15%
Maintain squirrel tail at 5%-15%
Increase blue grama from 6% to a range of 10%-15%
Maintain galleta grass at 5%-15%
Increase Indian rice grass from 3% to 5%-10%
Maintain sand dropseed at 15%-20%

Twin Tank

Reduce sagebrush from 36% to a range of 5%-15%
Maintain blue grama at 15%-20%
Maintain galleta grass at 5%-15%
Increase squirrel tail from 2% to 5%-10%
Maintain sand dropseed at 15%-20%

Dave Pond

Maintain blue grama at 30%-60%
Increase galleta from 1% to 5%-10%
Maintain black grama at 5%-20%
Maintain sand dropseed at 1%-5%
Maintain needle and thread grass at 10%-15%

Rational: In the pastures that contain fairly large amounts of sagebrush prescribed burns or herbicide treatments can be applied to reduce the CBW of the sagebrush and allow other species to increase. Increasing galleta grass in the Dave Pond pasture may be difficult with such a large amount of blue grama present.

Sandy loam upland 9"-13" precipitation zone range site: Located at the Key Area in the Calf pasture at the base of the Hurricane Cliffs.

Calf

Maintain galleta grass at 30%-55%
Maintain needle and thread grass at 5%-10%
Maintain black grama at 10%-15%
Increase fourwing saltbush from a trace to 5%
Increase Mormon tea from 4% to 5%-15%

Rational: The range site guide shows a range of 30%-40% for galleta, no needle and thread grass, and from 0-3% for black grama. Since these grass species exist in the composition at the respective rates of 55%, 7%, and 10%, the objective is to maintain them at close to current rates. Four wing saltbush should exist on the site at from 5%-10 of the CBW. Through careful management it should be able to increase to somewhere near that amount as well as increase the Mormon tea somewhat.

Loamy bottom 10"-14" precipitation zone range site: Located at the Key Area in the Englestead pasture.

Englestead

Maintain western wheat grass 30%-45%
Maintain squirrel tail at 10%-15%
Maintain galleta grass at 1%-5%
Increase sand drop seed from 1% to a rqnge of 5%-10%
Reduce sagebrush from 40% to a range of 5%-15%
Increase Indian rice grass from a trace to a range of 5%-10%

Rational: By reducing sagebrush to the range called for in the range site guide, grasses such as Indian rice grass will have a chance to increase in the plant community.

Limestone slopes 13"-17" precipitation zone range site: Located at the Key Area in the Hidden Pump pasture.

Hidden Pump

Reduce sagebrush from 78% to a range of 5%-25%
Maintain blue grama at 5%-25%
Increase galleta grass from a trace to 5%-10%
Increase squirrel tail from a trace to 5%-10%
Increase june grass and mutton grass from a trace to 5%-15%

Rational: At one time this area had a high concentration of juniper, but in the 1960's they were removed. This has allowed the sagebrush to increase greatly. By reducing the amount of sagebrush, perennial grasses will have an opportunity to increase, thus improving the vegetative cover to protect the soil from erosion and improve forage conditions for wildlife and livestock. If there is an insufficient source of grass seed in the area to allow it to naturally revegetate, then it may need to be reseeded from an outside source.

D. Key Species

Following is a list of key species for the allotment: Sand dropseed, galleta grass, big galleta, Indian ricegrass, squirreltail, blue grama, black grama, bush muhly, needle & thread grass, western wheat grass, globemallow, muttongrass, fourwing saltbush, winterfat, Mormon tea, and cliffrose.

E. Grazing System

The allotment is split into two main segments, a summer use area on the south and west portions of the allotment and a winter use area on the east side. Four pastures between the two segments serve as transition pastures. These four are used for separation and shipping of livestock as well as using when moving cattle from the summer to winter range and back. One of the transition pastures is rested each year.

The summer country is used from the middle of June until December 15, with the winter country being used from the middle of December until about June 15. The grazing system is called the "best pasture" system in which each year the area being moved into is looked over by the BLM and the rancher to determine which pastures to use and in what sequence.

The main source of water on the Mainstreet Allotment is provided by large earthen ponds or reservoirs built along dry washes or drainages throughout the allotment.

F. Other uses

1. Special Status Species

Endangered and Threatened Species

- California condor *(Gymnogyps californianus)* (10-J)
- Bald eagle *(Haliaeetus leucocephalus)*
- Fickiensen plains cactus *(Pediocactus peeblesianus var. fickienseniae)* (candidate)

An experimental, non-essential population of California condors was initially established on the Vermilion Cliffs in 1996 as part of a multi-agency effort to save this species from extinction. Subsequent condor releases on the Arizona Strip have occurred annually, with releases in 1998 and 1999 of 16 total condors occurring from the Hurricane Cliffs overlooking the Mainstreet Allotment.

Condors are strictly scavengers and they range widely, easily covering over 100 miles in a day. Condors prefer to scavenge large mammalian carcasses, such as deer or cattle.

Condors may be found in the Mainstreet Allotment either flying over it or feeding on the ground at anytime of the year. The condor release site on the Hurricane Cliffs is not presently being used, but may be reactivated in the future. When this release site was used, a public condor viewing area was located in the Mainstreet Grazing Allotment where the Temple Trail descends the Hurricane Cliffs. The Mainstreet Allotment public condor viewing site would probably be reactivated if the Hurricane Cliffs release site was made active.

Bald eagles are winter migrants in this allotment where they are primarily scavengers. They do not nest in this area, but may be seen during the colder months.

The Fickiensen plains cactus is a federal candidate species. The cactus occurs in this allotment in the Mainstreet Valley.

The Mojave Panic *(Panicum mohavense)* is an Arizona rare plant that occurs on small talus slopes of Kaibab limestone ledges and is considered sensitive by BLM. The plant has been found sporadically along the limestone ledges in Mainstreet Valley, Salaratus Hills, south of Poverty Mountain, on ledges above the Hurricane Cliffs and on similar habitat sporadically over to Hacks Canyon. The plant occurs locally abundant but the population is widespread with large gaps between the talus slopes and limestone balds.

The number of Mojave panics is estimated to be a few thousand during wet summers in Mainstreet Valley and the Salaratus Hills.

BLM Sensitive and State Species of Concern

Sensitive species are usually rare within at least a portion of their range. Listed below are the sensitive animal species that may occur within or adjacent to the Mainstreet Allotment:

- Ferruginous hawks (*Buteo regalis*)
- Western burrowing owls (*Athene cunicularia hypugea*)
- Spotted bat *(Euderma maculatum)*
- Western small-footed myotis *(Myotis ciliolabrum)*
- Fringed myotis (*Myotis thysanodes*)
- Allen's lappet-browed bat (*Idionycteris phyllotis*)
- Townsend's big-eared bat *(Corynorhinus townsendii)*
- Big free-tailed bats (*Nyctinomops macrotis*)

Ferruginous hawks and western burrowing owls are known to use habitat similar to that found on the Mainstreet Allotment, though specific sightings have not been recorded for any of these species.

Peregrine falcons (*Falco peregrinus*) were formally federally listed and were delisted in 1999. They nest on large cliffs in such several locations on the Arizona Strip, such as Kanab Creek and the Vermilion Cliffs. No nests are known on the Hurricane Cliffs, but peregrine falcons have been seen flying along the rim east of Diamond Butte and peregrines may be seen flying over and/or feeding in this allotment. Peregrines are primarily avian predators.

Herpetological inventories have not been done for this allotment. No sensitive reptiles or amphibians are known or suspected to occur on this allotment.

2. Other Wildlife Species

The primary big game on the Mainstreet Allotment is pronghorn (*Antilocapra americana*) although mule deer (*Odocoileus hemionus*) are also present. Pronghorn are native to the Arizona Strip, but were extirpated in the early 1900s. They were first re-introduced to the Strip in 1961 and to the area of this allotment in 1979 when 84 head were released near Diamond Butte. There have been several subsequent releases. In 2003, an outstanding pronghorn buck was harvested and reportedly may be a new world record, pending conformation by the Boone and Crockett Club.

The Hurricane Valley provides habitat for a herd of from 100 to 150 pronghorn. This area is managed under the Clayhole HMP. This plan does not distinguish between pronghorn populations in the Clayhole and Hurricane Valleys.

The Arizona Game and Fish Department (AGFD) manages the Clayhole Valley pronghorn herd within Game Management Unit (GMU) 13A and the Hurricane Valley

herd within GMU 13B. The two GMUs have different management strategies and have separate hunts. Some exchange between the two pronghorn herds exists.

Nongame wildlife found on the allotment is typical of the area, including a variety of small mammals, grassland birds, raptors, and reptiles. In late summer, large flocks of pinyon jays are often noted. All waters within this arid region are important for wildlife.

Predators including coyotes, bobcats, and mountain lions can be found in this allotment. Coyotes in particular are common and are opportunistic hunters. The Mainstreet Allotment provides some very good coyote habitat and is frequently used by coyote hunters from the St. George area.

3. Recreation

The Main Street Allotment is considered to have recreation values for its geology, scenic view sheds, and remoteness. General recreation activities might include sight seeing, horseback riding, hiking, camping, hunting, rock collecting, photography, bird watching and nature study.

Off Highway Vehicles: This allotment falls in an area classified as Limited to Existing Roads and Trails.

Recreation Opportunity Spectrum: This allotment was classified as having the following Recreation Spectrum Classes in it: Semi Primitive – Non Motorized, Semi Primitive - Motorized, and Roaded Natural.

4. Wilderness

No designated wilderness areas are located in this allotment.

G. Issues brought out in scoping.

1. Issues relating to Rangeland Health

a. Noxious weeds, scotch thistle on the allotment and Knapweed found close
b. Erosion at Rock Crossing/Childers
c. Lack of ground cover in Lower Hurricane Valley, west of the condor release site
d. Lack of fawning cover along the main road in Mainstreet Valley within ½ mile of water.
e. Utilization may be exceeding 50% along Mainstreet road
f. Lack of herbaceous understory in the sage west of the main road
g. Dense P/J and sage around Poverty Knoll and Poverty Mountain
h. Erosion on Kellers
i. Reinvasion of woody species into treatment areas
j. Effects of off road use of motorized equipement, seed harvesting
k. Amount of seed harvesting could affect frequency
l. Seed harvester compliance on private land
m. The watershed is still to be visited by B. Bock After his visit: Hurricane Wash flood plains exhibit headward erosion, as well as sheet and lateral erosion.

n. Closed stands of sage on the west end of the allotment, 5 year burn plan
o. Erosion along Hurricane Wash from rock crossing south to Higley tank

2. Issues not relating to Rangeland Health, and not discussed further in this document.

a. There is a major road torn up
The road referred to is #1073 just south of the Navajo Trail in Hurricane Valley. It has some "blow out areas" that are primarily gypsum soils that during the recent drought became dry and powdery when an oil well driller drove heavy equipment across it. Following recent rains, the "blow outs" have healed considerably. If additional rehabilitation is necessary, the oil driller has a $25,000 bond which can be used to fix the road.

b. There may be hazardous materials at a drill site
Open 5 gallon containers of unknown liquid were seen.
The well driller has been shut down for non compliance and will be required to clean the drill site up or forfeit his $25,000 bond.

c. Fences at Mud Pit are not in compliance
This issue is also at the oil well drill site and has the same solution as the above issue.

d. Fence, east of Childers has 8 strands of wire
After discussions between the ranchers, BLM biologists, and the Arizona Game and Fish, it was decided to study the fence line to determine where antelope were crossing the fence. At these sites the bottom wire would be raised and a piece of PVC pipe placed over the bottom wire to allow safer and easier passage for the antelope.

e. North of Poverty Knoll Tank (fence)
This is a seven or eight strand barbed wire fence which encloses Dave Pond, a base water on the Mainstreet allotment that provides water to both the Dave Pond and Bull pastures. Corrals are also located here where cattle are branded, vaccinated, separated, weaned, etc. It was decided that the bottom wire would be raised to twelve inches above ground level to see if that would allow adequate access to water for antelope and still be tight enough to hold cattle as they are being worked and pushed into the corral. If it does not work out satisfactorily, then a wildlife water catchment will be built in the area.

f. A recent fence inventory noted most of the problems are with the bottom wire. Luke Thompson has all of the locations.
This will be dealt with the same as "d" above by identifying where antelope cross fencelines and raising the wire and covering it with a piece of PVC pipe.

g. Vandalism at headquarters
There have been problems with vandalism at various locations on the allotment. BLM rangers will patrol the allotment along with their other

patrolling, but with increased recreational use on the Arizona Strip, it is anticipated that vandalism will not stop.

h. Dry ring tank, no yearlong water
During the 1950's five ring tanks were installed by the ranchers throughout the Hurricane Valley area. Water was hauled to these tanks by the rancher to water sheep in the area. Sheep are no longer grazed on the Arizona Strip and the tanks are used only occasionally when the permittee hauls water to them to increase livestock distribution or when no pond water is available. When no cattle are in the area, the permittee no longer hauls water to the tank. If BLM or the Arizona Game and Fish personnel feel that wildlife in the area need water in these ring tanks, they may seek permission from the rancher to haul water to the ring tanks. This conforms to BLM manual H-1741-2, Water Developments, which states that there should be an assurance of water available to wildlife when livestock are not using the facility when plan objectives identify the need.

i. Communication/coordination between permittees-authorizers
This has reference to BLM personnel and the rancher or permittee on the Mainstreet allotment getting together to talk over policy, expectations, changes in management, weather conditions or any other items where misunderstanding or disagreement may occur. Both BLM and the rancher will try to improve on this.

j. Trench in Childers pasture, opened for geology study; abandoned?
Arizona Geological Survey (AZGS) dug a fairly long and deep trench at the base of the Hurricane Fault in the Childers pasture in order to study movement along the fault. They have completed the study and when contacted by the BLM geologist indicated they would fill it in.

k. Stranded tourists are a safety hazard and a cost of time and money for permittees
Tourists sightseeing or visiting the Grand Canyon-Parashant National Monument sometimes get lost or break down on the rough roads of the Arizona Strip and require help from the rancher. This takes away from the work the rancher is trying to accomplish. Increasing patrols by the BLM rangers will help some, but this will probably continue to be a concern.

IV. Management Evaluation

A. Purpose of Evaluation

The purpose of this assessment is to determine if the existing soil, water, and vegetative resources are meeting/making progress toward meeting or are not meeting the Arizona Standards for Rangeland Health. These resources are managed according to resource management plans, Allotment Management Plans, and other activity plans, which identify terms and conditions for management on public lands within the Mainstreet Allotment. If the current livestock grazing practices are determined to be causing non-attainment of Standards then they will be modified to

comply with the Guidelines for Grazing Administration. This assessment will also evaluate and update existing Activity Plan objectives to ensure multiple use objectives are tied to the indicators for rangeland health.

B. Summary of Studies Data

1. Livestock Actual Use

The rancher turns in reports of actual livestock use twice a year, once in June for the winter use pastures and again in December for the summer use pastures. Some years the transition pastures are also shown separately.

Actual use is shown in animal unit months.

YEAR	SUMMER	TRANSITION	WINTER	TOTAL
1981	6,674	-	7,857	14,531
1982	6,995		8,227	15,222
1983	7,659		8,165	15,824
1984	6,384		7,132	13,516
1985	6,652		7,181	13,833
1986	6,347		6,891	13,238
1987	4,959	2,617	6,646	14,222
1988	5,253	2,714	6,520	14,487
1989	3,423	2,166	6,247	11,836
1990	4,639	2,104	4,998	11,741
1991	4,671	2,683	6,680	14,034
1992	5,643	2,892	5,475	14,010
1993	---	---	---	14,362
1994	---	---	---	12,792
1995	---	---	---	12,874
1996	---	---	---	13,417
1997	---	---	---	12,366
1998	---	---	---	13,433
1999	---	---	---	12,957
2000	---	---	---	11,979
2001	4610	3004	5211	12,825
2002	2834	831	5255	8,920

2. Precipitation

There are eight rain gauges located in or near the allotment that show precipitation in various parts of the allotment by season since 1978. The south end of the allotment averages about 14 inches of precipitation a year while HurricaneValley averages 10 inches. The west side has averaged 12 inches and the central portion nearly 11 inches.

The Appendices contain the readings from each rain gauge by season and year.

3. Utilization

The Key Forage Species Grazed Class method was used to collect the data. Utilization is read at or near the key area established in most pastures. Utilization data from twenty-nine different pastures has been collected and analyzed for this evaluation. The studies were done between 1986 and 1999. Earlier assessments or evaluations of the Mainstreet Allotment were conducted in 1984, 1987 and in 1992.

The highest average utilization over this period was 41% in the Marchant pasture. However, there are 108 instances where an individual species has been grazed heavier than 50% in one of the 28 pastures during the 14-year span in which the utilization studies have been conducted. Of the 108 instances, only 18 of those involved a specie whose frequency in the vegetative composition was 5% or greater. Most of the heavy use was on the browse species winter fat (*Ceritoides lanata*), four-wing saltbush (*Atriplex canescense*), and Mormon tea (*Ephredra nevadensis*), which generally made up only a trace to 2% of the composition. In only one instance did species show a decline in trend following a season of heavy grazing. That was on galleta grass in the Calving pasture in 1991. Utilization was read at 51%. Frequency for galleta had been 21% in 1986, 39% in1991 and then read at 15% in 1997. A complete listing of utilization on key species by pasture is located in the Appendices.

4. Trend

Trend data was collected using the Pace-Frequency method which measures the percent cover of bare ground, litter, rock and the live basal vegetation as well as the occurrence frequency of all vegetative species. Trend plots were established in 29 pastures in 1981 and 1982. Those established in 1981 were read in 1986,1991, and 1997. Those established in 1982 were read in 1987, 1992, and 1997. A few of the plots were read again in 2002 / 2003. This information is summarized in graph and table form in the Appendices. The tables show individual species while the graphs show plants grouped together based on forage value and/or growth patterns.

The 1981 and 1982 readings established a baseline for comparison to all future readings. While readings on individual plant species have fluctuated over the years, overall trend on key species has gradually increased. The exceptions to this appear to be 2002, where a severe drought impacted all vegetation, causing a die-off of many plants including sagebrush and pinyon pine, and the Twin Tank pasture where vegetation hit a spike in 1991 and shows a decline since that time.

5. Ecological Site Inventory

An ecological site inventory was conducted on the Mainstreet Allotment between 1999 and 2003. The ecological site at the Key Area in 28 different pastures was read with the following results:

Pasture	Ecological Site		Condition Rating
Square Pond	Gypsum Upland (7-11)	68	Late Seral
Round Pond	Gypsum Fan (7-11)	No site guide	
Cecil	Clay Loam Upland (7-11)	64	Late Seral
South Cecil	Gypsum Upland (7-11)	36	Mid Seral
Higley	Sandy Loam Upland (7-11)	48	Mid Seral
Mud Hole	Shallow Loamy (10-14)	69	Late Seral
Salaratus	Sandy Loam Upland (7-11)	55	Late Seral
Doolittle	Shallow Loamy (7-11)	68	Late Seral
Calving	Clay Loam Upland (7-11)	42	Mid Seral
Temple Trail	Clay Loam Upland (7-11)	56	Late Seral
Twin Tank	Loamy Upland (10-14)	68	Late Seral
Dutchman	Shallow Loamy (10-14)	61	Late Seral
Sullivan	Loamy Upland (10-14)	58	Late Seral
Cox-Atkin	Loamy Upland (10-14)	71	Late Seral
Little Joe	Shallow Loamy (10-14)	47	Mid Seral
Bishop & Burr	Shallow loamy (10-14)	49	Mid Seral
Polygamist	Loamy Upland (10-14)	53	Late Seral
Englestead	Loamy Bottom (10-14)	63	Late Seral
Hidden Pump	Limestone Slopes (13-17)	43	Mid Seral
Poverty Mountain	Shallow Loamy (10-14)	58	Late Seral
Mustang	Shallow Loamy (10-14)	66	Late Seral
Nutter	Shallow Loamy (10-14)	55	Late Seral
Christman	Shallow Loamy (10-14)	68	Late Seral
Bull Pond	Shallow Loamy (10-14)	71	Late Seral
Hy Pond	Shallow Loamy (10-14)	61	Late Seral
Dave Pond	Loamy Upland (10-14)	58	Late Seral
Childers	Shallow Loamy (7-11)	39	Mid Seral
Calf	Sandy Loam Upland (9-13)	55	Late Seral

The rating system is based on the percent similarity to the potential natural community::

0 through 25 Early Seral condition
26 through 50 Mid Seral condition
51 through 75 Late Seral condition
76 through 100 Potential Natural Community (PNC) condition

Of the 28 Key Areas studied, one (Round Pond) had no ecological site guide to evaluate it, four (Childers, Calving, Hidden Pump and South Cecil) are in the moderate range of Mid Seral condition. The remainder are in either high Mid Seral or Late Seral condition.

6. Special Status Species

There are two special status plants on the allotment. First is the Fickiensen plains cactus. There is one macroplot measuring demographic data-width size, mortality, and recruitment.The plot has been in place since 1986. There are also three cluster locations to count the cactus every ten years in the allotment. The macroplot has been studied since 1986.

Table: Dutchman Plot

86 Yr	87	88	89	90	91	92	93	95	97	98	99	00	01	02	03
21 #	107	102	185	180	194	219	168	188	122	49	45	37	41	30	50

The table shows the year and number of cactus counted and measured in the plot.

The cluster plots show the following counts: Ward Place: 1987, 12; 1993, 0; 2001,10. Navajo:1986, 4; 1993,0; 2001,10. Salaratus I: 1986, 5; 1993, 3; 2001, 0; Salaratus II; 1986, 12; 1993, 11; 2001, 0.

The fickiensen plains cactus in the Dutchman Plot is a cactus that retracts into the ground during drought periods. The number of cactus reflects the rainfall amounts that occur at the plot. During wet periods the numbers increased to a high in 1992, but a drought set in in 1998 and has been here to date (2003). This has pulled the number of cactus down.

Mortality data at the plot shows 261 fick cactus died naturally. Since 1986 to 2003, three died by cattle trampling in the plot. Many of the natural deaths occurred due to retracting and dying underground. However, this is difficult to ascertain until several years have passed. Even then a cactus will re-emerge during a monitoring period after being underground for seven years, at least during monitoring periods.

The other plots across the strip on this cactus show similar ups and downs. The Clayhole plots had around 20 to 40 cactus from 1986 to 2000 and since 2001 increased to 60+. North Canyon in House Rock Valley has varied from 14 in 1986, to 36 in 1991; in 1992 rodent depredation reduced it to 7. By 2001, the number of fick increased back to 34 at the North Canyon Plot. The Sunshine plot also shows similar trends.

This cactus is a rare plant which fluctuates with weather conditions. The mortality by cattle has been around 1-2 % at North Canyon and Dutchman and 16% at Clayhole. The Clayhole has had fewer over all mortalities than Dutchman and North Canyon.

The trend of this cactus appears weather controlled. If the area of the plots gets adequate rains, the cactus increases in numbers monitored. If the area of the plots is in drought, the number of cactus goes down. Trend in the plots has been a mixed picture of up and down trends to date. But the driving force is weather and its numerous indirect impacts on the cactus and not man-induced impacts. Overall the trend appears to be stable.

The second plant is the Mohave Panic Grass. The number of Mojave panics is estimated to be a few thousand during wet summers in Mainstreet Valley and the Salaratus Hills. The Mojave panic is very short and small and cattle cannot graze it. The talus and balds where it grows are unlikely to be trampled or grazed due to talus and little available forage.

The current condor population in northern Arizona is 41 (as of September 26, 2003). This includes one chick that has not yet fledged in the Grand Canyon and approximately five birds that are being held in pens. The current worldwide population, including birds held in captivity, is 221 (as of July 18, 2003). All the condors wear numbered wing tags and radio transmitters. They are monitored daily.

No specific information is known about bald eagles in this allotment. The eagles are winter migrants to the Arizona Strip. They would likely be seen in the Diamond Butte area and along the Hurricane Rim. Golden eagles, which are not federally listed but are federally protected, are found yearlong in this allotment, but are more numerous in the winter when migratory golden eagles from more northern locations join the golden eagles already present.

7. Wildlife Habitat

Most of the Mainstreet Allotment is considered pronghorn habitat. The habitat quality varies widely, however. While the Arizona Strip provides some of the most extensive habitat in the state, a consistent lack of summer forbs and vegetative succulence significantly limits pronghorn habitat quality. In 1996, AGFD evaluated the pronghorn habitat in Arizona and rated the quality section by section. In the Mainstreet Allotment, most of the habitat rated in the moderate category, as would be expected. In this and in adjacent allotments, the report identified two primary problems that were not weather/climate dependent. These were fences that were not pronghorn passable and lack of reliable, accessible water.

BLM GIS data currently shows approximately 278 miles of fence in or bounding the Mainstreet Allotment. In 2002, BLM and AGFD began an inventory of fences in pronghorn habitat on the Strip to determine if the fences met agency wildlife fence standards; 43 fence data points pertaining to the Mainstreet Allotment have been recorded so far. Eight of the 43 pronghorn fence points indicated the fence was acceptable (19%). Thirty-five were unacceptable (81%).

The pronghorn population itself in Game Management Unit 13B appears stable to slightly increasing. Annual fawn production varies considerably from year to year. This variation probably is due to annual differences in the timing and amount of precipitation and subsequent forb production. There is also some natural interchange between the 13A and the 13B herds, and AGFD has periodically conducted supplemental releases of pronghorn in 13B in order to increase numbers and to provide more genetic diversity. Appendix E provides some pronghorn data, but total numbers for either this allotment or for GMU 13B are not available.

Coyotes are often cited as the primary factor limiting pronghorn populations. In the Mainstreet Allotment in most years, Wildlife Services conducts aerial gunning of coyotes in late winter mostly to protect young calves. In the past and in cooperation with AGFD, Wildlife Services also conducted separate aerial gunning operations about the time of pronghorn fawning in order to protect newborn fawns, but this has not been done for several years. A significant amount of coyote hunting by the general public occurs in this allotment due to the good access from the St. George area and the open nature of the terrain.

8. Riparian/Fisheries Habitat

There is no known riparian/fisheries habitat in this allotment.

9. Wild Horse and Burro Habitat

There are no wild horses or burros on the allotment

10. Soils and Lithology

Lithology

The lithology varies greatly for this relatively large allotment. Slopes vary from one to seventy percent. Gypsum, basalt, limestone and sandstone rock dominate the fans, hills, scarps, hills, terraces and benches. Main Street Valley is primarily fans, and fan terraces. Hurricane Wash and Valley is dominated by floodplain, and fan terraces; they are surrounded by scarps and fans. The western part of Mainstreet comprises of scattered floodplains; fans and rock out crops surround those floodplains. The southeastern portion of the allotment comprises of old basalt flows, mesas, escarpments and fan terraces.

Soils

08 Barx fine sandy loam, 1 to 5 percent slopes, (fan terraces), mixed; Loamy Upland, 9" to 13"

09 Barx-Strych complex, 1 to 10 percent slopes, (fan terraces), mixed; Loamy Upland, 9" to 13" ppt

10 Berzatic fam-RO-Goblin complex, 35 to 70 percent slopes, (escarpments, cliffs), LS-gyp; Berzatic-Breaks, 7" to 11"; Goblin-Breaks (gypsiferous), 7" to 11"

11 Bisoodi-Anasazi family complex, 1 to 8 percent slopes, (plateaus), limestone and sandstone; Bisoodi-Shallow Loamy, 9" to 13" ppt; Anasazi family-Sandy Loam Upland (calcareous), 9" to 13" ppt

17 Chic-Teesto-RO complex, 1 to 30 percent slopes, (hills), basalt; Chic-Cinder Upland, 9" to 13" ppt; Teesto=Basalt Upland, 9" to 13" ppt

19 Dera very gravelly fine sandy loam, 1 to 10 percent slopes (fan terrace) mixed sedimentary; Sandy Loam Upland, 7" to 11"

20 Dermala fam-Guy fam-Rock Outcrop complex, 10 to 40 percent slopes (mesa scarp) basalt; Basalt Slopes, 13" to 17"

22 Dutchman-McCullan complex, 1 to 10 percent slopes (fan terrace) Moenkopi; Gypsum Upland, 7" to 11"

23 Goblin gravelly fine sandy loam, 15 to 50 percent slopes (hills, scarps) Moenkopi; Gypsum Hills, 7" to 11"

23 Goblin-Gyppocket complex, 2 to 10 percent slopes, (hills, fault benches), gypsite, LS; Goblin-Gypsum Hills, 7" to 11"; Gyppocket-Gypsum Upland, 7" to 11"

40 Ivanpatch fine sandy loam, 1 to 5 percent slopes, (fan terraces), mixed gyp- alluvium; Gypsum Fan, 9" to 13"

41 Ives loam, 1 to 3 percent slopes, (floodplains), mixed sediments; Loamy Bottom, 7" to 11"

45 Mellenthin-Rock outcrop-Torriorthents complex, 10 to 70 percent slopes (hills) Kaibab; Mellenthin-Shallow Loamy, 9" to 13"; Torriorthents-Breaks, 9" to 13"

46 Mellenthin-Strych Complex, 4 to 25 percent slopes, cool, (plateaus, mesas), limestone; Mellenthin-Shallow Loamy, 9" to 13"; Strych-Loamy Upland, 9" to 13"

48 Mellenthin-Tanbark complex, 5 to 50 percent slopes, cool (mesas, hills) Kaibab, Harrisburg; Mellenthin-Shallow Loamy, 9" to 13"; Tanbark-Gypsum Hills, 9" to 13"

54 Moenkopie-Goblin complex, 5 to 50 percent slopes (bench, mesa) Kaibab-Harrisburg; Moenkopie-Shallow Loamy, 7" to 11"; Goblin-Gypsum Hills, 7" to 11"

55 Moenkopie-Pennell-RO complex, 10 to 50 percent slopes, (plateau, mesa), Limestone; Shallow Loamy, 7" to 11" ppt

63 Radnik loam, 1 to 5 percent slopes (floodplain) mixed; Loamy Bottom, 9" to 13" ppt

66 Robroost fine sandy loam, 1 to 3 percent slopes, (fan terrace), mixed sedimentary; Gypsum Fan, 7" to 11"

73 Strych very gravelly loam, 2 to 10 percent slopes (fan) mixed; Loamy Upland, 9" to 13"

75 Tanbark loam, 15 to 75 percent slopes, (hills, escarpments), Moenkopi; Gypsum Hills (calcareous), 9" to 13"

79 Tours silt loam, 1 to 3 percent slopes, (floodplain, fan), mixed stream alluvium; Clayey Bottom, 7" to 11"

82 Twist loam, 2 to 10 percent slopes (fan terrace) Moenkopi; Sandy Loam Upland, 7" to 11"

An assessment of the indicators for Standard #1; litter, live vegetation (or bare ground), rock, flow patterns, gullies, rills and plant pedestalling; was conducted at three sites during the field visit. Once at the cactus plot, in the Dave Pond pasture and in the Pump Station pasture. All three places were found to be meeting Standard #1.

C. Information and/or Data Pertaining to Issues (from III.G.1.)

1. Issues relating to Rangeland Health

a. Noxious weeds, such as scotch thistle on the allotment and Knapweed were found close by. Scotch thistle has been found around various ponds on the allotment and has been treated using mechanical and chemical means. Russian knapweed is growing on a pond bank on private land inside the allotment. Part of it was sprayed with the herbicide Tordon in the spring of 2003. It has been resprayed every year since.

b. Erosion at Rock Crossing/Childers. The field visit confirmed significant erosion in the Lower Hurricane Wash between these two points. However, the upland vegetation looked surprisingly good, and the allotment has responded quite well to recent rain.

c. Lack of ground cover in lower hurricane valley, west of release site. The field visit in September observed much different (and far better) conditions than were observed prior to the scoping meeting in January. The 2001 and 2002 water years on the Arizona Strip are recognized as the most severe drought period since precipitation data has been collected. The 2003 water year was near average with several good rains coming during the summer growing season, and the vegetation has responded well.

d. Lack of fawning cover along the main road in Mainstreet Valley within ½ mile of water. This was confirmed, but vegetation conditions in September look much better than they did a year ago.

e. Utilization may be exceeding 50% along Mainstreet road. Last year this was a true statement. It is not true this year. Utilization was read at the trend plot in the Twin Tanks pasture along the Mainstreet road seven years between 1986 and 1998. Use exceeded 50% on winterfat in 1989 (57%), and Indian ricegrass in 1986, 1988 and 1989 (51%, 55%, 53% respectively). The highest average use of all key species was 44% in 1989. In 2002 there was no measurable precipitation in this area between March 1st and the end of August, which is essentially the growing season. There was virtually no vegetative growth in 2002.

f. Lack of herbaceous understory in the sage west of the Mainstreet road. Last year this was a true statement. It is not true this year. This is the same general area as issue "e" and the same rational applies.

g. Dense pinyon, juniper and sage around poverty knoll and poverty mountain. The vegetation around Poverty Mountain and Poverty Knoll consists of closed stands of pinyon-juniper and sagebrush making it both unproductive for wildlife and poor watershed cover.

h. Erosion on Kellers. Keller is a pasture consisting of mostly private ground on the Mainstreet allotment. The Hurricane Wash, a steep sided drainage that runs the length of Hurricane Valley and empties into Ft. Pearce Wash cuts through this pasture. The wash shows signs of healing in the bottom with vegetation established in it. There is some lateral cutting taking place during very high rainfall events.

i. Reinvasion of woody species into treatment areas. Large areas on the west side of the allotment were treated in the 1950's and 1960's to reduce the dense, closed stands of pinyon and juniper and allow understory vegetation to establish. Over the years sagebrush and the pinyon and juniper have reestablished, crowding out the understory plants.

j. Seed harvesting permits in Sullivan Draw and Dave Pond Pasture. Commercial seed harvesters have a great interest in harvesting needle and thread grass seed in the Dave Pond pasture and globe mallow in Sullivan Draw, Mainstreet, and in new burn sites where globe mallow has a tendency to grow profusely during certain years. There is considerable competition for seed harvesting permits and also controversy about issuing the permits when the forage, which the seed is part of, has been allocated to the rancher for livestock grazing. The Forest Service and the BLM purchases most of this seed to use in rehabilitating burned areas.

k. Effects of off road use of motorized equipment for seed harvesting. The needle and thread grass and globemallow seed is harvested by driving cross country in a pickup truck or tractor with a large brush paddle mounted on the front which sweeps through the vegetation knocking the seed from the plant into a bin situated below and behind the paddle.

l. Amount of seed harvesting could affect frequency of new plant production. The seed harvester present disputed this indicating that 50% to 60% of the seed produced is all that the brush paddles gather, leaving sufficient seed to produce new vegetation.

m. Seed harvester compliance on private land. Harvesting seed has become a popular way for a number of people to make some extra money. They do not always acquire the necessary permit or permission to harvest the seed. They sometimes trespass on private land in their attempts to harvest seed.

n. Closed stands of sage on the west end of the allotment, five-year burn plan. This is the same as issue "i" above.

o. Erosion along Hurricane Wash from rock crossing south to Higley tank. This is the same or similar issue as issues "b" and "h."

V. Conclusions

A. Pertaining to Objectives

1. Land Use Plan Objectives

Arizona Strip Resource Management Plan, 1992 p. II-2

- *Manage public lands in a manner that responds to the nation's need for domestic sources of energy, minerals, and livestock products from the public lands and the importance of these industries to local and regional economies.*

  This objective is being met from a livestock production standpoint.

- *Manage livestock grazing to maintain productive rangelands which meet forage, watershed, and wildlife needs.*

  Because of the severe drought for the past several years, trend studies read in 2002 and 2003 were down and 90 percent of the livestock were removed from the allotment, but with a return to near normal moisture patterns the trend is expected to improve. Vegetation studies conducted on the allotment indicate the rangelands remain productive, and the forage, watershed, and wildlife needs are being met.

Shivwits Resource Area Implementation Plan

GZ17 *Allowable use on key forage species is 50% on allotments with rotational grazing systems.*

Not met. There have been108 instances out of 980 readings where an individual specie has been grazed heavier than 50% in one of the 28 pastures during the fourteen-year span in which the utilization studies have been conducted. Of the 108 instances, only 18 of those involved a specie whose frequency in the vegetative composition was 5% or greater. Most of the heavy use was on the browse species winter fat (*Ceritoides lanata*), four-wing saltbush (*Atriplex canescense*), and Mormon tea (*Ephredra nevadensis*), which generally made up only a trace to two percent of the composition.

RR-01 *Continue authorizing the organized recreational events now occurring on the Resource Area.*

This objective is being met. There have been a few authorized organized events which have occurred over the years, they have been infrequent and usually with out controversy.

RR-06 *Implement actions to restore and/or maintain natural conditions or appearance in all areas.*

This objective is being met. This objective is a process that is an on-going effort based on observations of range and other specialists and restoration actions are evaluated through the planning and NEPA process for interdisciplinary input and review.

RR-07 *Maintain primary access roads, particularly Quail Hill Road, on a year round basis.*

This objective is routinely met as roads need grading from traffic use, repairs due to washouts during wet weather, or as other maintenance needs occur.

RR-08 *Manage the majority of the Resource Area for extensive recreation while maintaining its naturalness/remoteness. The exception to this is the Cedar Pockets campground.*

This objective is being met. Visitors to this allotment engage in hunting, camping, sightseeing, and indulge in a variety of legitimate recreation activities and are monitored to see that the area's values not degraded by overuse.

RR-09 *Commercial recreation permits would be issued to the extent that their cumulative impacts are consistent with the overall objectives of this plan and in the public interest.*

This objective is being met. As new requests for commercial special recreation use permits are received, they are evaluated through an interdisciplinary review and are reviewed for consistency with this objective and processed accordingly.

WS01-*Manage vegetation cover towards ecological stability and sound long-term protective soil cover using mechanical, chemical, biological of fire methods as tools for accomplishments.*

This has been accomplished over most of the allotment. The Tours soils on the floodplains need an increase in vegetative cover.

WS22-*Manage watershed areas according to watershed categorizations to achieve identified objectives.*

Mainstreet was classified as Category II for the uplands and Category IV for the floodplains in the 1992 RMP. Because of the slowly progressing numerous lateral headcuts along the Hurricane Wash floodplains, and the related rill and sheet erosion, the Tours soils there are at risk. Therefore, the floodplains will remain a Category IV. A future detailed watershed assessment is planned for Lower Hurricane Valley, which will address this issue.

TE01 *Carry out management consistent with multiple use for conservation of candidate species and their habitats and ensure that actions authorized, funded, or carried out do not contribute to the need to list any of these species as threatened or endangered. Adverse impacts to listed species will be avoided.*

This objective has been met. No actions are known which have contributed to the need to list any species. No adverse impacts to listed species are known.

WL02 *Maintain productive wildlife habitat and ensure wildlife needs and considerations are incorporated into land use planning, National Environmental Policy Act documents, and management decisions.*

This objective is being met. All proposed actions with potential to impact wildlife species are reviewed through the NEPA process. Biological evaluations would be prepared to document the effects of any proposed action on listed or proposed species.

WL06 *Continue restoration of native wildlife into historic range by transplanting wildlife in cooperation with the Arizona Department of Game and Fish.*

This objective is being met. The re-introduction of the pronghorn and the California condor are two good examples specific to this allotment.

WL20 *Manage pronghorn habitat through the Habitat Management Plan (HMP) process to achieve and maintain viable populations in accordance with HMP objectives. Initial target levels are 400 in the Shivwits Resource Area.*

Not met. Current population range is between 100 and 200. The pronghorn population seems to be stable or slightly increasing, but over time has been sustained by periodic supplemental releases of additional pronghorn from other areas. Therefore, the population really is not viable. Improper fences and lack of consistent reliable water have been shown to reduce the quality of the habitat and are factors which BLM and AGFD can manage. The consistent lack of yearlong forbs and vegetative succulence are natural limitations of the habitat in this area, and these factors are related to the climate, which cannot be changed.

2. Specific Resource Objectives

California Condor Recovery Plan

Provide foraging habitat for California condors. Encourage livestock owners to leave dead livestock on rangelands.

Foraging habitat is provided. Due to recent concerns raised about the condors eating contaminated food, leaving dead livestock on the range for the condors is not currently being encouraged. The condors, when subsidized, are fed still-born calves originating from a Phoenix dairy because it is felt dairy animals are the least likely to be contaminated. Condors are especially vulnerable to lead poisoning, and carcasses possibly containing lead should be removed from the range.

Clayhole Habitat Management Plan

O2. *Provide quality habitat for 400 pronghorn antelope and allow for their expansion and utilization of potential antelope habitat within the Clayhole Habitat Area.*

This objective is being met. Quality pronghorn habitat depends to a large extent upon available precipitation. In years with adequate rainfall, this allotment includes quality habitat areas. Without adequate rainfall, forbs become a limiting factor for pronghorn.

O8. *Provide for safe and yearlong wildlife use of all existing livestock waters within the CHA.*

This objective is being met on this allotment. Wildlife and livestock waters are inspected and maintained at least biennially within the habitat area. Those found to be hazardous to wildlife are modified.

A2. *Modify fences to allow free movement of pronghorn antelope within the CHA.*

This objective is being met on a continuing basis. In 2002, BLM and AGFD inventoried fences in pronghorn habitat on the Strip to determine if the fences met agency wildlife fence standards; 43 fence data points pertaining to the Mainstreet Allotment were recorded. Eight of the 43 pronghorn fence points indicated the fence was acceptable (19%). Thirty-five were unacceptable (81%). Fence modifications are performed as quickly as funding and manpower permit.

Black Rock Habitat Management Plan

VM1 *Enhance wildlife forage conditions on all allotments with a downward or static trend to achieve DPC by 2010.*

Met. Trend is generally been static or upward. Recorded utilization of key wildlife shrubs is relatively high and needs to be carefully watched.

Frequency Objectives from the Mainstreet Allotment Management Plan, revised 1987.

Little Joe Pasture

- *Maintain squirreltail at 42% frequency*
- *Increase blue grama from 2% to 5% frequency by 1996.*

  Met. In 1997 Squirreltail was at 52% and blue grama at 5%.

Sullivan Pasture

- *Maintain the following key species at current levels*
  Squirreltail 35% frequency
  Blue grama 6.5% frequency
  Needle and thread .5% frequency
  Indian rice grass 1% frequency
  Sand dropseed 2% frequency
  Galleta 8% frequency
  Globemallow 11.5% frequency

Met. While the various grasses fluctuated somewhat and globemallow was not measured, overall key species increased from 1987 to 1997.

Cox/Atkin Pasture

- *Maintain the following key species at current levels*

  Squirreltail 21% frequency
  Blue grama 38% frequency
  Galleta 5% frequency
  Indian ricegrass 1% frequency
  Needle and thread 1% frequency
  Sand dropseed .5% frequency
  Globemallow 5% frequency

Met. Again, while individual grass species have fluctuated over the years, total frequency was about the same in 1997 as in 1982, the base year.

Englestead Pasture

- *Maintain western wheat at 43% frequency*
- *Maintain blue grama at 6% frequency*
- *Increase Indian ricegrass from 3% to 6% frequency by 1996*
- *Increase squirrel tail from 6% to 9% frequency by 1996*
- *Increase winterfat from .5% to 3% frequency by 1996*

Met. The various Key species have fluctuated over the years with some increasing slightly while others are down somewhat. Total overall composition has not changed significantly.

Northwest Pasture (Dutchman)

- *Maintain squirreltail at 46.5% frequency*
- *Increase Indian ricegrass from 11% to 13% frequency by 1996*
- *Increase sand dropseed from 4% to 6% frequency by 1996*
- *Increase blue grama from 7% to 9% frequency by 1996*
- *Increase galleta from 11.5% to 13.5% frequency by 1996*

Met. Readings done in1997 showed squiretail at 62%, Indian ricegrass at 13%, sand dropseed at 6%, blue grama at 13%, and galleta at 14%.

Polygamist Pasture

- *Maintain blue grama at 35% frequency*
- *Increase galleta from 3% to 6% frequency by 1996*
- *Increase Indian ricegrass from 1.5% to 5% frequency by 1996*
- *Increase globemallow from .5% to 2% frequency by 1996*

Met. While Indian ricegrass was still at 1%, the other species had increased considerably. Even winter fat, which was not listed as present in 1981, showed a 5% frequency in 1997.

Poverty Mountain Pasture

- *Increase blue grama from 2% to 4% frequency by 1996*
- *Increase squirreltail from 3% to 6% frequency by 1996*
- *Increase green ephedra from 3% to 6% frequency by 1996*
- *Increase cliffrose from 9% to 12% frequency by 1996*
- *Increase buckwheat from .5% to 2% frequency by 1996*

Met. In 1997 blue grama was at 8%, squirreltail at 8%, green ephedra (which is not a forage plant) was still at 3%, cliffrose was at 17%, and buckwheat at2%.

Pump Station Pasture

- *Maintain blue grama at 28% frequency*
- *Increase squirreltail from 3% to 5% frequencyby 1996*

Met. Blue grama in 1997 was at 58% and squirrel tail was at 32%

Hy Pond Pasture

- *Maintain blue grama at 56% frequency*
- *Increase squirreltail from 10.5 % to 13% frequency by 1996*
- *Increase sand dropseed from 3% to 5% frequency*
- *Increase needle and thread from 1% to 3% frequency*

Met. In 1997 blue grama was at 77%, squirreltail at 31%, sand dropseed at 19%, and needle and thread grass at 5%.

Bishop & Burr Pasture

- *Maintain the following key species at their current levels*

  Sand dropseed 16% frequency
  Blue grama 23% frequency
  Indian ricegrass 1% frequency
  Needle and thread 8.5% frequency
  Black grama 1% frequency
  Galleta 9.5% frequency
  Squirreltail .5% frequency
  Globemallow 10% frequency

Met. These species have fluctuated over the years. Some are high one year with another replacing it a few years later. Sand dropseed was at 39% in 1997and 44% in 2003, blue grama was 39% in 1997 and 8% in 2003, Indian ricegrass was at 2% in 2003, needle and thread showed nothing in 1997 and 23% in 2003, black grama was 2% in 1997 but didn't show up in 2003, galleta was 16% in 1997 and 10% in 2003, squirreltail was 7% in 1997 and 3% in 2003, globemallow was 19% in 1997 and 16% in 2003.

Mustang Pasture

- *Maintain the following key species at their current levels*
  Blue grama 37% frequency
  Squirreltail 18% frequency
  Sand dropseed 2% frequency
  Galleta 14% frequency
  Globemallow 4% frequency

Met. By 1997 all the above species had increased.

Nutter Pasture (New Spring)

- *Maintain the following key species at their current levels:*

  Galleta 35% frequency
  Squirreltail 20.5% frequency
  Blue grama 7.5% frequency
  Indian ricegrass 5% frequency
  Globemallow 12.5% frequency

Met. These species have fluctuated somewhat, but all were above or near the above percentages by 1997.

Christman Pasture

- *Maintain blue grama at 45% frequency*
- *Maintain galleta at 24% frequency*
- *Maintain black grama at 2% frequency*
- *Maintain sand dropseed at 4% frequency*
- *Increase squirreltail from .5% to 4% frequency by 1996*
- *Maintain globemallow at 9% frequency*

Met. By 1997 all grass species had increased and globe mallow was at 8%. It fluctuates more than the perennial grasses in response to moisture.

Bull Pond Pasture

- *Maintain the following key species at their current levels:*

  Needle and thread 21% frequency
  Blue grama 73% frequency
  Indian ricegrass .5% frequency
  Squirreltail 14% frequency
  Galleta 21% frequency
  Sand dropseed 2% frequency
  Black grama .5% frequency
  Globemallow 9% frequency

Met. Globemallow in 1997 had dropped to 6%, but all the grasses except sand dropseed had increased significantly. Sand dropseed remained at 2%.

Dave Pond Pasture

- *Maintain blue grama at 54% frequency*
- *Maintain galleta at 5% frequency*
- *Maintain black grama at 7% frequency*
- *Maintain sand dropseed at 6% frequency*
- *Increase needle and thread from 2% to 4% frequency by 1996*
- *Increase Indian rice grass from .5% to 3% frequency by 1996*
- *Increase squirreltail from .5% to 3% frequency by 1996*
- *Maintain globemallow at 9.5% frequency*

Met. While Indian ricegrass was at 1% in 1997 and globemallow decreased to 2% all other key species had increased significantly.

Mudhole Pasture

- *Maintain galleta at 93% frequency*
- *Increase winterfat from 12% to 15% frequency by 1996*
- *Increase squirreltail from .5% to 3% frequency by 1996*
- *Increase Indian ricegrass from 4% to 6% frequency by 1996*

Met. While the galleta grass has decreased to 70% in 1997, overall diversity has improved. Winterfat was 41% in 1997, Indian ricegrass was 15%.

Twin Tanks Pasture

- *Maintain the following key species at their current levels*

  Galleta at 57% frequency
  Blue grama at 16% frequency
  Squirreltail at 9% frequency
  Globemallow at 1.5% frequency

Not met. These key species increased between 1986 and 1997, but when read in 2002 all but globemallow had decreased significantly. Globemallow increased to 9%.

All Winter Pastures

The specific resource objective for the winter pastures in the allotment is to maintain the current (1987) percent frequency of key species.

The objective has been met in the Calf, Calving, Cecil, Childers, Higley, Keller, Salaratus, and South Cecil pastures. In the Doolittle pasture grasses decreased between 1997 and 2003. In the Round Pond pasture galleta grass and four-wing saltbush decreased between 1997and 2003.

B. Pertaining to Issues relating to Rangeland Health

1. *Noxious weeds, scotch thistle on the allotment and Knapweed found close by.* It all is scheduled to be every year. The results of treating both weed species will be monitored and additional treatments applied as is needed.

2. *Erosion at Rock Crossing/Childers.* The group concluded that the vegetation/erosion issue was weather caused and that a monitoring transect would be established in the wash area.

3. *Lack of ground cover in Lower Hurricane Valley west of the condor release site.* It was pointed out that weather was the big factor. It was concluded that the earlier observed lack of ground cover and the present good appearance of the area was a function of weather (precipitation and temperature), rather than impacts of livestock grazing.

4. *Lack of fawning cover along the main road in Mainstreet Valley within ½ mile of water.* Again, precipitation in August of 2003 produced considerable vegetation demonstrating that the issue was more a lack of soil moisture than anything else.

5. *Utilization may be exceeding 50% along Mainstreet road.* Near average precipitation in 2003 has restored the area to near normal conditions.

6. *Lack of herbaceous understory in the sage west of the Mainstreet road.* Again the conclusion was that considerable moisture during the past growing season had totally changed the production of vegetation in the area

7. *Dense pinyon, juniper and sage around Poverty Knoll and Poverty Mountain.* An environmental assessment will be written for this area that will incorporate the use of the herbicide Spike to reduce the amount of sagebrush and pinyon-juniper and allow the native grasses in the area to increase. This would increase ground cover and decrease the likelihood of severe wildfires in the area.

8. *Erosion on Kellers.* It was determined that most of this erosion is geologic and there is little that can be done to prevent it. Careful management of livestock grazing to insure that vegetation remains healthy and provides what ground cover the limited precipitation allows is all that can economically be done.

9. *Reinvasion of woody species into treatment areas.* Preparing prescribed burn plans for this area to allow naturally occurring fires to burn, igniting fires in the area to clear out much of these reinvading species, and preparing an environmental assessment addressing the application of the herbicide Spike to reduce sagebrush will be done to improve the habitat and watershed conditions of the area.

10. *Seed harvesting permits in Sullivan Draw and Dave Pond Pasture.* This was discussed during the September field tour. The conclusion reached was that before future mechanized seed harvesting is authorized, a programmatic EA

and a cultural clearance would be completed. Allocation between seed harvesting operators was discussed, but no conclusions were reached.

11. *Effects of off road use of motorized equipment for seed harvesting.* This was discussed during the September field tour. The seed harvesting discussion was very good, objective, and appreciated. Before future mechanized seed harvesting is authorized, a programmatic EA and a cultural clearance should be completed. Allocation between seed harvesting operators was discussed, but no conclusions were reached.

12. *Amount of seed harvesting could affect frequency of new plant growth.* Future monitoring should be designed to determine the amount of seed left on the soil surface after harvesting.

13. *Seed harvester compliance on private land.*
Better public education and patrolling by BLM Rangers could help alleviate this problem.

14. *Closed stands of sage on the west end of the allotment.* An environmental assessment will be written for this area to reduce the stands of sagebrush allowing native grasses to increase. This will provide better ground cover and biodiversity and reduce the likelihood of wild fire burning in this area.

15. *Erosion along Hurricane Wash from Rock Crossing south to Higley tank.*
The conclusion here is the same as for issues 2 and 8.

The following is added for conclusions relative to implementation of the Standards for Rangeland Health and Guidelines for Grazing Administration

Based on the analyses and supporting documentation referenced herein, resource conditions on the allotment:

[X] Meet all applicable standards for rangeland health

[ ] Are making significant progress toward meeting the applicable standards for rangeland health

Do not meet the standards for rangeland health for:

[ ] No. 1: Upland sites
[ ] No. 2: Riparian-Wetland sites
[ ] No. 3: Desired Resource Conditions

[ ] Have not been sufficiently documented to make a specific determination, but there is no reason to believe that current management would preclude meeting the standards for rangeland health.

VI. Recommendations

A. Renew the ten year grazing permit with current terms and conditions.

B. Before any future mechanized seed harvesting is authorized, a programmatic EA and a cultural clearance needs to be completed. An equitable method of allocation between seed harvesting operators needs to be developed.

C. The 2002 BLM/AGFD pronghorn fence standard inventory needs to be completed in Unit 13B. Once the evaluation is complete, a priority order of those fences that do not meet BLM standards for pronghorn passage needs to be established, in cooperation with AGFD and the livestock grazing permittee. Finally, a schedule for modifying (or removing) the fences in non-compliance must be set and followed. All the fences in pronghorn habitat in this allotment (and in Unit 13B) should meet BLM standards within ten years (by September 30, 2013).

D. Regarding the erosion in the Lower Hurricane Wash, a transect will be established to determine the trend of the erosion. It might be good to include a flood gauge to monitor the size of events being experienced. A future detailed watershed assessment is planned for the area.

E. In order to separate the effects of management from the effects of climate and weather, it is recommended that at least one fairly large (at least 10 acres), permanent, livestock grazing enclosure be built in a representative location on federal land within the Grand Canyon – Parashant National Monument in this allotment.

AUTHORIZED OFFICER CONCURRENCE:

__✓__ I concur with the conclusions and recommendations as written.

_____ I do not concur.

_____ I concur, with the following modifications:

Becky J. Hammond
Field Manager
Arizona Strip Field Office

August 4, 2005
Date

Appendix A

ARIZONA STANDARDS FOR RANGELAND HEALTH AND
GUIDELINES FOR GRAZING ADMINISTRATION

INTRODUCTION

The Department of the Interior's final rule for Grazing Administration, issued on February 22, 1995, and effective August 21, 1995, requires that Bureau of Land Management (BLM) State Directors develop State or regional standards and guidelines for grazing administration in consultation with BLM Resource Advisory Councils (RAC), other agencies and the public. The final rule provides that fallback standards and guidelines be implemented, if State standards and guidelines are not developed by February 12, 1997. Arizona Standards and Guidelines and the final rule apply to grazing administration on public lands as indicated by the following quotation from the Federal Register, Volume 60, Number 35, page 9955.

> "The fundamentals of rangeland health, guiding principles for standards and the fallback standards address ecological components that are affected by all uses of public rangelands, not just livestock grazing. However, the scope of this final rule, and therefore the fundamentals of rangeland health of §4180.1, and the standards and guidelines to be made effective under §4180.2, are limited to grazing administration."

Although the process of developing standards and guidelines applies to grazing administration, present rangeland health is the result of the interaction of many factors in addition to grazing by livestock. Other contributing factors may include, but are not limited to, past land uses, land use restrictions, recreation, wildlife, rights-of-way, wild horses and burros, mining, fire, weather, and insects and disease.

With the commitment of BLM to ecosystem and interdisciplinary resource management, the standards for rangeland health as developed in this current process will be incorporated into management goals and objectives. The standards and guidelines for rangeland health for grazing administration, however, are not the only considerations in resolving resource issues.

The following quotations from the Federal Register, Vol. 60, No. 35, page 9956, February 22, 1995, describe the purpose of standards and guidelines and their implementation:

> "The guiding principles for standards and guidelines require that State or regional standards and guidelines address the basic components of healthy rangelands. The Department believes that by implementing grazing-related actions that are consistent with the fundamentals of §4180.1 and the guiding principles of §4180.2, the long-term health of public rangelands can be ensured."

> "Standards and guidelines will be implemented through terms and conditions of grazing permits, leases, and other authorizations, grazing-related portions of activity plans (including Allotment Management Plans), and through range improvement-related activities."
> "The Department anticipates that in most cases the standards and guidelines themselves will not be terms and conditions of various authorizations but that the terms and conditions will reflect the standards and guidelines."

"The Department intends that assessments and corrective actions will be undertaken in priority order as determined by BLM."

"The Department will use a variety of data including monitoring records, assessments, and knowledge of the locale to assist in making the "significant progress" determination. It is anticipated that in many cases it will take numerous grazing seasons to determine direction and magnitude of trend. However, actions will be taken to establish significant progress toward conformance as soon as sufficient data are available to make informed changes in grazing practices."

FUNDAMENTALS AND DEFINITION OF RANGELAND HEALTH

The Grazing Administration Regulations, at §4180.1 (43 Code of Federal Regulation [CFR] 4180.1), Federal Register Vol. 60, No. 35, pg. 9970, direct that the authorized officer ensures that the following conditions of rangeland health exist:

(a) Watersheds are in, or are making significant progress toward, properly functioning physical condition, including their upland, riparian-wetland, and aquatic components; soil and plant conditions support infiltration, soil moisture storage, and the release of water that are in balance with climate and landform and maintain or improve water quality, water quantity, and timing and duration of flow.

(b) Ecological processes, including the hydrologic cycle, nutrient cycle, and energy flow, are maintained, or there is significant progress toward their attainment, in order to support healthy biotic populations and communities.

(c) Water quality complies with State water quality standards and achieves, or is making significant progress toward achieving, established BLM management objectives such as meeting wildlife needs.

(d) Habitats are, or are making significant progress toward being, restored or maintained for Federal threatened and endangered species, Federal Proposed, Category 1 and 2 Federal candidate and other special status species.

These fundamentals focus on sustaining productivity of a rangeland rather than its uses. Emphasizing the physical and biological functioning of ecosystems to determine rangeland health is consistent with the definition of rangeland health as proposed by the Committee on Rangeland Classification, Board of Agriculture, National Research Council (Rangeland Health, 1994, pg. 4 and 5). This Committee defined Rangeland Health ". . .as the degree to which the integrity of the soil and the ecological processes of rangeland ecosystems are sustained." This committee emphasized ". . .the degree of integrity of the soil and ecological processes that are most important in sustaining the capacity of rangelands to satisfy values and produce commodities." The Committee also recommended that "The determination of whether a rangeland is healthy, at risk, or unhealthy should be based on the evaluation of three criteria: degree of soil stability and watershed function, integrity of nutrient cycles and energy flow, and presence of functioning mechanisms." (Rangeland Health, 1994, pg. 97-98)

Standards describe conditions necessary to encourage proper functioning of ecological processes on specific ecological sites. An ecological site is the logical and practical ecosystem unit upon which to base an interpretation of rangeland health. Ecological site is defined as:

". . . a kind of land with specific physical characteristics which differs from other kinds of land in its ability to produce distinctive kinds and amounts of vegetation and in its response to management" (Journal of Range Management, 48:279, 1995). Ecological sites result from the interaction of climate, soils, and landform (slope, topographic position). The importance of this concept is that the "health" of different kinds of rangeland must be judged by standards specific to the potential of the ecological site. Acceptable erosion rates, water quality, productivity of plants and animals, and other features are different on each ecological site.

Since there is wide variation of ecological sites in Arizona, standards and guidelines covering these sites must be general. To make standards and guidelines too specific would reduce the ability of BLM and interested publics to select specific objectives, monitoring strategies, and grazing permit terms and conditions appropriate to specific land forms.

Ecological sites have the potential to support several different plant communities. Existing communities are the result of the combination of historical and recent uses and natural events. Management actions may be used to modify plant communities on a site. The desired plant community for a site is defined as follows: "Of the several plant communities that may occupy a site, the one that has been identified through a management plan to best meet the plan's objectives for the site. It must protect the site as a minimum." (Journal of Range Management, 48:279, 1995)

Fundamentals (a) and (b) define physical and biological components of rangeland health and are consistent with the definition of rangeland health as defined by the Committee on Rangeland Classification, Board on Agriculture, National Research Council, as discussed in the paragraph above. These fundamentals provide the basis for sustainable rangelands.

Fundamentals (c) and (d) emphasize compliance with existing laws and regulation and, therefore, define social and political components of rangeland health. Compliance with Fundamentals (c) and (d) is accomplished by managing to attain a specific plant community and associated wildlife species present on ecological sites. These desired plant communities are determined in the BLM planning process, or, where the desired plant community is not identified, a community may be selected that will meet the conditions of Fundamentals (a) and (b) and also adhere to laws and regulations. Arizona Standard 3 is written to comply with Fundamentals (c) and (d) and provide a logical combination of Standards and Guidelines for planning and management purposes.

STANDARD AND GUIDELINE DEFINITIONS

Standards are goals for the desired condition of the biological and physical components and characteristics of rangelands. Standards:

(1) are measurable and attainable; and
(2) comply with various Federal and State statutes, policies, and directives applicable to BLM Rangelands.

Guidelines are management approaches, methods, and practices that are intended to achieve a standard. Guidelines:

(1) typically identify and prescribe methods of influencing or controlling specific public land uses;
(2) are developed and applied consistent with the desired condition and within site capability; and
(3) may be adjusted over time.

IMPLEMENTING STANDARDS AND GUIDELINES

The authorized officer will review existing permitted livestock use, allotment management plans, or other activity plans which identify terms and conditions for management on public land. Existing management practices, and levels of use on grazing allotments will be reviewed and evaluated on a priority basis to determine if they meet, or are making significant progress toward meeting, the standards and are in conformance with the guidelines. The review will be interdisciplinary and conducted under existing rules which provide for cooperation, coordination, and consultation with affected individuals, federal, state, and local agencies, tribal governments, private landowners, and interested publics.

This review will use a variety of data, including monitoring records, assessments, and knowledge of the locale to assist in making the significant progress determination. Significance will be determined on a case by case basis, considering site potential, site condition, weather and financial commitment. It is anticipated there will be cases where numerous years will be needed to determine direction and magnitude of trend.

Upon completion of review, the authorized officer shall take appropriate action as soon as practicable but no later than the start of the next grazing year upon determining that the existing grazing management practices or level of use on public land are significant factors contributing to failure to achieve the standards and conform with the guidelines that are made effective under 43 CFR 4180.2. Appropriate action means implementing actions that will result in significant progress toward fulfillment of the standards and significant progress toward conformance with guidelines.
Livestock grazing will continue where significant progress toward meeting standards is being made. Additional activities and practices would not be needed on such allotments. Where new activities or practices are required to assure significant progress toward meeting standards, livestock grazing use can continue contingent upon determinations from monitoring data that the implemented actions are effective in making significant progress toward meeting the standards. In some cases, additional action may be needed as determined by monitoring data over time.

New plans will incorporate an interdisciplinary team approach (Arizona BLM Interdisciplinary Resource Management Handbook, April 1995). The terms and conditions for permitted grazing in these areas will be developed to comply with the goals and objectives of these plans which will be consistent with the standards and guidelines.

ARIZONA STANDARDS AND GUIDELINES

Arizona Standards and Guidelines (S&G) for grazing administration have been developed through a collaborative process involving the Bureau of Land Management State S&G Team and the Arizona Resource Advisory Council. Together, through meetings, conference calls, correspondence, and Open Houses with the public, the BLM State Team and RAC prepared Standards and Guidelines to address the minimum requirements outlined in the grazing regulations. The Standards and Guidelines, criteria for meeting Standards, and indicators are an integrated document that conforms to the fundamentals of rangeland health and the requirements of the regulations when taken as a whole. Upland sites, riparian-wetland areas, and desired resource conditions are each addressed by a standard and associated guidelines.

Standard 1: Upland Sites

Upland soils exhibit infiltration, permeability, and erosion rates that are appropriate to soil type, climate and landform (ecological site).

Criteria for meeting Standard 1:

Soil conditions support proper functioning of hydrologic, energy, and nutrient cycles. Many factors interact to maintain stable soils and healthy soil conditions, including appropriate amounts of vegetative cover, litter, and soil porosity and organic matter. Under proper functioning conditions, rates of soil loss and infiltration are consistent with the potential of the site.

Ground cover in the form of plants, litter or rock is present in pattern, kind, and amount sufficient to prevent accelerated erosion for the ecological site; or ground cover is increasing as determined by monitoring over an established period of time.

Signs of accelerated erosion are minimal or diminishing for the ecological site as determined by monitoring over an established period of time.

As indicated by such factors as:

Ground Cover
- litter
- live vegetation, amount and type (e.g., grass, shrubs, trees, etc.)
- rock

Signs of erosion
- flow pattern
- gullies
- rills
- plant pedestaling

Exceptions and exemptions (where applicable): none

Guidelines:

1-1. Management activities will maintain or promote ground cover that will provide for infiltration, permeability, soil moisture storage, and soil stability appropriate for the ecological sites within management units. The ground cover should maintain soil organisms and plants and animals to support the hydrologic and nutrient cycles, and energy flow. Ground cover and signs of erosion are surrogate measures for hydrologic and nutrient cycles and energy flow.

1-2. When grazing practices alone are not likely to restore areas of low infiltration or permeability, land management treatments may be designed and implemented to attain improvement.

Standard 2: Riparian-Wetland Sites

Riparian-wetland areas are in properly functioning condition.

Criteria for meeting Standard 2:

Stream channel morphology and functions are appropriate for proper functioning condition for existing climate, landform, and channel reach characteristics. Riparian-wetland areas are functioning properly when adequate vegetation, land form, or large woody debris is present to dissipate stream energy associated with high water flows.

Riparian-wetland functioning condition assessments are based on examination of hydrologic, vegetative, soil and erosion-deposition factors. BLM has developed a standard checklist to address these factors and make functional assessments. Riparian-wetland areas are functioning properly as indicated by the results of the application of the appropriate checklist.

The checklist for riparian areas is in Technical Reference 1737-9 "Process for Assessing Proper Functioning Condition." The checklist for wetlands is in Technical Reference 1737-11 "Process for Assessing Proper Functioning Condition for Lentic Riparian-Wetland Areas." These checklists are reprinted on the pages following the Guidelines for Standard 3.

As indicated by such factors as:

Gradient
Width/depth ratio
Channel roughness and sinuosity of stream channel
Bank stabilization
Reduced erosion
Captured sediment
Ground-water recharge
Dissipation of energy by vegetation

Exceptions and exemptions (where applicable):

Dirt tanks, wells, and other water facilities constructed or placed at a location for the purpose of providing water for livestock and/or wildlife and which have not been determined through local planning efforts to provide for riparian or wetland habitat are exempt.

Water impoundments permitted for construction, mining, or other similar activities are exempt.

Guidelines:

2-1. Management practices maintain or promote sufficient vegetation to maintain, improve or restore riparian-wetland functions of energy dissipation, sediment capture, groundwater recharge and stream bank stability, thus promoting stream channel morphology (e.g., gradient, width/depth ratio, channel roughness and sinuosity) and functions appropriate to climate and landform.

2-2. New facilities are located away from riparian-wetland areas if they conflict with achieving or maintaining riparian-wetland function. Existing facilities are used in a way that does not conflict with riparian-wetland functions or are relocated or modified when incompatible with riparian-wetland functions.

2-3. The development of springs and seeps or other projects affecting water and associated resources shall be designed to protect ecological functions and processes.

Standard 3: Desired Resource Conditions

Productive and diverse upland and riparian-wetland plant communities of native species exist and are maintained.

Criteria for meeting Standard 3:

Upland and riparian-wetland plant communities meet desired plant community objectives. Plant community objectives are determined with consideration for all multiple uses. Objectives also address native species, and the requirements of the Taylor Grazing Act, Federal Land Policy and Management Act, Endangered Species Act, Clean Water Act, and appropriate laws, regulations, and policies.

Desired plant community objectives will be developed to assure that soil conditions and ecosystem function described in Standards 1 and 2 are met. They detail a site-specific plant community, which when obtained, will assure rangeland health, State water quality standards, and habitat for endangered, threatened, and sensitive species. Thus, desired plant community objectives will be used as an indicator of ecosystem function and rangeland health.

As indicated by such factors as:

Composition
Structure
Distribution

Exceptions and exemptions (where applicable):

Ecological sites or stream reaches on which a change in existing vegetation is physically, biologically, or economically impractical.

Guidelines:

3-1. The use and perpetuation of native species will be emphasized. However, when restoring or rehabilitating disturbed or degraded rangelands, non-intrusive, non-native plant species are appropriate for use where native species (a) are not available, (b) are not economically feasible, (c) cannot achieve ecological objectives as well as non-native species, and/or (d) cannot compete with already established non-native species.

3-2. Conservation of Federal threatened or endangered, proposed, candidate, and other special status species is promoted by the maintenance or restoration of their habitats.

3-3. Management practices maintain, restore, or enhance water quality in conformance with State or Federal standards.

3-4. Intensity, season and frequency of use, and distribution of grazing use should provide for growth and reproduction of those plant species needed to reach desired plant community objectives.

3-5. Grazing on designated ephemeral (annual and perennial) rangeland may be authorized if the following conditions are met:

ephemeral vegetation is present in draws, washes, and under shrubs and has grown to useable levels at the time grazing begins;

sufficient surface and subsurface soil moisture exists for continued plant growth;

serviceable waters are capable of providing for proper grazing distribution;

sufficient annual vegetation will remain on site to satisfy other resource concerns, (i.e., watershed, wildlife, wild horses and burros); and

monitoring is conducted during grazing to determine if objectives are being met.

3-6. Management practices will target those populations of noxious weeds which can be controlled or eliminated by approved methods.

3-7. Management practices to achieve desired plant communities will consider protection and conservation of known cultural resources, including historical sites, and prehistoric sites and plants of significance to Native American peoples.

Appendix B
Team Membership

Team Membership
Interdisciplinary Assessment Team

Linda Price	Project (BLM)
Michael Small	Wildlife (BLM)
Larry Gearhart	Wilderness/Recreation Specialist (BLM)
Ken Beckstrom	Vegetation/Grazing (BLM)
Robert Smith	Soils and Hydrology(BLM)
John Sims	Wildlife Manager (Arizona Game and Fish Department)
Rob Grumbles	Vegetation and Social (Mohave County Extension Service)
Vernon Parent	Vegetation and Social (Washington County Extension Service)

Rangeland Resource Team

Commodity Interests

Bill Gubler,
Grazing
Rancher, St. George, UT

Bill Howes
Off Road Vehicle Use
Wizards Motorcycle Club

Kent McComb,
Grazing
Retired, St. George, UT

Non-Commodity Interests

Scott Hansen,
Environmental Conservation
Retired, St. George, UT

Spence Esplin,
Historical
Retired, St. George, UT

Phil Squire,
Dispersed Recreation/Wildlife
Retired, St. George, UT

Local Area Interests

Frank Malan,
Public-at-Large
Retired, St. George, UT

Roger McPeek
Public-at-Large
Retired, St. George, UT

Dennis Becenti
Native American Interests
Hopi and Navajo Tribes, AZ

Alternates

Maggie Sacher,
Commercial Recreation/Tourism
Owner: Lee's Ferry Lodge,
Marble Canyon, AZ

Paul Weaver
Non-Commodity
St. George, UT

Appendix C

Precipitation Data

Historical Precipitation Report

Field Office 110 **Rain Gauge Name:** Alcorn **Rain Gauge Number:** 01

	Seasonal Precipitation Amounts					Annual Average					Percent of Normal				
Year	Fall	Winter	Spring	Summer	Annual	Fall	Winter	Spring	Summer	Annual	Fall	Winter	Spring	Summer	Annual
1978	1.76	10.00	2.40	2.65	16.81	1.79	3.95	2.27	4.75	12.76	98%	253%	106%	56%	132%
1979	3.85	5.10	2.77	3.86	15.58	1.79	3.95	2.27	4.75	12.76	215%	129%	122%	81%	122%
1980	0.35	5.90	2.62	5.45	14.32	1.79	3.95	2.27	4.75	12.76	20%	149%	115%	115%	112%
1981	0.92	1.72	3.85	7.05	13.54	1.79	3.95	2.27	4.75	12.76	51%	43%	170%	148%	106%
1982	1.12	3.98	1.92	8.80	15.82	1.79	3.95	2.27	4.75	12.76	63%	101%	85%	185%	124%
1983	3.06	3.84	2.46	6.87	16.23	1.79	3.95	2.27	4.75	12.76	171%	97%	108%	145%	127%
1986	2.61	1.10	3.11	6.07	12.89	1.79	3.95	2.27	4.75	12.76	146%	28%	137%	128%	101%
1987	1.38	2.38	2.76	4.10	10.62	1.79	3.95	2.27	4.75	12.76	77%	60%	122%	86%	83%
1988	4.05	2.13	3.78	2.55	12.51	1.79	3.95	2.27	4.75	12.76	226%	54%	167%	54%	98%
1989	0.64	2.68	1.13	2.10	6.55	1.79	3.95	2.27	4.75	12.76	36%	68%	50%	44%	51%
1990	0.29	1.86	2.00	6.42	10.57	1.79	3.95	2.27	4.75	12.76	16%	47%	88%	135%	83%
1991	0.48	4.00	1.34	5.33	11.15	1.79	3.95	2.27	4.75	12.76	27%	101%	59%	112%	87%
1992	0.91	4.75	6.30	3.09	15.05	1.79	3.95	2.27	4.75	12.76	51%	120%	278%	65%	118%
1993	2.10	9.78	3.38	1.74	17.00	1.79	3.95	2.27	4.75	12.76	117%	247%	149%	37%	133%
1994	1.81	2.94	2.50	3.25	10.50	1.79	3.95	2.27	4.75	12.76	101%	74%	110%	68%	82%
1995	1.96	6.19	5.35	3.00	16.50	1.79	3.95	2.27	4.75	12.76	110%	157%	236%	63%	129%
1996	0.12	3.88	0.87	2.63	7.50	1.79	3.95	2.27	4.75	12.76	7%	98%	38%	55%	59%
1997	2.13	3.38	2.24	7.13	14.88	1.79	3.95	2.27	4.75	12.76	119%	85%	99%	150%	117%
1998	1.63	4.32	1.30	10.00	17.25	1.79	3.95	2.27	4.75	12.76	91%	109%	57%	210%	135%
1999	2.47	1.28	0.75	7.45	11.95	1.79	3.95	2.27	4.75	12.76	138%	32%	33%	157%	94%
2000	0.00	2.75	0.25	3.25	6.25	1.79	3.95	2.27	4.75	12.76	0%	70%	11%	68%	49%
2001	2.83	3.92	0.88	5.12	12.75	1.79	3.95	2.27	4.75	12.76	158%	99%	39%	108%	100%
2002	0.37	1.38	0.00	2.75	4.50	1.79	3.95	2.27	4.75	12.76	21%	35%	0%	58%	35%
2003	1.50	3.00	1.28	3.72	9.50	1.79	3.95	2.27	4.75	12.76	84%	76%	56%	78%	74%
2004	0.81	2.56	1.49	4.39	9.25	1.79	3.95	2.27	4.75	12.76	45%	65%	66%	92%	72%
2005	7.38	8.00				1.79	3.95	2.27	4.75	12.76	412%	202%			

Historical Precipitation Report

Field Office 110 **Rain Gauge Name:** Force Catchment **Rain Gauge Number:** 10

	Seasonal Precipitation Amounts					Annual Average					Percent of Normal				
Year	Fall	Winter	Spring	Summer	Annual	Fall	Winter	Spring	Summer	Annual	Fall	Winter	Spring	Summer	Annual
1978	0.97	6.46	5.24	1.61	14.28	1.51	3.47	1.99	3.77	10.73	64%	186%	263%	43%	133%
1979	3.28	4.70	2.30	2.96	13.24	1.51	3.47	1.99	3.77	10.73	217%	136%	115%	79%	123%
1980	0.30	7.91	2.13	3.33	13.67	1.51	3.47	1.99	3.77	10.73	20%	228%	107%	88%	127%
1981	1.14	1.85	3.64	4.63	11.26	1.51	3.47	1.99	3.77	10.73	76%	53%	183%	123%	105%
1982	0.75	2.76	1.62	4.37	9.50	1.51	3.47	1.99	3.77	10.73	50%	80%	81%	116%	89%
1983	2.60	3.00	2.66	5.77	14.03	1.51	3.47	1.99	3.77	10.73	172%	87%	134%	153%	131%
1984	1.79	1.12	0.96	7.83	11.70	1.51	3.47	1.99	3.77	10.73	119%	32%	48%	208%	109%
1985	1.50	4.70	3.38	2.08	11.66	1.51	3.47	1.99	3.77	10.73	99%	136%	170%	55%	109%
1986	2.32	1.11	2.61	4.18	10.22	1.51	3.47	1.99	3.77	10.73	154%	32%	131%	111%	95%
1987	1.70	3.59	2.47	4.07	11.83	1.51	3.47	1.99	3.77	10.73	113%	104%	124%	108%	110%
1988	3.22	1.65	2.97	2.83	10.67	1.51	3.47	1.99	3.77	10.73	213%	48%	149%	75%	99%
1989	0.68	2.87	1.56	4.93	10.04	1.51	3.47	1.99	3.77	10.73	45%	83%	78%	131%	94%
1990	0.58	1.35	0.95	4.37	7.25	1.51	3.47	1.99	3.77	10.73	38%	39%	48%	116%	68%
1991	0.61	3.10	1.12	4.40	9.23	1.51	3.47	1.99	3.77	10.73	40%	89%	56%	117%	86%
1992	0.91	3.45	3.85	2.91	11.12	1.51	3.47	1.99	3.77	10.73	60%	100%	193%	77%	104%
1993	1.70	10.50	1.80	1.00	15.00	1.51	3.47	1.99	3.77	10.73	113%	303%	90%	27%	140%
1994	1.88	2.13	1.99	0.75	6.75	1.51	3.47	1.99	3.77	10.73	125%	61%	100%	20%	63%
1995	1.00	5.25	1.40			1.51	3.47	1.99	3.77	10.73	66%	151%	70%		
1996	0.25	2.50	1.25	2.13	6.13	1.51	3.47	1.99	3.77	10.73	17%	72%	63%	57%	57%
1997	2.00	3.00	2.25	6.50	13.75	1.51	3.47	1.99	3.77	10.73	133%	87%	113%	173%	128%
1998	1.13	3.37	1.00	7.00	12.50	1.51	3.47	1.99	3.77	10.73	75%	97%	50%	186%	116%
1999	2.00	1.00	1.25	6.00	10.25	1.51	3.47	1.99	3.77	10.73	133%	29%	63%	159%	96%
2000	0.00	2.00	1.00	4.25	7.25	1.51	3.47	1.99	3.77	10.73	0%	58%	50%	113%	68%
2001	1.32	3.55	1.13	2.00	8.00	1.51	3.47	1.99	3.77	10.73	87%	102%	57%	53%	75%
2002	1.00	1.50	0.00	1.13	3.63	1.51	3.47	1.99	3.77	10.73	66%	43%	0%	30%	34%
2003	1.12	3.38	1.63	3.12	9.25	1.51	3.47	1.99	3.77	10.73	74%	98%	82%	83%	86%
2004	0.50	2.63	1.62	3.75	8.50	1.51	3.47	1.99	3.77	10.73	33%	76%	81%	100%	79%
2005	6.00	6.63				1.51	3.47	1.99	3.77	10.73	398%	191%			

Historical Precipitation Report

Field Office 110 **Rain Gauge Name:** Holgate **Rain Gauge Number:** 15

	Seasonal Precipitation Amounts					Annual Average					Percent of Normal				
Year	Fall	Winter	Spring	Summer	Annual	Fall	Winter	Spring	Summer	Annual	Fall	Winter	Spring	Summer	Annual
1977	1.18	7.62	2.40	3.00	14.20	1.76	3.31	1.84	4.12	11.03	67%	231%	130%	73%	129%
1978	3.02	4.59	2.77	3.82	14.20	1.76	3.31	1.84	4.12	11.03	171%	139%	151%	93%	129%
1979	0.34	7.66	2.05	3.65	13.70	1.76	3.31	1.84	4.12	11.03	19%	232%	111%	89%	124%
1980	1.04	1.67	3.93	6.91	13.55	1.76	3.31	1.84	4.12	11.03	59%	51%	214%	168%	123%
1981	0.97	2.82	1.15	5.80	10.74	1.76	3.31	1.84	4.12	11.03	55%	85%	62%	141%	97%
1982	2.42	2.59	2.07	5.44	12.52	1.76	3.31	1.84	4.12	11.03	137%	78%	112%	132%	114%
1983	1.54	0.99	0.96	7.45	10.94	1.76	3.31	1.84	4.12	11.03	87%	30%	52%	181%	99%
1984	0.83	4.39	2.00	2.99	10.21	1.76	3.31	1.84	4.12	11.03	47%	133%	109%	73%	93%
1985	3.19	0.39	2.00	7.16	12.74	1.76	3.31	1.84	4.12	11.03	181%	12%	109%	174%	115%
1986	1.82	3.57	2.27	4.12	11.78	1.76	3.31	1.84	4.12	11.03	103%	108%	123%	100%	107%
1987	4.21	1.40	2.08	3.02	10.71	1.76	3.31	1.84	4.12	11.03	239%	42%	113%	73%	97%
1988	2.28	2.47	1.18	3.09	9.02	1.76	3.31	1.84	4.12	11.03	129%	75%	64%	75%	82%
1989	0.72	1.22	1.77	4.11	7.82	1.76	3.31	1.84	4.12	11.03	41%	37%	96%	100%	71%
1990	0.61	3.20	1.14	3.58	8.53	1.76	3.31	1.84	4.12	11.03	35%	97%	62%	87%	77%
1991	0.80	3.00	4.70	3.51	12.01	1.76	3.31	1.84	4.12	11.03	45%	91%	255%	85%	109%
1992	1.60	6.90	2.63	5.87	17.00	1.76	3.31	1.84	4.12	11.03	91%	209%	143%	142%	154%
1993	2.00	2.38	1.37	0.00	5.75	1.76	3.31	1.84	4.12	11.03	113%	72%	74%	0%	52%
1994	2.00	2.38	1.37	1.75	7.50	1.76	3.31	1.84	4.12	11.03	113%	72%	74%	42%	68%
1995	1.25	7.50	1.25	2.75	12.75	1.76	3.31	1.84	4.12	11.03	71%	227%	68%	67%	116%
1996	2.25	2.25	0.63	3.87	9.00	1.76	3.31	1.84	4.12	11.03	128%	68%	34%	94%	82%
1997	2.00	1.60	1.70	5.38	10.68	1.76	3.31	1.84	4.12	11.03	113%	48%	92%	131%	97%
1998	1.25	3.37	2.65	8.35	15.62	1.76	3.31	1.84	4.12	11.03	71%	102%	144%	203%	142%
1999	1.50	1.10	3.90	2.25	8.75	1.76	3.31	1.84	4.12	11.03	85%	33%	212%	55%	79%
2000	0.00	1.62	0.13	2.75	4.50	1.76	3.31	1.84	4.12	11.03	0%	49%	7%	67%	41%
2001	4.20	5.80	0.38	5.63	16.01	1.76	3.31	1.84	4.12	11.03	238%	175%	21%	137%	145%
2002	0.25	1.25	0.25	1.75	3.50	1.76	3.31	1.84	4.12	11.03	14%	38%	14%	42%	32%
2003	1.38	2.68	1.69	4.38	10.13	1.76	3.31	1.84	4.12	11.03	78%	81%	92%	106%	92%
2004	0.50	2.25	1.11	3.01	6.87	1.76	3.31	1.84	4.12	11.03	28%	68%	60%	73%	62%
2005	6.00	7.19				1.76	3.31	1.84	4.12	11.03	340%	218%			

Historical Precipitation Report

Field Office 110 **Rain Gauge Name:** Marchant Tank **Rain Gauge Number:** 19

	Seasonal Precipitation Amounts					Annual Average					Percent of Normal				
Year	Fall	Winter	Spring	Summer	Annual	Fall	Winter	Spring	Summer	Annual	Fall	Winter	Spring	Summer	Annual
1978	0.83	6.92	2.09	1.72	11.56	1.56	3.02	1.88	3.62	10.08	53%	229%	111%	48%	115%
1979	2.94	4.44	1.80	2.73	11.91	1.56	3.02	1.88	3.62	10.08	188%	147%	96%	75%	118%
1980	0.61	6.23	2.24	3.32	12.40	1.56	3.02	1.88	3.62	10.08	39%	206%	119%	92%	123%
1981	1.41	1.76	4.75	5.36	13.28	1.56	3.02	1.88	3.62	10.08	90%	58%	252%	148%	132%
1982	0.69	3.50	2.60	7.66	14.45	1.56	3.02	1.88	3.62	10.08	44%	116%	138%	212%	143%
1983	2.17	2.19	2.47	5.25	12.08	1.56	3.02	1.88	3.62	10.08	139%	72%	131%	145%	120%
1984	2.20	1.19	0.97	6.41	10.77	1.56	3.02	1.88	3.62	10.08	141%	39%	52%	177%	107%
1985	1.34	4.43	2.50	2.62	10.89	1.56	3.02	1.88	3.62	10.08	86%	147%	133%	72%	108%
1986	3.00	0.70	2.71	3.54	9.95	1.56	3.02	1.88	3.62	10.08	192%	23%	144%	98%	99%
1987	1.80	3.06	2.28	2.44	9.58	1.56	3.02	1.88	3.62	10.08	115%	101%	121%	67%	95%
1988	3.24	1.19	3.87	2.65	10.95	1.56	3.02	1.88	3.62	10.08	207%	39%	206%	73%	109%
1989	1.41	2.66	0.73	2.40	7.20	1.56	3.02	1.88	3.62	10.08	90%	88%	39%	66%	71%
1990	0.20	1.59	1.23	5.32	8.34	1.56	3.02	1.88	3.62	10.08	13%	53%	65%	147%	83%
1991	0.89	2.37	0.79	2.68	6.73	1.56	3.02	1.88	3.62	10.08	57%	78%	42%	74%	67%
1992	1.13	2.17	2.27	4.65	10.22	1.56	3.02	1.88	3.62	10.08	72%	72%	121%	129%	101%
1993	1.70	8.25	1.43	0.12	11.50	1.56	3.02	1.88	3.62	10.08	109%	273%	76%	3%	114%
1994	1.63	1.62	2.12	0.63	6.00	1.56	3.02	1.88	3.62	10.08	104%	54%	113%	17%	60%
1995	1.50	3.75	2.24	5.01	12.50	1.56	3.02	1.88	3.62	10.08	96%	124%	119%	139%	124%
1996	1.50	3.25	0.25	5.00	10.00	1.56	3.02	1.88	3.62	10.08	96%	108%	13%	138%	99%
1997	1.75	2.50	1.50	4.75	10.50	1.56	3.02	1.88	3.62	10.08	112%	83%	80%	131%	104%
1998	1.00	2.88	0.87	6.75	11.50	1.56	3.02	1.88	3.62	10.08	64%	95%	46%	187%	114%
1999	1.75	1.00	2.25	4.25	9.25	1.56	3.02	1.88	3.62	10.08	112%	33%	119%	118%	92%
2000	0.00	2.00	1.00	2.50	5.50	1.56	3.02	1.88	3.62	10.08	0%	66%	53%	69%	55%
2001	1.55	4.20	2.25	2.50	10.50	1.56	3.02	1.88	3.62	10.08	99%	139%	119%	69%	104%
2002	0.62	1.38	0.00	1.62	3.62	1.56	3.02	1.88	3.62	10.08	40%	46%	0%	45%	36%
2003	1.12	2.88	2.25	4.13	10.38	1.56	3.02	1.88	3.62	10.08	72%	95%	119%	114%	103%
2004	1.00	1.75	1.38	1.62	5.75	1.56	3.02	1.88	3.62	10.08	64%	58%	73%	45%	57%
2005	4.75	4.75				1.56	3.02	1.88	3.62	10.08	304%	157%			

Historical Precipitation Report

Field Office 110 **Rain Gauge Name:** Sullivan Tank **Rain Gauge Number:** 25

	Seasonal Precipitation Amounts					Annual Average					Percent of Normal				
Year	Fall	Winter	Spring	Summer	Annual	Fall	Winter	Spring	Summer	Annual	Fall	Winter	Spring	Summer	Annual
1978	1.35	10.00	3.78	1.88	17.01	1.81	4.84	2.24	3.90	12.78	75%	207%	169%	48%	133%
1979	1.56	9.64	2.01	4.54	17.75	1.81	4.84	2.24	3.90	12.78	86%	199%	90%	116%	139%
1980	1.41	10.00	1.64	4.63	17.68	1.81	4.84	2.24	3.90	12.78	78%	207%	73%	119%	138%
1981	1.13	2.28	3.74	4.39	11.54	1.81	4.84	2.24	3.90	12.78	63%	47%	167%	113%	90%
1982	0.86	4.83	3.08	6.37	15.14	1.81	4.84	2.24	3.90	12.78	48%	100%	137%	163%	118%
1983	2.20	4.00	3.36	5.65	15.21	1.81	4.84	2.24	3.90	12.78	122%	83%	150%	145%	119%
1984	2.33	1.69	0.70	7.08	11.80	1.81	4.84	2.24	3.90	12.78	129%	35%	31%	181%	92%
1985	1.53	6.49	1.88	3.06	12.96	1.81	4.84	2.24	3.90	12.78	85%	134%	84%	78%	101%
1986	2.67	1.51	3.06	3.33	10.57	1.81	4.84	2.24	3.90	12.78	148%	31%	137%	85%	83%
1987	1.94	4.71	3.82	3.33	13.80	1.81	4.84	2.24	3.90	12.78	107%	97%	170%	85%	108%
1988	3.45	1.93	3.59	3.19	12.16	1.81	4.84	2.24	3.90	12.78	191%	40%	160%	82%	95%
1989	0.89	4.37	1.22	2.91	9.39	1.81	4.84	2.24	3.90	12.78	49%	90%	54%	75%	73%
1990	0.56	2.07	1.50	6.35	10.48	1.81	4.84	2.24	3.90	12.78	31%	43%	67%	163%	82%
1991	0.88	4.57	1.24	2.82	9.51	1.81	4.84	2.24	3.90	12.78	49%	94%	55%	72%	74%
1992	2.00	4.10	4.38	3.86	14.34	1.81	4.84	2.24	3.90	12.78	111%	85%	195%	99%	112%
1993	2.30	11.39	2.63	1.43	17.75	1.81	4.84	2.24	3.90	12.78	127%	235%	117%	37%	139%
1994	2.25	3.52	1.98	1.25	9.00	1.81	4.84	2.24	3.90	12.78	125%	73%	88%	32%	70%
1995	1.55	9.20	1.86	4.14	16.75	1.81	4.84	2.24	3.90	12.78	86%	190%	83%	106%	131%
1996	2.38	4.66	1.84	1.37	10.25	1.81	4.84	2.24	3.90	12.78	132%	96%	82%	35%	80%
1997	2.75	3.75	1.75	6.50	14.75	1.81	4.84	2.24	3.90	12.78	152%	78%	78%	167%	115%
1998	1.38	6.05	1.82	9.00	18.25	1.81	4.84	2.24	3.90	12.78	76%	125%	81%	231%	143%
1999	2.56	1.44	2.50	3.50	10.00	1.81	4.84	2.24	3.90	12.78	142%	30%	112%	90%	78%
2000	0.00	3.62	0.26	2.72	6.60	1.81	4.84	2.24	3.90	12.78	0%	75%	12%	70%	52%
2001	1.88	4.62	2.88	0.75	10.13	1.81	4.84	2.24	3.90	12.78	104%	96%	129%	19%	79%
2002	1.25	2.00	0.12	0.78	4.15	1.81	4.84	2.24	3.90	12.78	69%	41%	5%	20%	32%
2003	2.00	4.50	2.50	4.50	13.50	1.81	4.84	2.24	3.90	12.78	111%	93%	112%	115%	106%
2004	0.50	3.65	1.37	6.00	11.52	1.81	4.84	2.24	3.90	12.78	28%	75%	61%	154%	90%
2005	5.00					1.81	4.84	2.24	3.90	12.78	277%				

Historical Precipitation Report

Field Office 110 **Rain Gauge Name:** Toquer Tank **Rain Gauge Number:** 28

	Seasonal Precipitation Amounts					Annual Average					Percent of Normal				
Year	Fall	Winter	Spring	Summer	Annual	Fall	Winter	Spring	Summer	Annual	Fall	Winter	Spring	Summer	Annual
1978	2.28	6.72	1.64	1.68	12.32	1.47	2.79	1.63	3.56	9.46	156%	241%	100%	47%	130%
1979	3.16	3.75	1.93	2.02	10.86	1.47	2.79	1.63	3.56	9.46	216%	134%	118%	57%	115%
1980	0.55	5.53	2.20	5.15	13.43	1.47	2.79	1.63	3.56	9.46	38%	198%	135%	144%	142%
1981	1.21	1.86	3.98	3.84	10.89	1.47	2.79	1.63	3.56	9.46	83%	67%	243%	108%	115%
1982	0.95	2.64	1.65	4.60	9.84	1.47	2.79	1.63	3.56	9.46	65%	95%	101%	129%	104%
1983	2.22	2.02	2.04	5.63	11.91	1.47	2.79	1.63	3.56	9.46	151%	72%	125%	158%	126%
1984	1.30	1.05	1.27	5.94	9.56	1.47	2.79	1.63	3.56	9.46	89%	38%	78%	167%	101%
1985	1.24	4.14	2.50	2.01	9.89	1.47	2.79	1.63	3.56	9.46	85%	148%	153%	56%	105%
1986	2.34	0.63	2.41	3.89	9.27	1.47	2.79	1.63	3.56	9.46	160%	23%	147%	109%	98%
1987	1.50	2.18	2.46	3.82	9.96	1.47	2.79	1.63	3.56	9.46	102%	78%	150%	107%	105%
1988	3.50	0.98	2.88	2.45	9.81	1.47	2.79	1.63	3.56	9.46	239%	35%	176%	69%	104%
1989	0.64	2.22	0.78	2.50	6.14	1.47	2.79	1.63	3.56	9.46	44%	79%	48%	70%	65%
1990	0.25	0.95	1.27	4.82	7.29	1.47	2.79	1.63	3.56	9.46	17%	34%	78%	135%	77%
1991	0.30	2.50	0.74	3.41	6.95	1.47	2.79	1.63	3.56	9.46	20%	90%	45%	96%	73%
1992	0.89	2.30	3.29	2.93	9.41	1.47	2.79	1.63	3.56	9.46	61%	82%	201%	82%	99%
1993	1.80	8.50	1.83	0.37	12.50	1.47	2.79	1.63	3.56	9.46	123%	304%	112%	10%	132%
1994	1.50	1.75	1.63	2.62	7.50	1.47	2.79	1.63	3.56	9.46	102%	63%	100%	74%	79%
1996	0.50	2.25	0.25	4.25	7.25	1.47	2.79	1.63	3.56	9.46	34%	81%	15%	119%	77%
1997	1.50	2.25	1.00	8.00	12.75	1.47	2.79	1.63	3.56	9.46	102%	81%	61%	224%	135%
1998	1.00	2.50	0.75	8.00	12.25	1.47	2.79	1.63	3.56	9.46	68%	90%	46%	224%	130%
1999	1.75	1.25	2.00	4.50	9.50	1.47	2.79	1.63	3.56	9.46	119%	45%	122%	126%	100%
2000	0.00	1.25	1.25	3.25	5.75	1.47	2.79	1.63	3.56	9.46	0%	45%	76%	91%	61%
2001	1.45	3.55	0.00	2.00	7.00	1.47	2.79	1.63	3.56	9.46	99%	127%	0%	56%	74%
2002	0.62	1.38	0.00	1.50	3.50	1.47	2.79	1.63	3.56	9.46	42%	49%	0%	42%	37%
2003	1.62	2.88	1.63	2.00	8.13	1.47	2.79	1.63	3.56	9.46	111%	103%	100%	56%	86%
2004	0.75	2.38	1.12	1.50	5.75	1.47	2.79	1.63	3.56	9.46	51%	85%	69%	42%	61%
2005	4.75	6.00				1.47	2.79	1.63	3.56	9.46	324%	215%			

Historical Precipitation Report

Field Office 110 **Rain Gauge Name:** Wolfhole **Rain Gauge Number:** 31

	Seasonal Precipitation Amounts					Annual Average					Percent of Normal				
Year	Fall	Winter	Spring	Summer	Annual	Fall	Winter	Spring	Summer	Annual	Fall	Winter	Spring	Summer	Annual
1983	5.00	5.73	1.31	5.27	17.31	1.79	4.09	1.56	3.72	11.16	280%	140%	84%	142%	155%
1984	2.17	1.24	0.70	6.53	10.64	1.79	4.09	1.56	3.72	11.16	121%	30%	45%	176%	95%
1985	1.28	5.79	2.27	2.64	11.98	1.79	4.09	1.56	3.72	11.16	72%	142%	145%	71%	107%
1986	2.26	1.40	2.14	5.21	11.01	1.79	4.09	1.56	3.72	11.16	126%	34%	137%	140%	99%
1987	2.06	4.62	1.86	3.26	11.80	1.79	4.09	1.56	3.72	11.16	115%	113%	119%	88%	106%
1988	3.82	1.50	2.78	2.54	10.64	1.79	4.09	1.56	3.72	11.16	214%	37%	178%	68%	95%
1989	0.65	3.55	1.09	2.89	8.18	1.79	4.09	1.56	3.72	11.16	36%	87%	70%	78%	73%
1990	0.70	2.15	1.80	5.76	10.41	1.79	4.09	1.56	3.72	11.16	39%	53%	115%	155%	93%
1991	1.08	4.02	1.22	2.97	9.29	1.79	4.09	1.56	3.72	11.16	60%	98%	78%	80%	83%
1992	0.96	4.00	4.92	2.64	12.52	1.79	4.09	1.56	3.72	11.16	54%	98%	315%	71%	112%
1993	2.00	12.00	1.50	0.88	16.38	1.79	4.09	1.56	3.72	11.16	112%	293%	96%	24%	147%
1994	1.81	2.69	1.50	7.00	13.00	1.79	4.09	1.56	3.72	11.16	101%	66%	96%	188%	116%
1995	1.48	8.52	1.55	3.45	15.00	1.79	4.09	1.56	3.72	11.16	83%	208%	99%	93%	134%
1996	0.50	3.00	1.50	2.75	7.75	1.79	4.09	1.56	3.72	11.16	28%	73%	96%	74%	69%
1997	2.25	4.25	1.25	7.00	14.75	1.79	4.09	1.56	3.72	11.16	126%	104%	80%	188%	132%
1998	0.88	5.12	1.50	6.50	14.00	1.79	4.09	1.56	3.72	11.16	49%	125%	96%	175%	125%
1999	2.17	1.33	1.50	4.38	9.38	1.79	4.09	1.56	3.72	11.16	121%	33%	96%	118%	84%
2000	0.00	3.25	0.50	1.85	5.60	1.79	4.09	1.56	3.72	11.16	0%	79%	32%	50%	50%
2001	1.81	4.44	0.50	2.50	9.25	1.79	4.09	1.56	3.72	11.16	101%	109%	32%	67%	83%
2002	1.50	1.25	0.00	1.75	4.50	1.79	4.09	1.56	3.72	11.16	84%	31%	0%	47%	40%
2003	1.25	5.35	1.90	1.00	9.50	1.79	4.09	1.56	3.72	11.16	70%	131%	121%	27%	85%
2004	0.50	3.25	1.12	3.00	7.87	1.79	4.09	1.56	3.72	11.16	28%	79%	72%	81%	71%
2005	5.00	5.63				1.79	4.09	1.56	3.72	11.16	280%	138%			

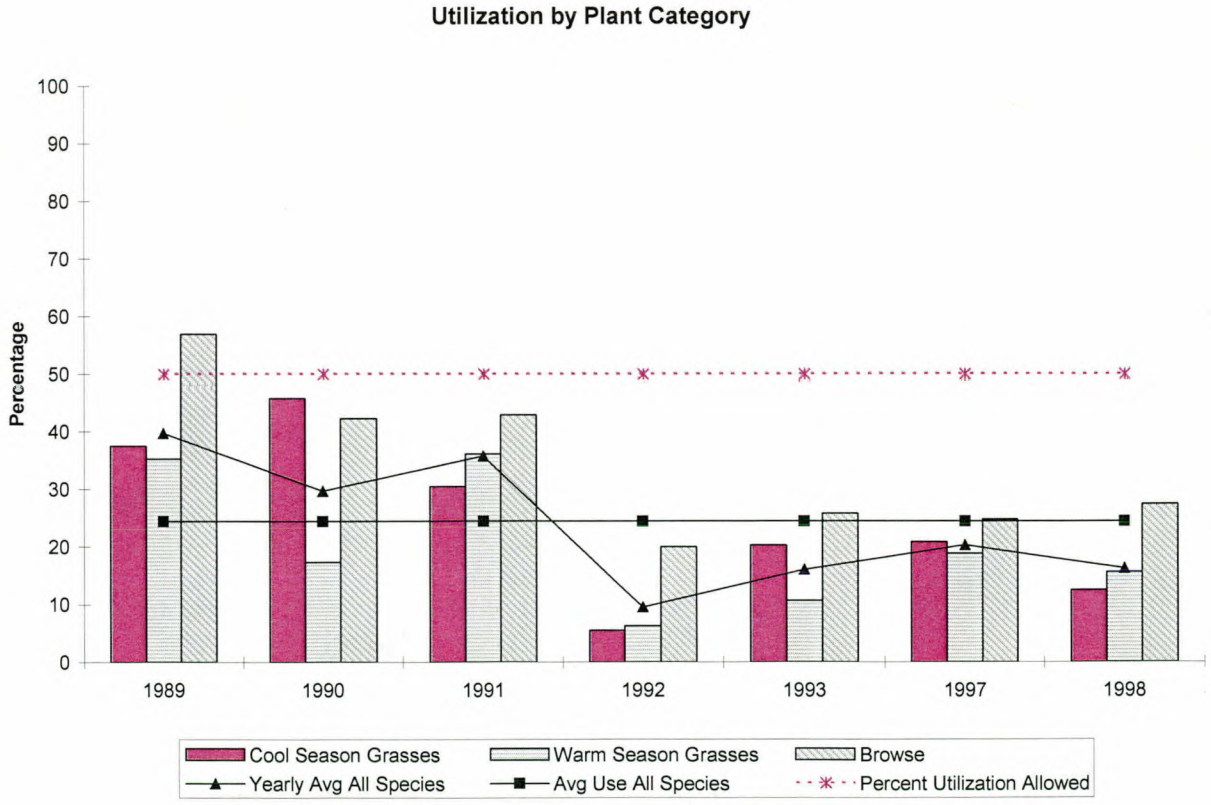
Appendix D:

Vegetation Data

Utilization Data
Followed by
Pace Frequency Data

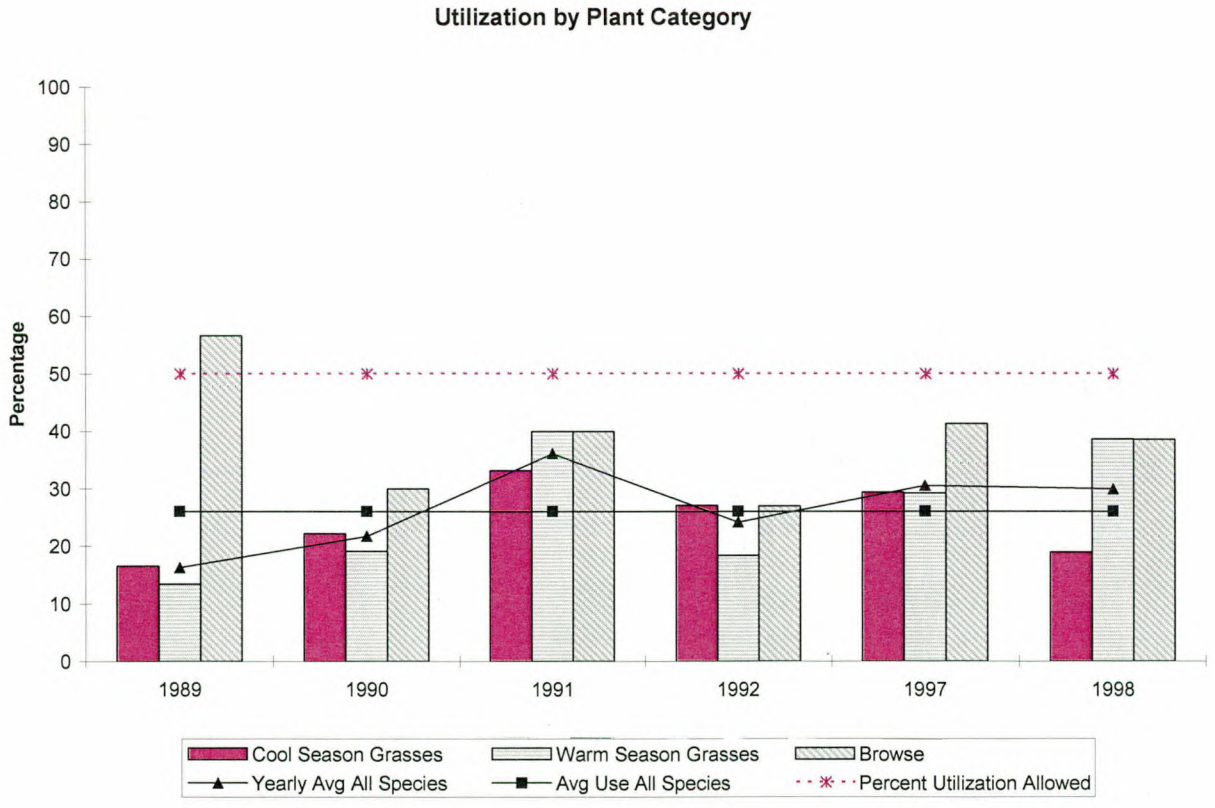
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ALLOTMENT = MAINSTREET				PASTURE = BISHOP/BURR				KEY AREA NUMBER =								Page 1					07/07/03
Utilization expressed as a percent use for each species as of the particular year read.																					
Cool Season Grasses																					
	1989	1990	1991	1992	1993	1997	1998														AVG
ORHY	38	46		6	20	21	13														25
STIPA			30																		30
CSGG																					
AVERAGE	38	46	30	6	20	21	13														26
WARM SEASON GRASSES																					
HIJA	21	12	37	7	11	17	13														16
SPCR	39	23	33	6	10	23	20														25
WSGG																					
AVERAGE	35	17	36	6	11	19	16														20
BROWSE																					
ATCA	57	42	43	20	26	25	27														35
SSSS																					
AVERAGE	57	42	43	20	26	25	27														35
AVG ALL SPEC	40	30	36	10	16	20	16														24

Allotment: MAINSTREET **Pasture: BISHOP/BURR** **Key Area: 0**



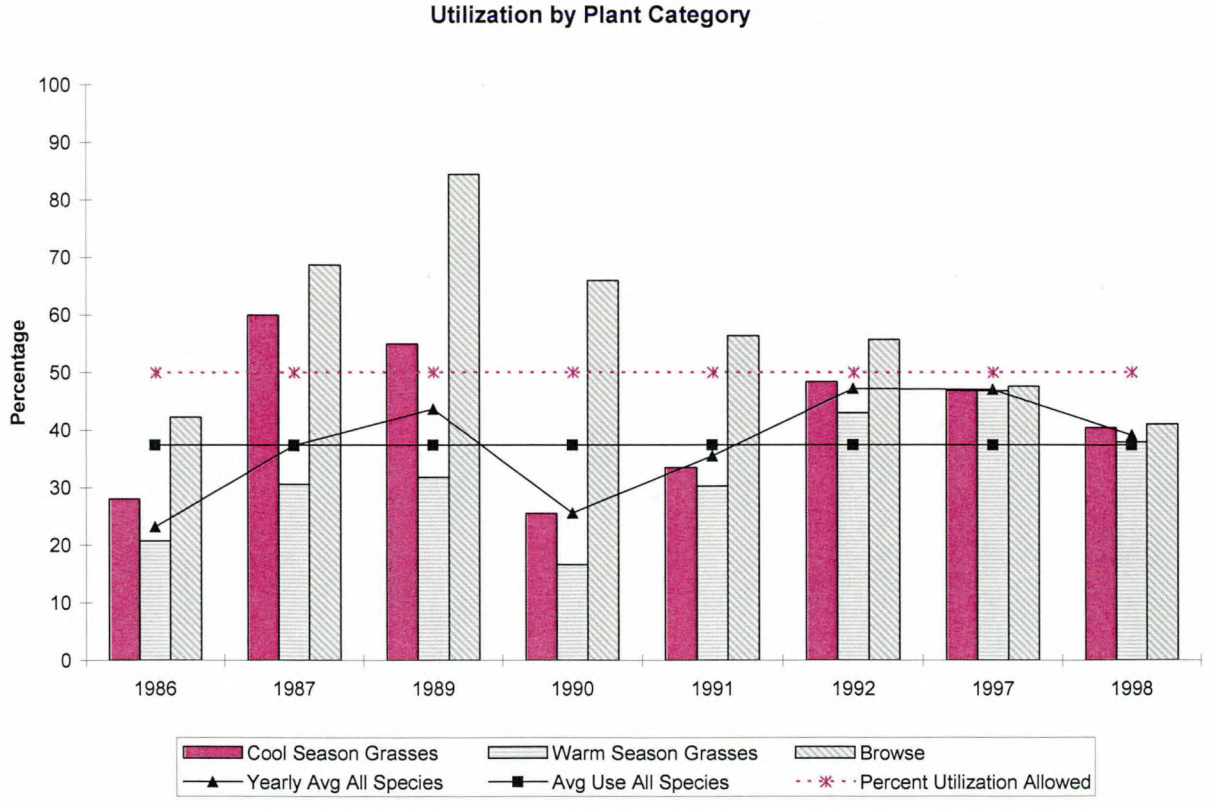
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ALLOTMENT = MAINSTREET				PASTURE = BULL POND			KEY AREA NUMBER =								Page 1						07/07/03	
Utilization expressed as a percent use for each species as of the particular year read.																						
Cool Season Grasses																						
	1989	1990	1991	1992	1997	1998																AVG
ORHY	17	22	34	19	16	18																21
SIHY			28	27	37	26																31
STIPA				30	30	8																29
CSGG																						
AVERAGE	17	22	33	27	29	19																25
WARM SEASON GRASSES																						
SPCR		30																				30
BOGR	13	18	42	19	26	39																23
BOER			36	18	31	38																30
WSGG																						
AVERAGE	13	19	40	18	29	39																25
BROWSE																						
ATCA	57	30	40	27	41	39																37
SSSS																						
AVERAGE	57	30	40	27	41	39																37
AVG ALL SPEC	16	22	36	24	31	30																26

Allotment: MAINSTREET **Pasture: BULL POND** **Key Area: 0**



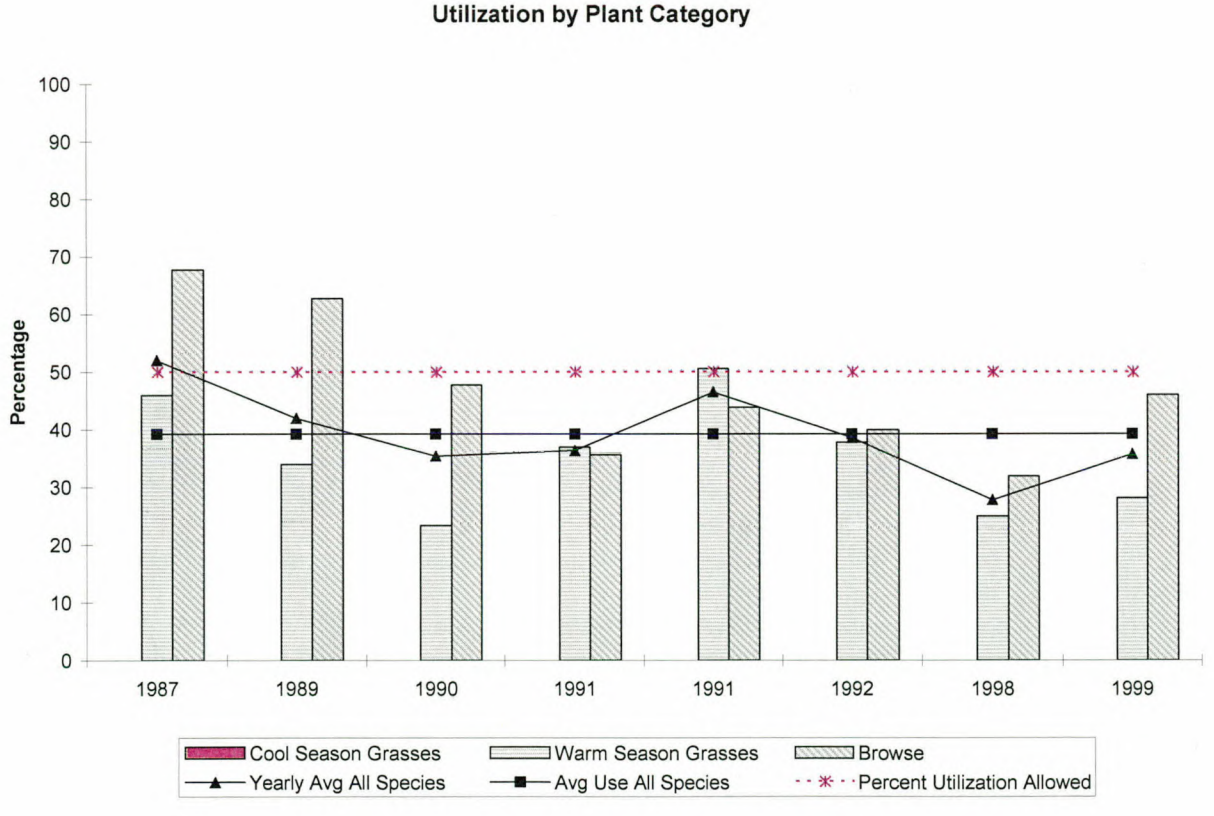
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ALLOTMENT = MAINSTREET					PASTURE = CALF				KEY AREA NUMBER =							Page 1					07/07/03
Utilization expressed as a percent use for each species as of the particular year read.																					
Cool Season Grasses																					
	1986	1987	1989	1990	1991	1992	1997	1998													AVG
ORHY	28	60	55	26	33	48	47	40													43
CSGG																					
AVERAGE	28	60	55	26	33	48	47	40													43
WARM SEASON GRASSES																					
HIJA	17	26	30	17	30	44	45	37													29
SPCR	29	44	46		30	41	50	39													39
WSGG																					
AVERAGE	21	31	32	17	30	43	47	38													31
BROWSE																					
CELA	42	65	83	67	57	58	48	41													53
ATCA	50	73	87	65	55	53															64
SSSS																					
AVERAGE	42	69	84	66	56	56	48	41													55
AVG ALL SPEC	23	37	44	26	36	47	47	39													37

Allotment: MAINSTREET **Pasture: CALF** **Key Area: 0**



ARIZONA STRIP				UTILIZATION STUDY SUMMARY																		
ALLOTMENT = MAINSTREET				PASTURE = CALVING				KEY AREA NUMBER =							Page 1						07/07/03	
Utilization expressed as a percent use for each species as of the particular year read.																						
Cool Season Grasses																						
	1987	1989	1990	1991	1991	1992	1998	1999														AVG
CSGG																						
AVERAGE																						
WARM SEASON GRASSES																						
HIJA	45	34	26	35	51	37	26	25														35
SPCR			17																			17
BOER	58	37	30	42	50	42	20	37														39
WSGG																						
AVERAGE	46	34	23	37	51	38	25	28														35
BROWSE																						
CELA	66	57	42	32	42	38	33	49														44
ATCA	69	65	49	38	45	41	31	44														47
SSSS																						
AVERAGE	68	63	48	36	44	40	32	46														46
AVG ALL SPEC	52	42	35	36	47	39	28	36														39

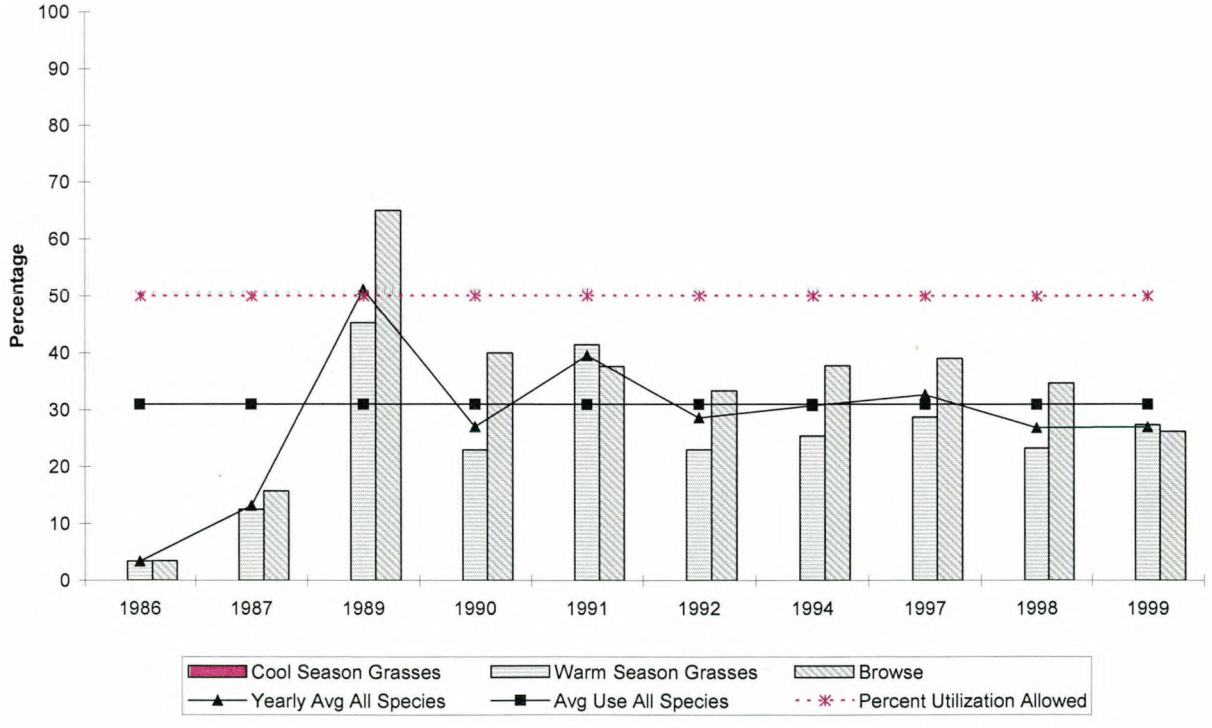
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ARIZONA STRIP					UTILIZATION STUDY SUMMARY																
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Utilization expressed as a percent use for each species as of the particular year read.																					
Cool Season Grasses																					
	1986	1987	1989	1990	1991	1992	1994	1997	1998	1999											AVG
CSGG																					
AVERAGE																					
WARM SEASON GRASSES																					
HIJA	3	13	48	23	42	24	26	26	23	25											28
SPCR	5	12	35	22	39	20	25	38	23	32											27
WSGG																					
AVERAGE	3	13	45	23	41	23	25	29	23	27											28
BROWSE																					
ATCA	3	16	65	39	38	33	41	44	36	25											38
EPNE	10		63	70	36	35	32	32	34	28											34
SSSS																					
AVERAGE	4	16	65	40	38	33	38	39	35	26											37
AVG ALL SPEC	3	13	51	27	40	29	31	33	27	27											31

Allotment: MAINSTREET **Pasture: CECIL** **Key Area: 0**

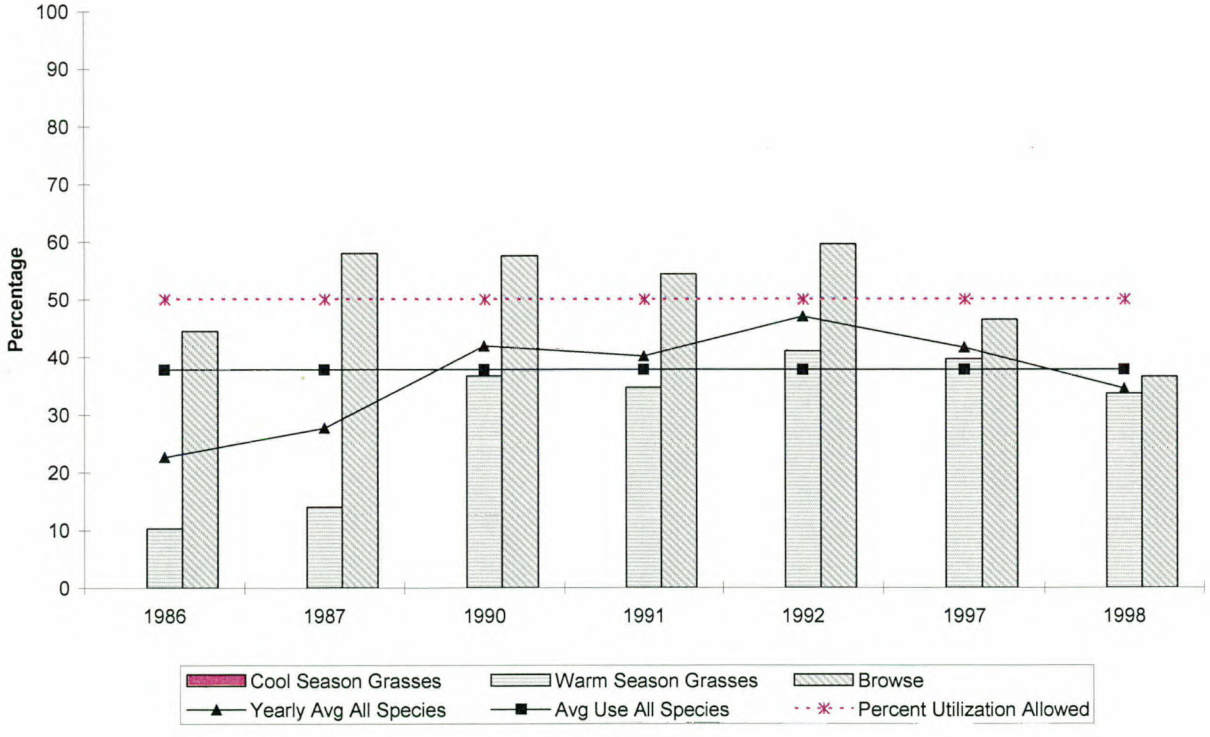
Utilization by Plant Category



ARIZONA STRIP					UTILIZATION STUDY SUMMARY																
ALLOTMENT = MAINSTREET				PASTURE = CHILDERS				KEY AREA NUMBER =							Page 1					07/07/03	
Utilization expressed as a percent use for each species as of the particular year read.																					
Cool Season Grasses																					
	1986	1987	1990	1991	1992	1997	1998														AVG
CSGG																					
AVERAGE																					
WARM SEASON GRASSES																					
HIJA	10	16	43	39	40	41	40														35
SPCR	11	11	36	33	41	35	33														30
BOER			21	27	44	46	24														32
WSGG																					
AVERAGE	10	14	37	35	41	40	34														33
BROWSE																					
CELA	43	50	57	58	64	54	37														52
ATCA	46	70	64	56	54	45	41														50
EPNE	45	57	54	50	57	34	32														47
SSSS																					
AVERAGE	45	58	58	54	60	46	37														50
AVG ALL SPEC	23	28	42	40	47	42	35														38

Allotment: MAINSTREET **Pasture: CHILDERS** **Key Area: 0**

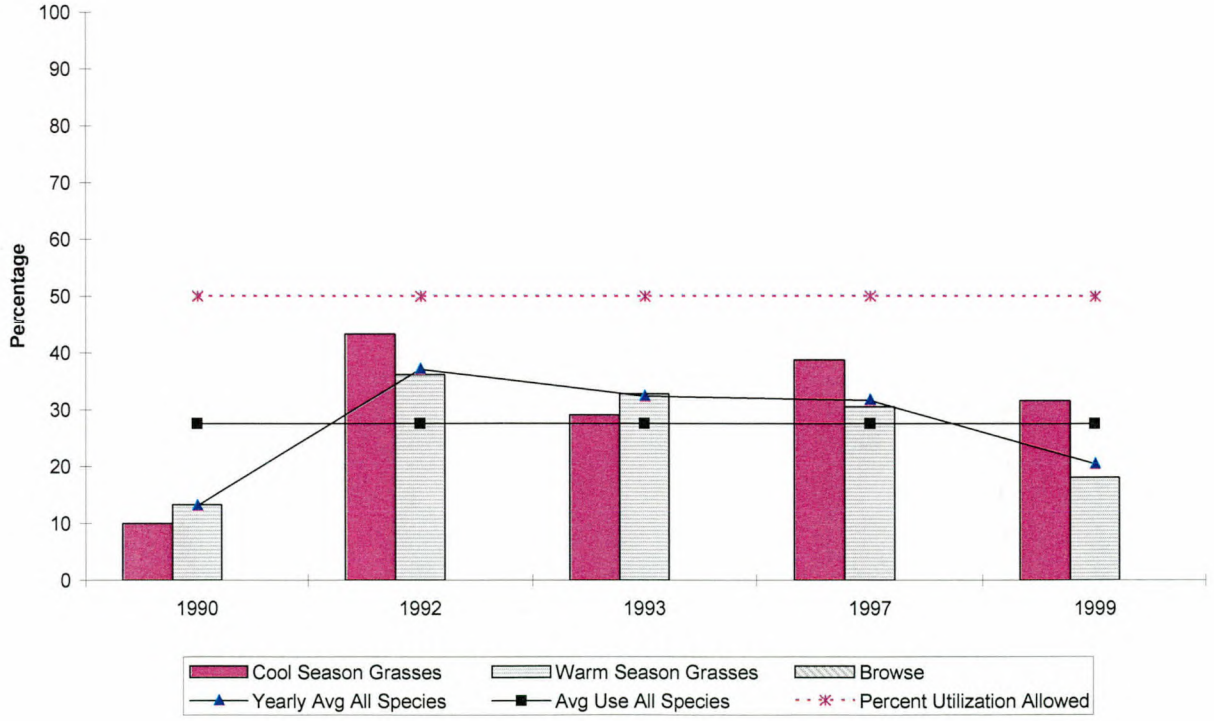
Utilization by Plant Category



ARIZONA STRIP				UTILIZATION STUDY SUMMARY																	
ALLOTMENT = MAINSTREET				PASTURE = CHRISTMAN			KEY AREA NUMBER =								Page 1					07/07/03	
Utilization expressed as a percent use for each species as of the particular year read.																					
Cool Season Grasses																					
	1990	1992	1993	1997	1999																AVG
STIPA	10	43	29	39	32																33
CSGG																					
AVERAGE	10	43	29	39	32																33
WARM SEASON GRASSES																					
HIJA	15	39	38	31	23																30
BOGR	12	34	26	32	14																23
BOER	10	23	29	27	11																23
WSGG																					
AVERAGE	13	36	33	31	18																27
BROWSE																					
SSSS																					
AVERAGE																					
AVG ALL SPEC	13	37	32	32	20																28

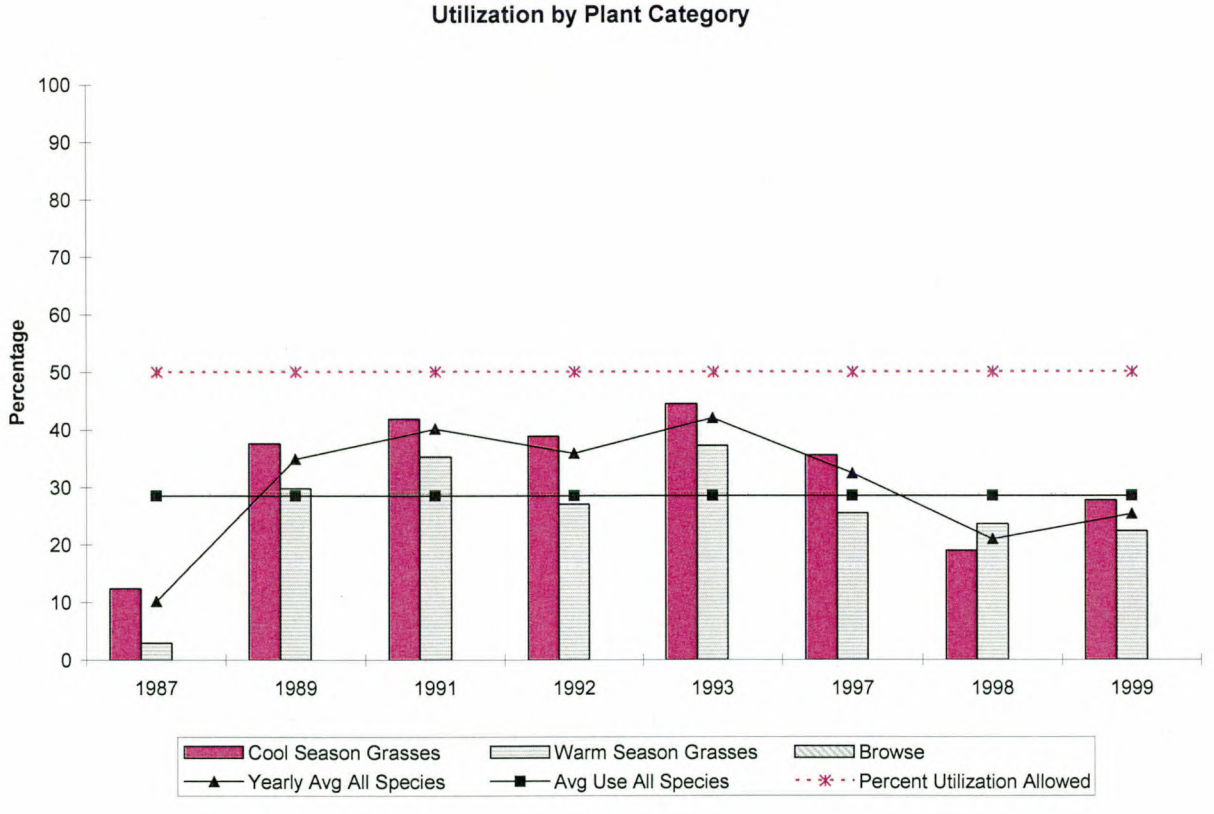
Allotment: MAINSTREET **Pasture: CHRISTMAN** **Key Area: 0**

Utilization by Plant Category



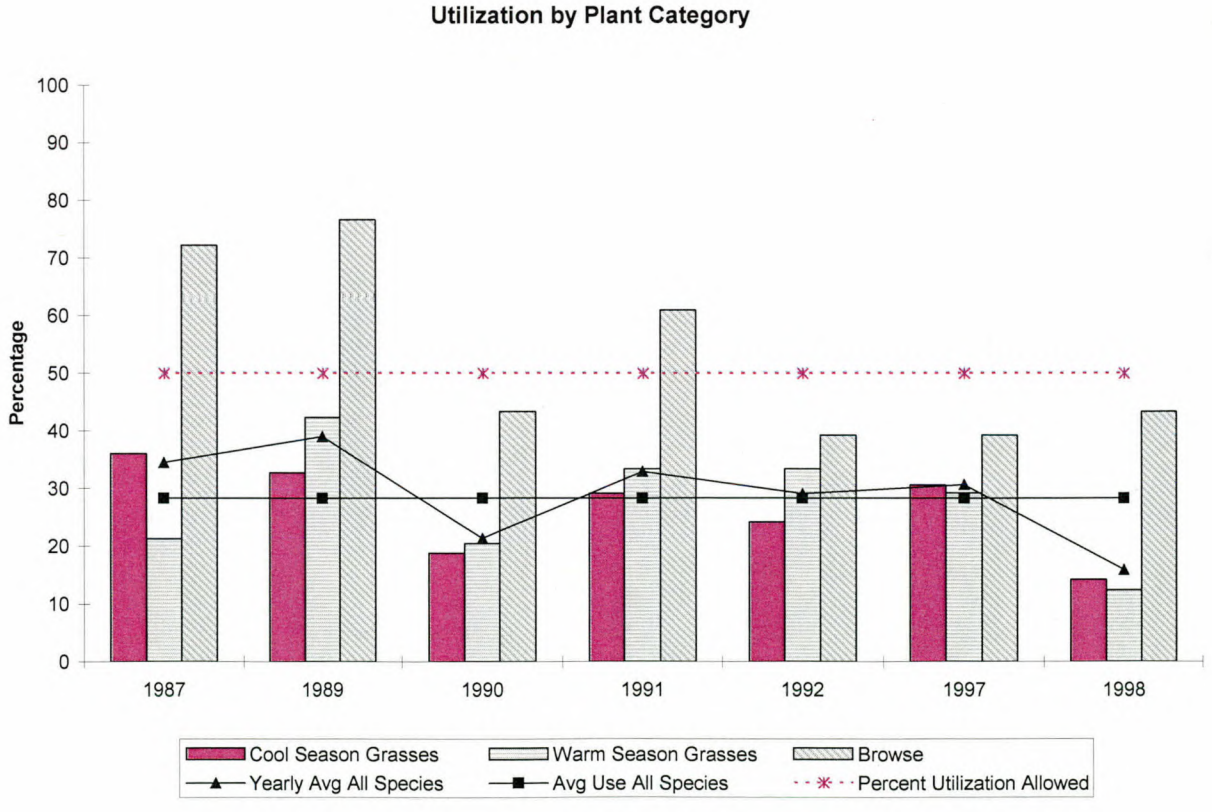
ARIZONA STRIP					UTILIZATION STUDY SUMMARY																
ALLOTMENT = MAINSTREET					PASTURE = COX/ATKIN				KEY AREA NUMBER =								Page 1				07/07/03
Utilization expressed as a percent use for each species as of the particular year read.																					
Cool Season Grasses																					
	1987	1989	1991	1992	1993	1997	1998	1999													AVG
ORHY	15	45	44	41	44	39	17	28													32
SIHY	15	24	39	42	54																32
STIPA	2		44	32	26	20	24	27													25
CSGG																					
AVERAGE	12	38	42	39	44	36	19	28													30
WARM SEASON GRASSES																					
HIJA	3	16	34	27	34	24	27	23													21
SPCR		55	37	28	43	27	19	21													30
WSGG																					
AVERAGE	3	30	35	27	37	26	24	22													24
BROWSE																					
SSSS																					
AVERAGE																					
AVG ALL SPEC	10	35	40	36	42	32	21	25													28

Allotment: MAINSTREET **Pasture: COX/ATKIN** **Key Area: 0**



ARIZONA STRIP					UTILIZATION STUDY SUMMARY																	
ALLOTMENT = MAINSTREET					PASTURE = DAVE POND					KEY AREA NUMBER =						Page 1						07/07/03
Utilization expressed as a percent use for each species as of the particular year read.																						
Cool Season Grasses																						
	1987	1989	1990	1991	1992	1997	1998															AVG
ORHY	31			29	21	38	16															27
SIHY	42	32		29	33	33	20															31
STIPA	35	33	19		22	26	8															25
CSGG																						
AVERAGE	36	33	19	29	24	31	14															27
WARM SEASON GRASSES																						
HIJA	21	32	7	32	34	30	10															23
SPCR		52	39	41	39	32	13															33
BOGR		49	18	30	27	24	14															27
BOER	21																					21
WSGG																						
AVERAGE	21	42	20	33	33	29	12															27
BROWSE																						
CELA		90	38	58	40	45	40															45
ATCA	72	70	46	63	38	37	44															50
SSSS																						
AVERAGE	72	77	43	61	39	39	43															49
AVG ALL SPEC	35	39	21	33	29	31	16															28

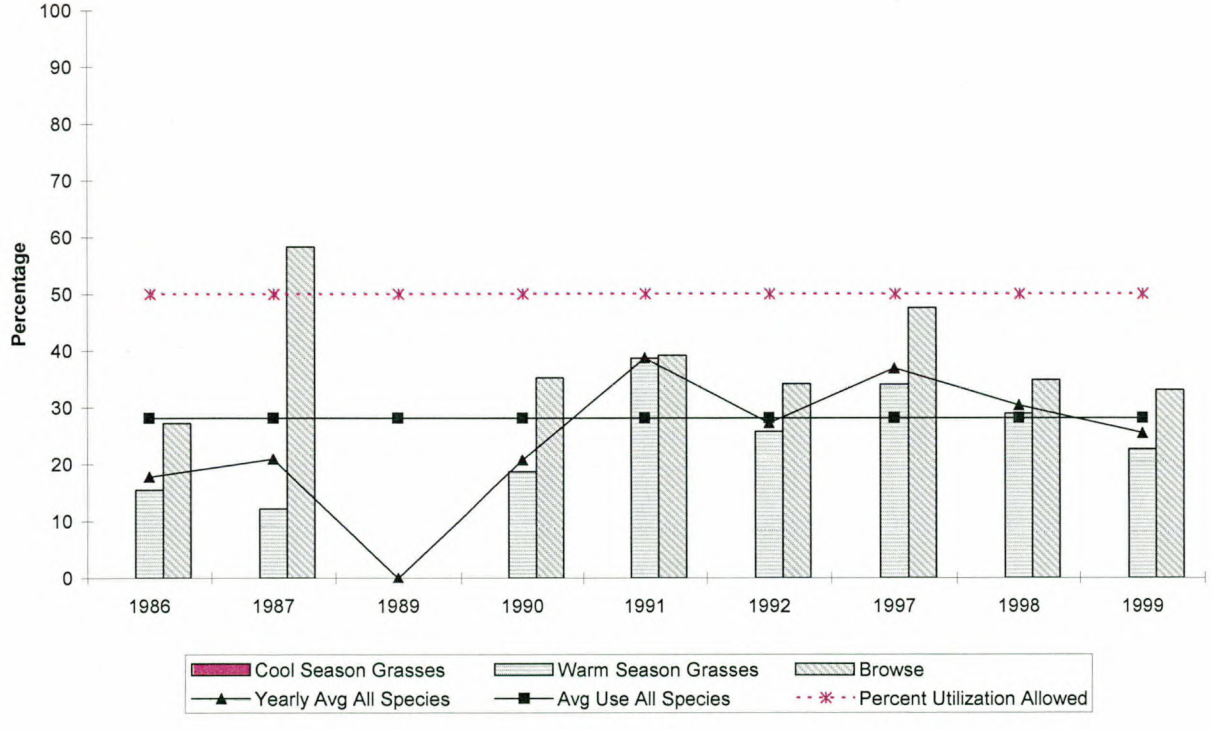
Allotment: MAINSTREET **Pasture: DAVE POND** **Key Area: 0**



ARIZONA STRIP				UTILIZATION STUDY SUMMARY																	
ALLOTMENT = MAINSTREET				PASTURE = DOOLITTLE				KEY AREA NUMBER =							Page 1					07/07/03	
Utilization expressed as a percent use for each species as of the particular year read.																					
Cool Season Grasses																					
	1986	1987	1989	1990	1991	1992	1997	1998	1999												AVG
CSGG																					
AVERAGE																					
WARM SEASON GRASSES																					
HIJA	14	13		20	38	25	31	28	25												24
SPCR	19	9		18	38	29	36	27	19												28
BOGR							38														38
BOER		7		15	46	20		34	23												26
WSGG																					
AVERAGE	16	12		19	39	26	34	29	23												26
BROWSE																					
CELA	37	50		35	40	30	48	35	33												37
ATCA	32	59		37	38	40															42
EPNE	20																				20
SSSS																					
AVERAGE	27	58		35	39	34	48	35	33												37
AVG ALL SPEC	18	21		21	39	27	37	30	26												28

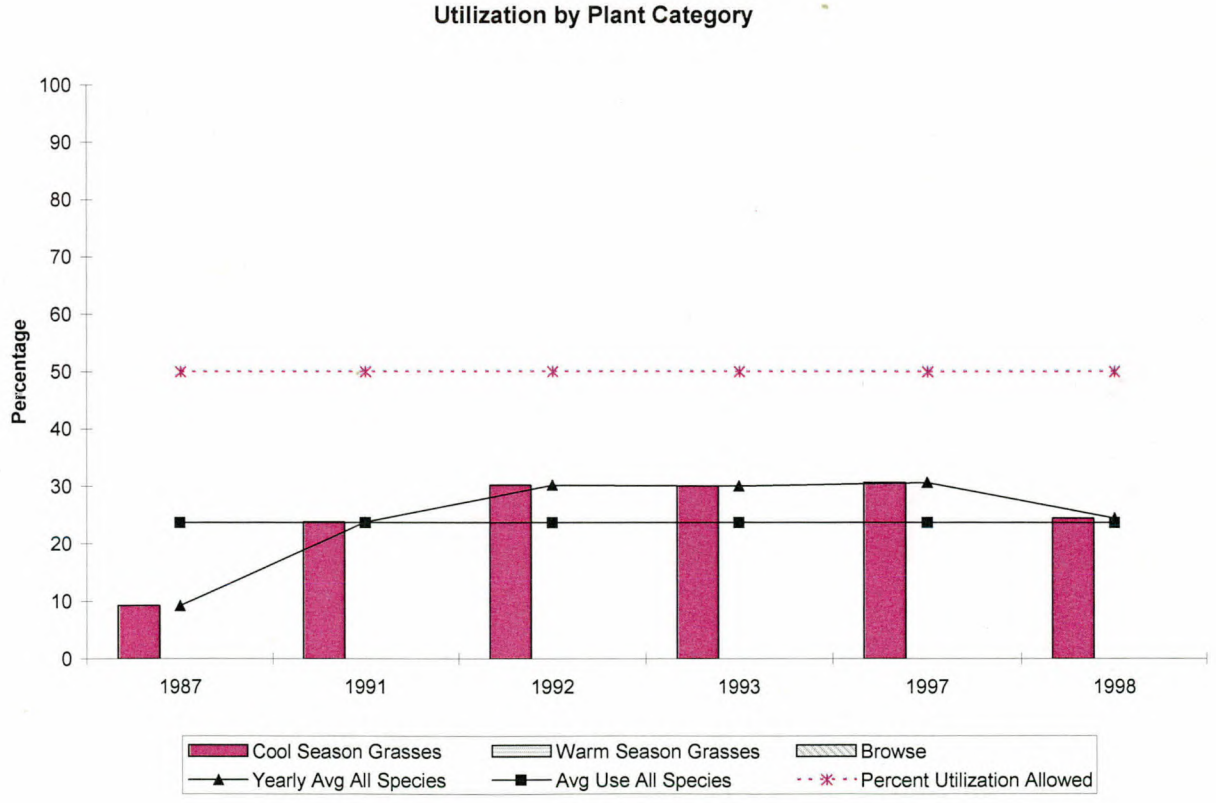
Allotment: MAINSTREET **Pasture: DOOLITTLE** **Key Area: 0**

Utilization by Plant Category



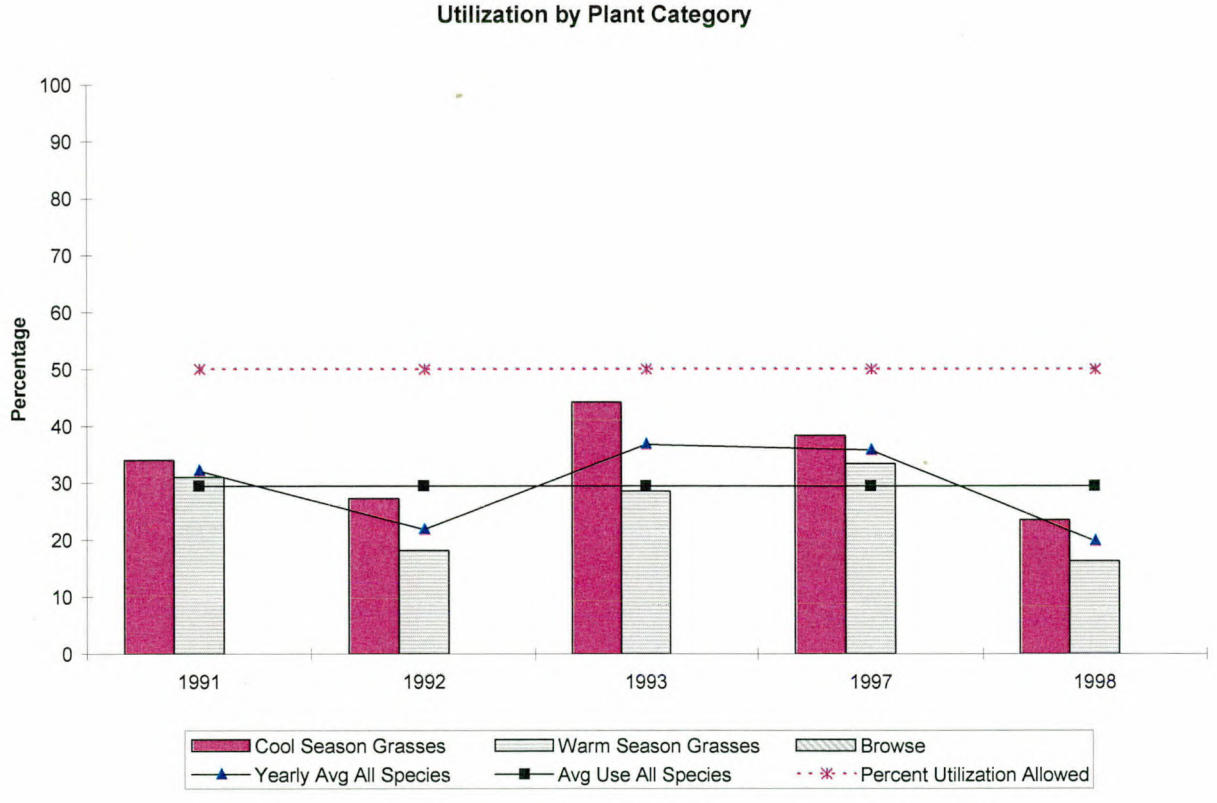
ARIZONA STRIP				UTILIZATION STUDY SUMMARY																	
ALLOTMENT = MAINSTREET				PASTURE = ENGLESTEAD			KEY AREA NUMBER =							Page 1							07/08/03
Utilization expressed as a percent use for each species as of the particular year read.																					
Cool Season Grasses																					
	1987	1991	1992	1993	1997	1998															AVG
ORHY	20	12	28	32	34	29															26
SIHY	7	25	29	28	22	23															22
AGSM	6	29	33	31	36	22															24
CSGG																					
AVERAGE	9	24	30	30	31	24															24
WARM SEASON GRASSES																					
WSGG																					
AVERAGE																					
BROWSE																					
SSSS																					
AVERAGE																					
AVG ALL SPEC	9	24	30	30	31	24															24

Allotment: MAINSTREET **Pasture: ENGLESTEAD** **Key Area: 0**



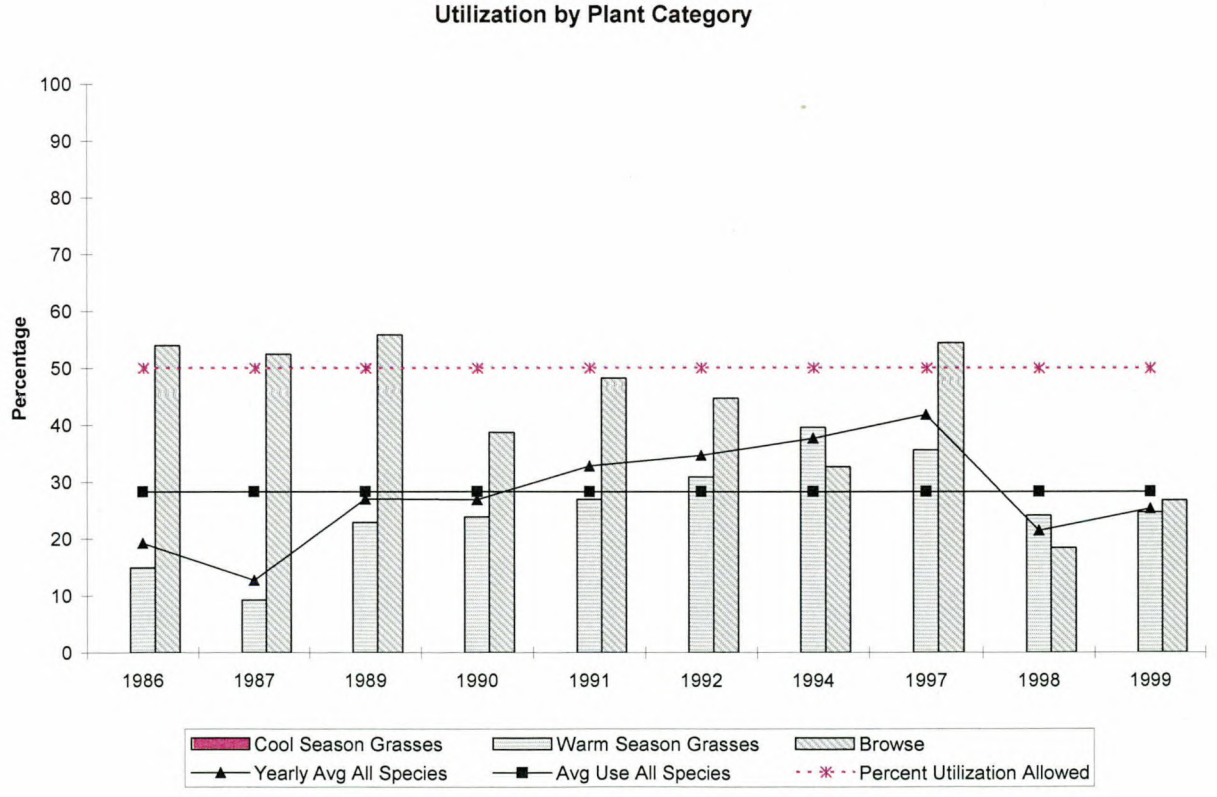
ARIZONA STRIP				UTILIZATION STUDY SUMMARY																	
ALLOTMENT = MAINSTREET				PASTURE = HIDDEN PUMP			KEY AREA NUMBER =							Page 1							07/07/03
Utilization expressed as a percent use for each species as of the particular year read.																					
Cool Season Grasses																					
	1991	1992	1993	1997	1998																AVG
SIHY	34	27	44	38	24																34
CSGG																					
AVERAGE	34	27	44	38	24																34
WARM SEASON GRASSES																					
BOGR	31	18	29	33	16																26
WSGG																					
AVERAGE	31	18	29	33	16																26
BROWSE																					
SSSS																					
AVERAGE																					
AVG ALL SPEC	32	22	37	36	20																29

Allotment: MAINSTREET **Pasture: HIDDEN PUMP** **Key Area: 0**



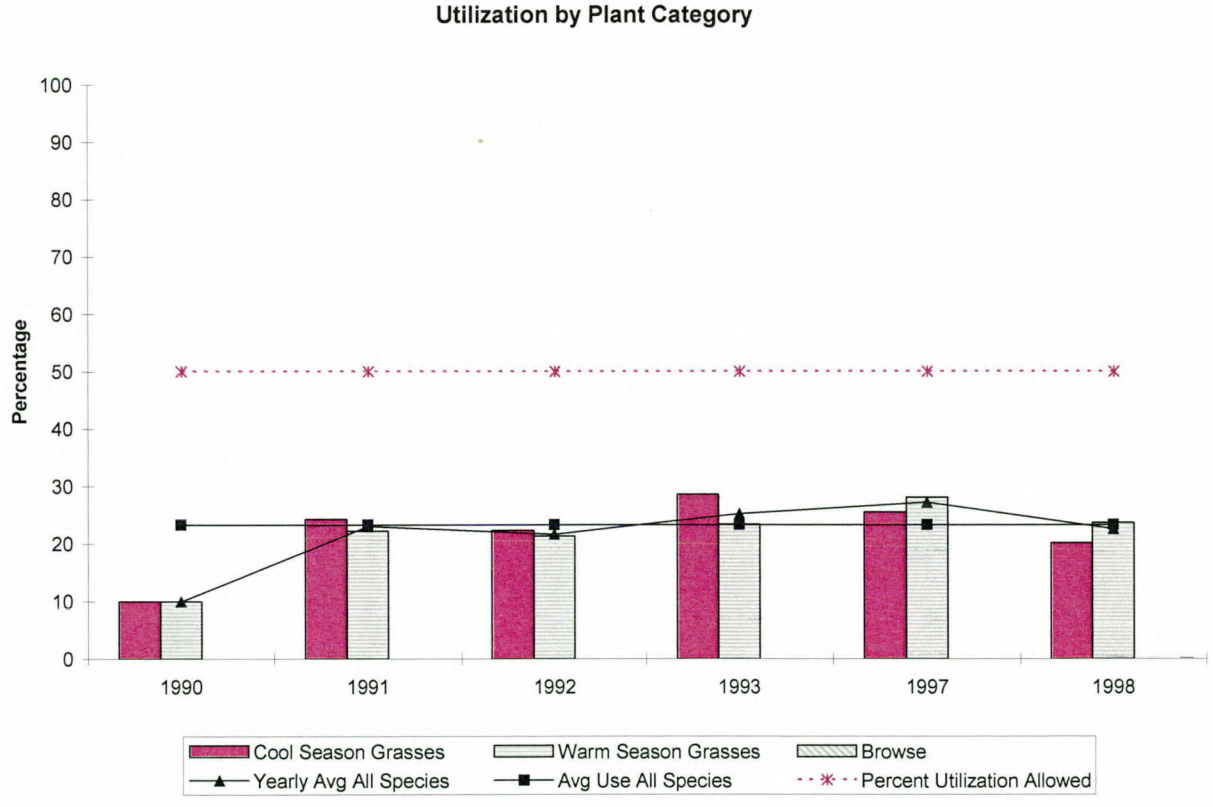
ARIZONA STRIP					UTILIZATION STUDY SUMMARY																
ALLOTMENT = MAINSTREET				PASTURE = HIGLEY				KEY AREA NUMBER =			Page 1									07/07/03	
Utilization expressed as a percent use for each species as of the particular year read.																					
Cool Season Grasses																					
	1986	1987	1989	1990	1991	1992	1994	1997	1998	1999											AVG
CSGG																					
AVERAGE																					
WARM SEASON GRASSES																					
HIJA	14	12	23	27	25	28	39	33	26	26											24
SPCR	17	3	21	18	34	37	43	40	19	20											25
SPAI							38														38
WSGG																					
AVERAGE	15	9	23	24	27	31	40	36	24	25											25
BROWSE																					
CELA	55	53	47	41	47	45	33	49	28	21											40
EPNE	50	50	62	34	50	45		59	16	31											37
SSSS																					
AVERAGE	54	53	56	39	48	45	33	54	18	27											39
AVG ALL SPEC	19	13	27	27	33	35	38	42	22	25											28

Allotment: MAINSTREET **Pasture: HIGLEY** **Key Area: 0**



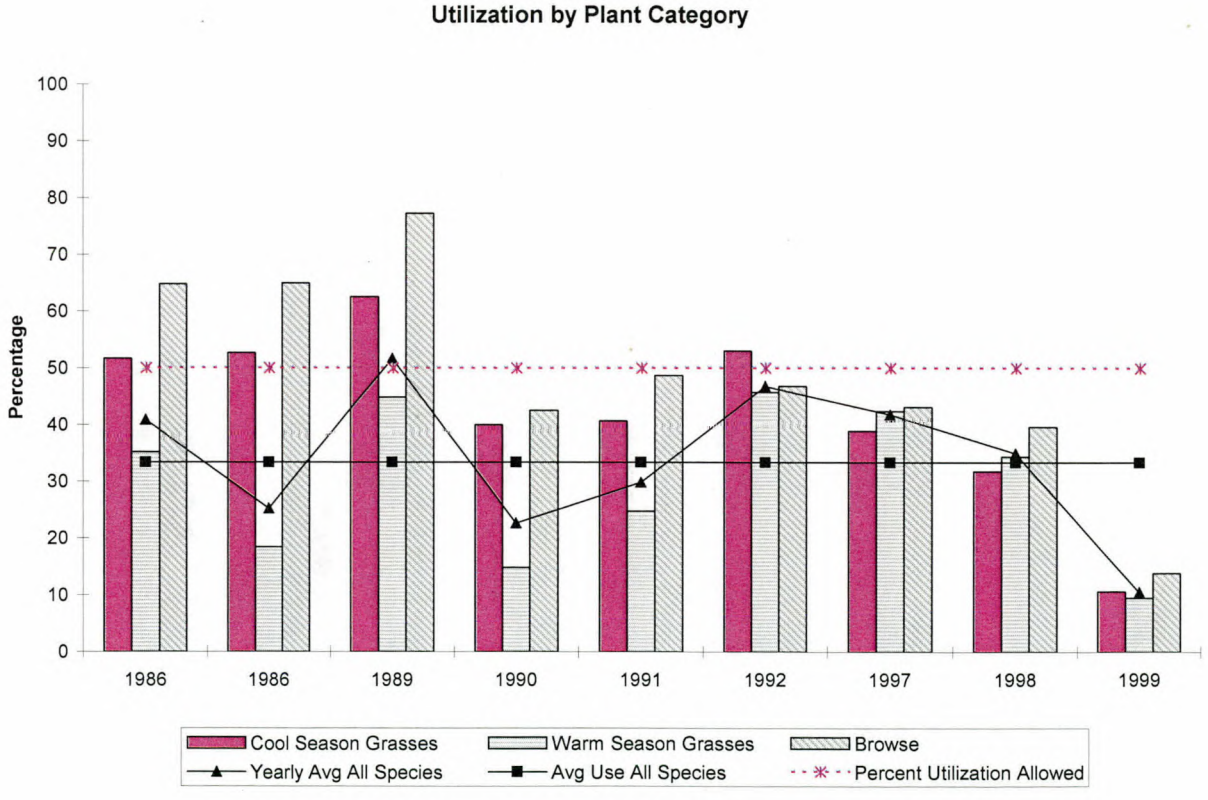
ARIZONA STRIP				UTILIZATION STUDY SUMMARY																	
ALLOTMENT = MAINSTREET				PASTURE = HY POND			KEY AREA NUMBER =						Page 1							07/07/03	
Utilization expressed as a percent use for each species as of the particular year read.																					
Cool Season Grasses																					
	1990	1991	1992	1993	1997	1998															AVG
SIHY	10	24	23	29	26	20															24
STIPA	10	24	19																		18
CSGG																					
AVERAGE	10	24	22	29	26	20															24
WARM SEASON GRASSES																					
HIJA		24	17	19	23	23															21
BOGR	10	21	31	32	33	26															27
BOER		19	18	17	30	21															21
WSGG																					
AVERAGE	10	22	21	23	28	24															23
BROWSE																					
SSSS																					
AVERAGE																					
AVG ALL SPEC	10	23	22	25	27	23															23

Allotment: MAINSTREET **Pasture: HY POND** **Key Area: 0**



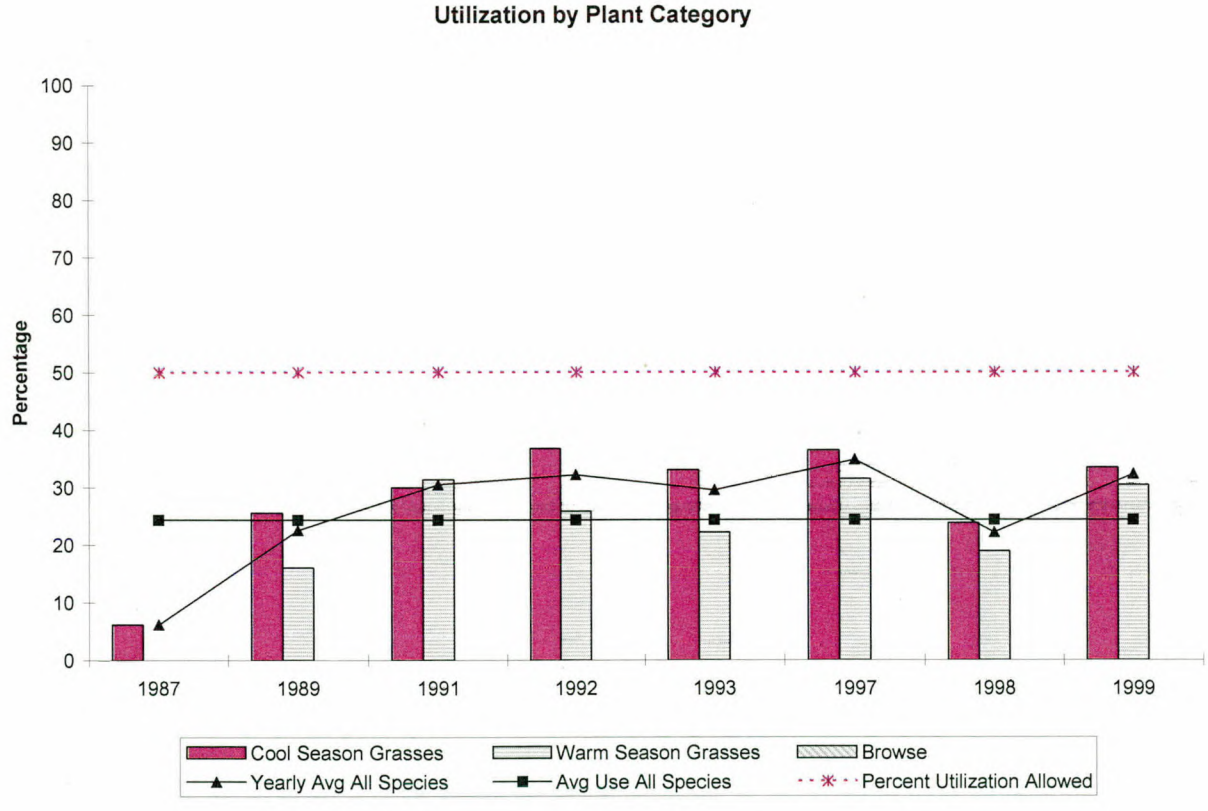
ARIZONA STRIP					UTILIZATION STUDY SUMMARY																
ALLOTMENT = MAINSTREET					PASTURE = KELLER					KEY AREA NUMBER =								Page 1			07/07/03
Utilization expressed as a percent use for each species as of the particular year read.																					
Cool Season Grasses																					
	1986	1986	1989	1990	1991	1992	1997	1998	1999												AVG
ORHY	52	53	63	40	41	53	39	32	11												38
CSGG																					
AVERAGE	52	53	63	40	41	53	39	32	11												38
WARM SEASON GRASSES																					
HIJA	27	13	36	13	23	44	43	33	9												26
SPCR	47	27	55	17	26	48	42	36	10												33
WSGG																					
AVERAGE	35	18	45	15	25	46	42	34	9												30
BROWSE																					
CELA	68	63	70	46	50	48	43	40	14												38
ATCA	63	66	78	42	48	46															55
SSSS																					
AVERAGE	65	65	77	43	49	47	43	40	14												45
AVG ALL SPEC	41	25	52	23	30	47	42	35	11												33

Allotment: MAINSTREET **Pasture: KELLER** **Key Area: 0**



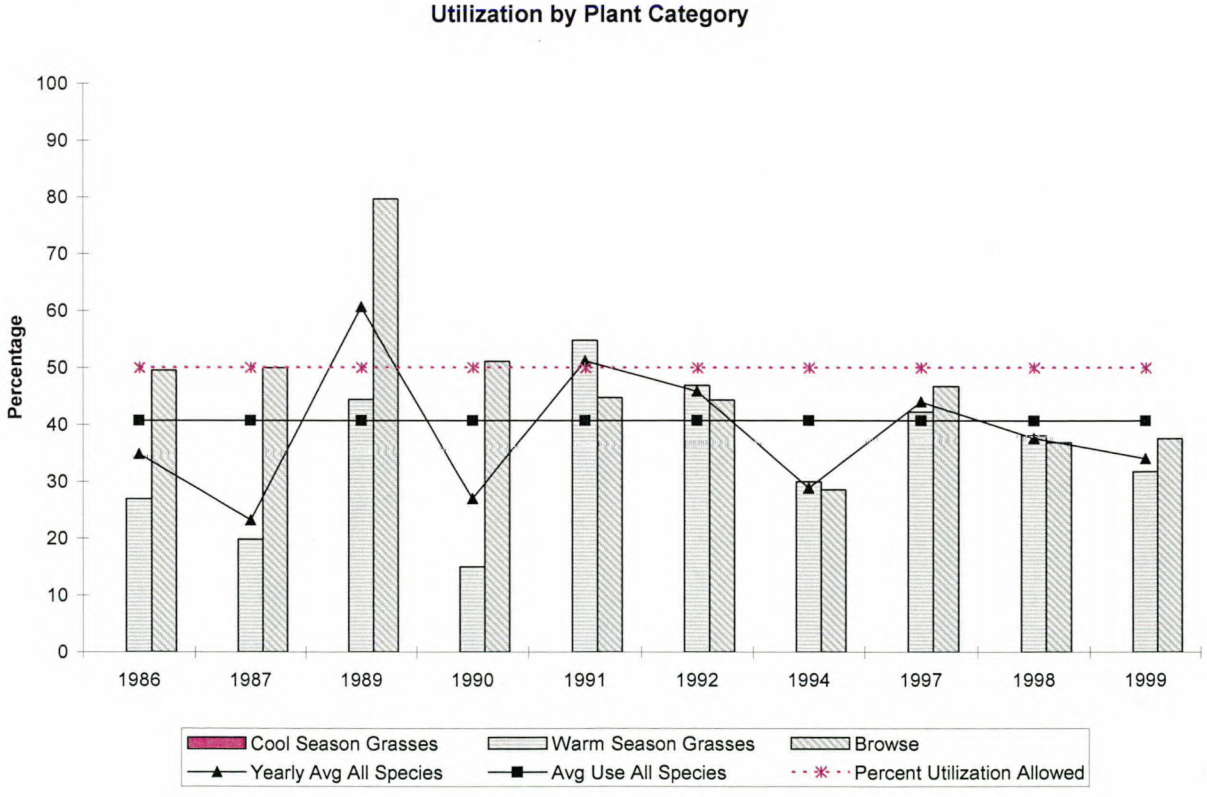
ARIZONA STRIP				UTILIZATION STUDY SUMMARY																	
ALLOTMENT = MAINSTREET				PASTURE = LITTLE JOE					KEY AREA NUMBER =						Page 1					07/07/03
Utilization expressed as a percent use for each species as of the particular year read.																					
Cool Season Grasses																					
	1987	1989	1991	1992	1993	1997	1998	1999													AVG
ORHY	1	29	32	41	32	38	27	33													28
SIHY	7	21	28	31	34	35	21	34													22
STIPA	11																				11
CSGG																					
AVERAGE	6	26	30	37	33	36	24	33													24
WARM SEASON GRASSES																					
HIJA		16	31	26	22	32	19	30													26
WSGG																					
AVERAGE		16	31	26	22	32	19	30													26
BROWSE																					
SSSS																					
AVERAGE																					
AVG ALL SPEC	6	23	31	32	30	35	22	32													24

Allotment: MAINSTREET **Pasture: LITTLE JOE** **Key Area: 0**



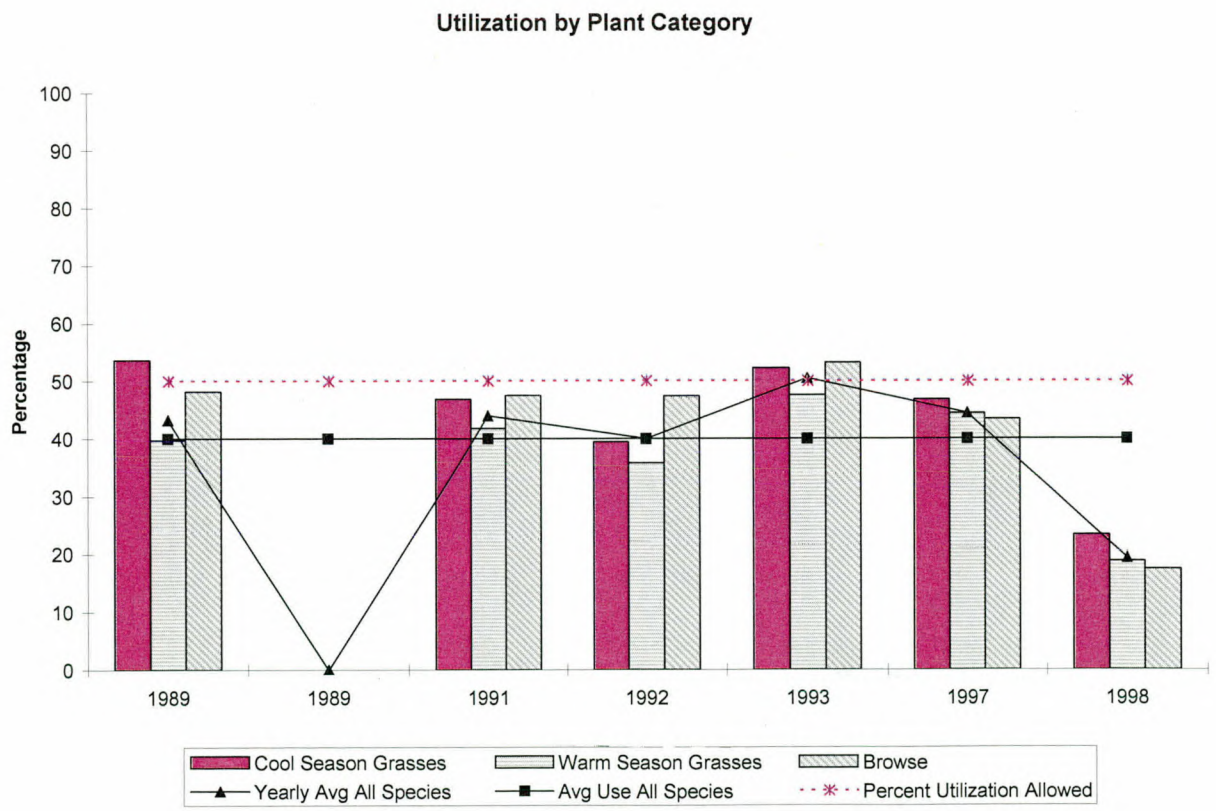
ARIZONA STRIP					UTILIZATION STUDY SUMMARY																
ALLOTMENT = MAINSTREET					PASTURE = MARCHANT						KEY AREA NUMBER =						Page 1				07/07/03
Utilization expressed as a percent use for each species as of the particular year read.																					
Cool Season Grasses																					
	1986	1987	1989	1990	1991	1992	1994	1997	1998	1999											AVG
CSGG																					
AVERAGE																					
WARM SEASON GRASSES																					
HIJA	24	19	40	15	56	48	30	42	37	31											35
SPCR	37	24	49	19	50	43		44	40	32											39
WSGG																					
AVERAGE	27	20	44	15	55	47	30	42	38	32											36
BROWSE																					
ATCA	52	55	83	51	45	42	29	48	44	42											52
EPNE	47	46	73		45	47		44	28	33											44
SSSS																					
AVERAGE	50	50	80	51	45	44	29	47	37	38											49
AVG ALL SPEC	35	23	61	27	51	46	29	44	38	34											41

Allotment: MAINSTREET **Pasture: MARCHANT** **Key Area: 0**



ARIZONA STRIP				UTILIZATION STUDY SUMMARY																
ALLOTMENT = MAINSTREET				PASTURE = MUD HOLE				KEY AREA NUMBER =							Page 1					07/08/03
Utilization expressed as a percent use for each species as of the particular year read.																				
Cool Season Grasses																				
	1989	1989	1991	1992	1993	1997	1998													AVG
ORHY	54		47	39	52	47	23													41
CSGG																				
AVERAGE	54		47	39	52	47	23													41
WARM SEASON GRASSES																				
HIJA	28		39	35	49	42	17													34
SPCR	52		46	37	45	49	21													43
WSGG																				
AVERAGE	40		42	36	48	44	19													38
BROWSE																				
CELA	46		46	45	54	43	17													39
ATCA	50		48	49	53															50
SSSS																				
AVERAGE	48		48	47	53	43	17													43
AVG ALL SPEC	43		44	40	51	45	19													40

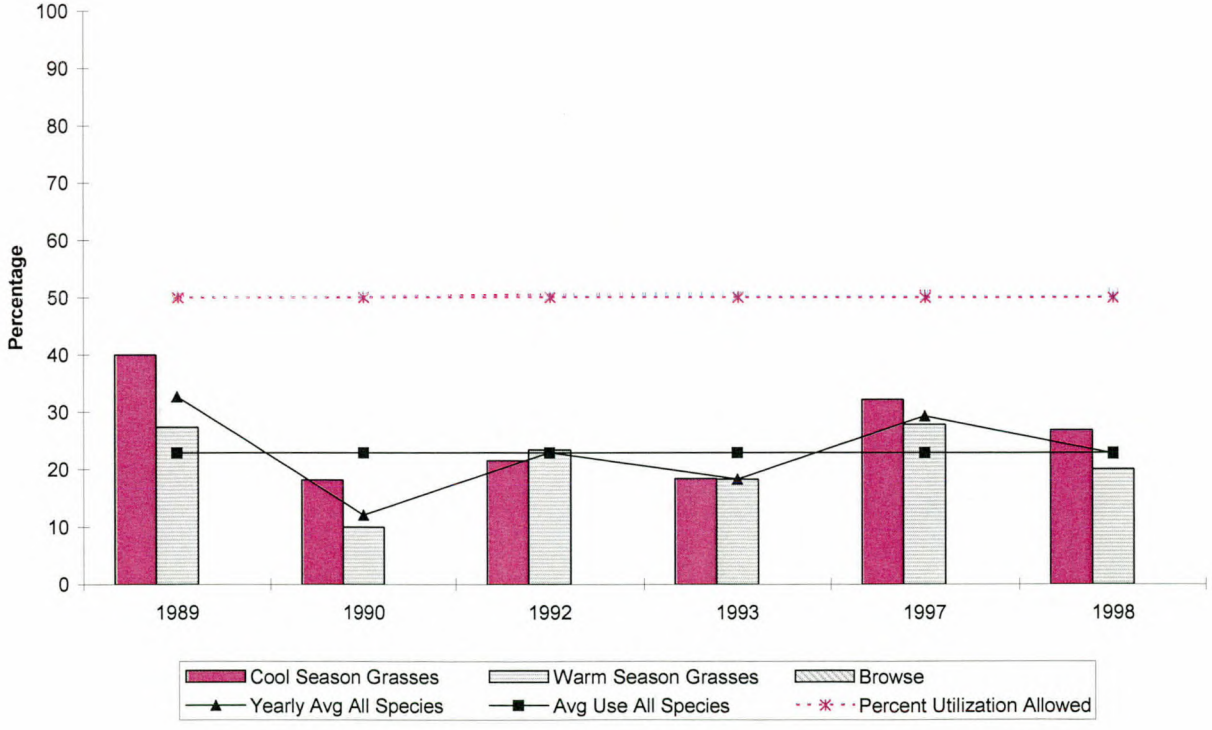
Allotment: MAINSTREET **Pasture: MUD HOLE** **Key Area: 0**



ARIZONA STRIP				UTILIZATION STUDY SUMMARY																	
ALLOTMENT = MAINSTREET				PASTURE = MUSTANG			KEY AREA NUMBER =							Page 1							07/07/03
Utilization expressed as a percent use for each species as of the particular year read.																					
Cool Season Grasses																					
	1989	1990	1992	1993	1997	1998															AVG
ORHY	53	25	31	18	31	24															30
SIHY	14	10	11	19	33	30															23
CSGG																					
AVERAGE	40	18	22	18	32	27															27
WARM SEASON GRASSES																					
HIJA	22	10	28	23	27	26															23
BOGR	32	10	15	11	28	11															17
WSGG																					
AVERAGE	27	10	23	18	28	20															21
BROWSE																					
SSSS																					
AVERAGE																					
AVG ALL SPEC	33	12	23	18	29	23															23

Allotment: MAINSTREET **Pasture: MUSTANG** **Key Area: 0**

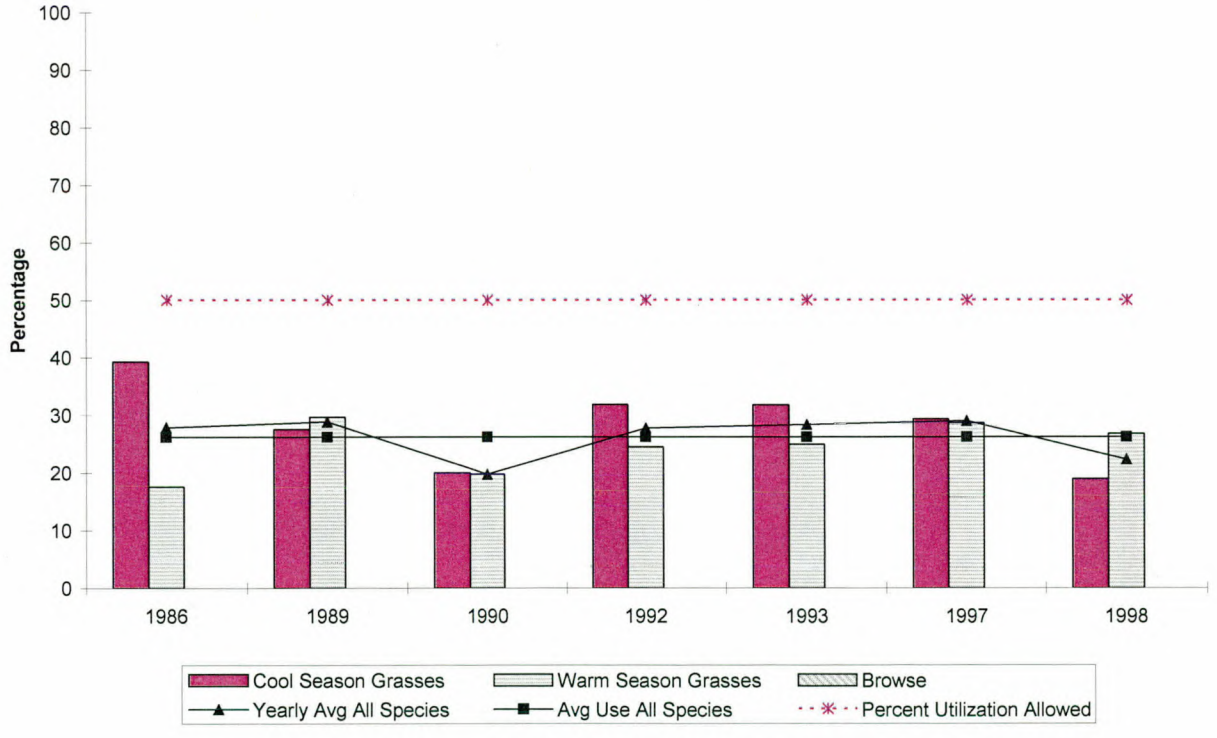
Utilization by Plant Category



ARIZONA STRIP				UTILIZATION STUDY SUMMARY																	
ALLOTMENT = MAINSTREET				PASTURE = NEW SPRING				KEY AREA NUMBER =							Page 1						07/07/03
Utilization expressed as a percent use for each species as of the particular year read.																					
Cool Season Grasses																					
	1986	1989	1990	1992	1993	1997	1998														AVG
ORHY	37	43	35	45	36	19	8														28
SIHY	42	23	10	28	30	33	24														29
AGROPY		20																			20
CSGG																					
AVERAGE	39	28	20	32	32	29	19														28
WARM SEASON GRASSES																					
HIJA	18	30	20	25	25	29	27														25
WSGG																					
AVERAGE	18	30	20	25	25	29	27														25
BROWSE																					
SSSS																					
AVERAGE																					
AVG ALL SPEC	28	29	20	28	28	29	22														26

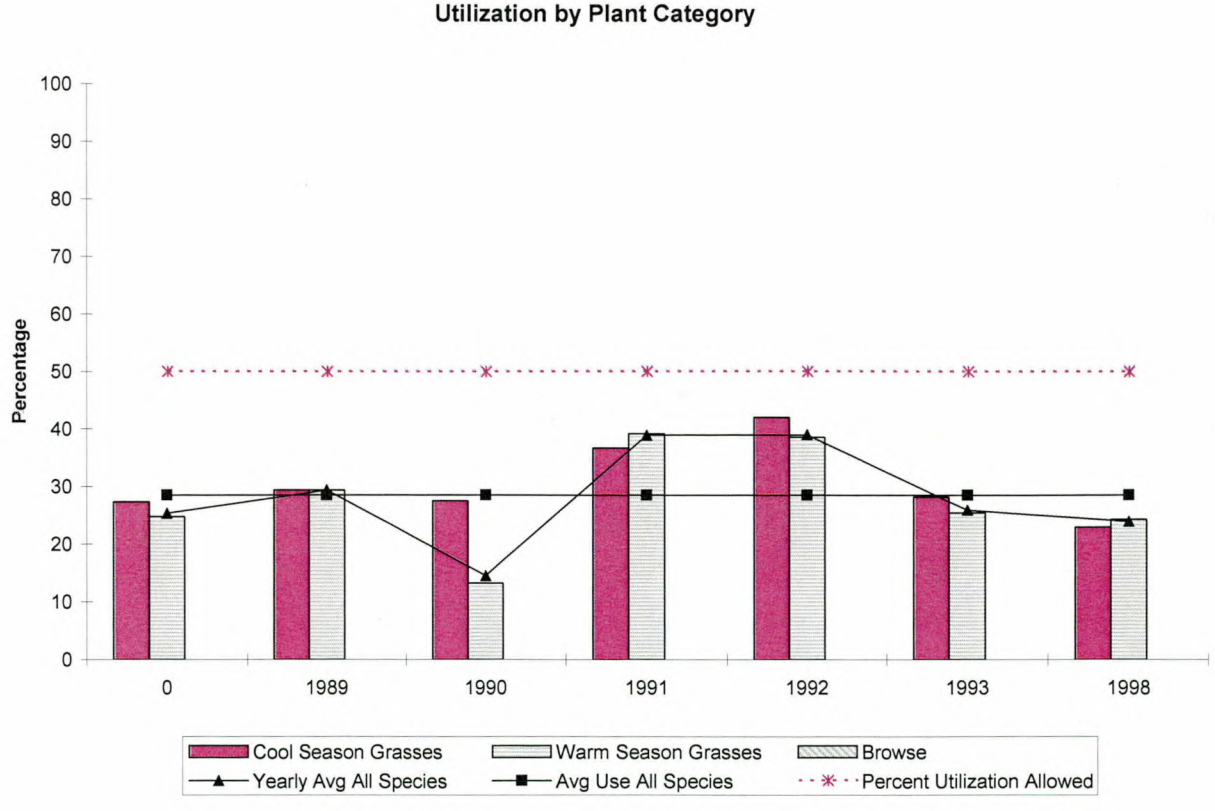
Allotment: MAINSTREET **Pasture: NEW SPRING** **Key Area: 0**

Utilization by Plant Category



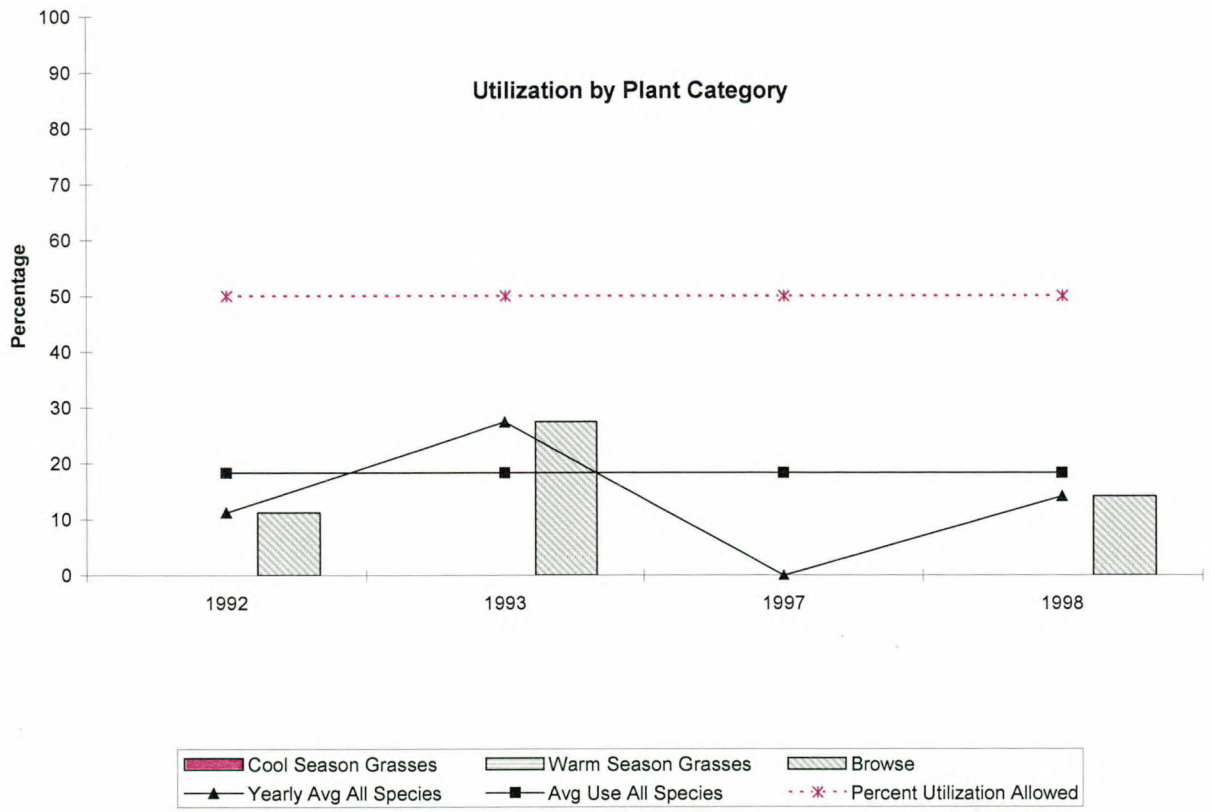
ARIZONA STRIP				UTILIZATION STUDY SUMMARY																		
ALLOTMENT = MAINSTREET				PASTURE = POLYG				KEY AREA NUMBER =								Page 1						07/07/03
Utilization expressed as a percent use for each species as of the particular year read.																						
Cool Season Grasses																						
		1989	1990	1991	1992	1993	1998															AVG
ORHY	27			37	42	28	23															29
STIPA		29	28																			29
CSGG																						
AVERAGE	27	29	28	37	42	28	23															29
WARM SEASON GRASSES																						
HIJA	22	21	10	43	35	25	26															28
SPCR	27	47	38	44	43	33	29															37
BOGR		28	11																			18
BOER	25			35	39	22	20															28
WSGG																						
AVERAGE	25	29	13	39	39	25	24															28
BROWSE																						
SSSS																						
AVERAGE																						
AVG ALL SPEC	25	29	15	39	39	26	24															29

Allotment: MAINSTREET **Pasture: POLYG** **Key Area: 0**



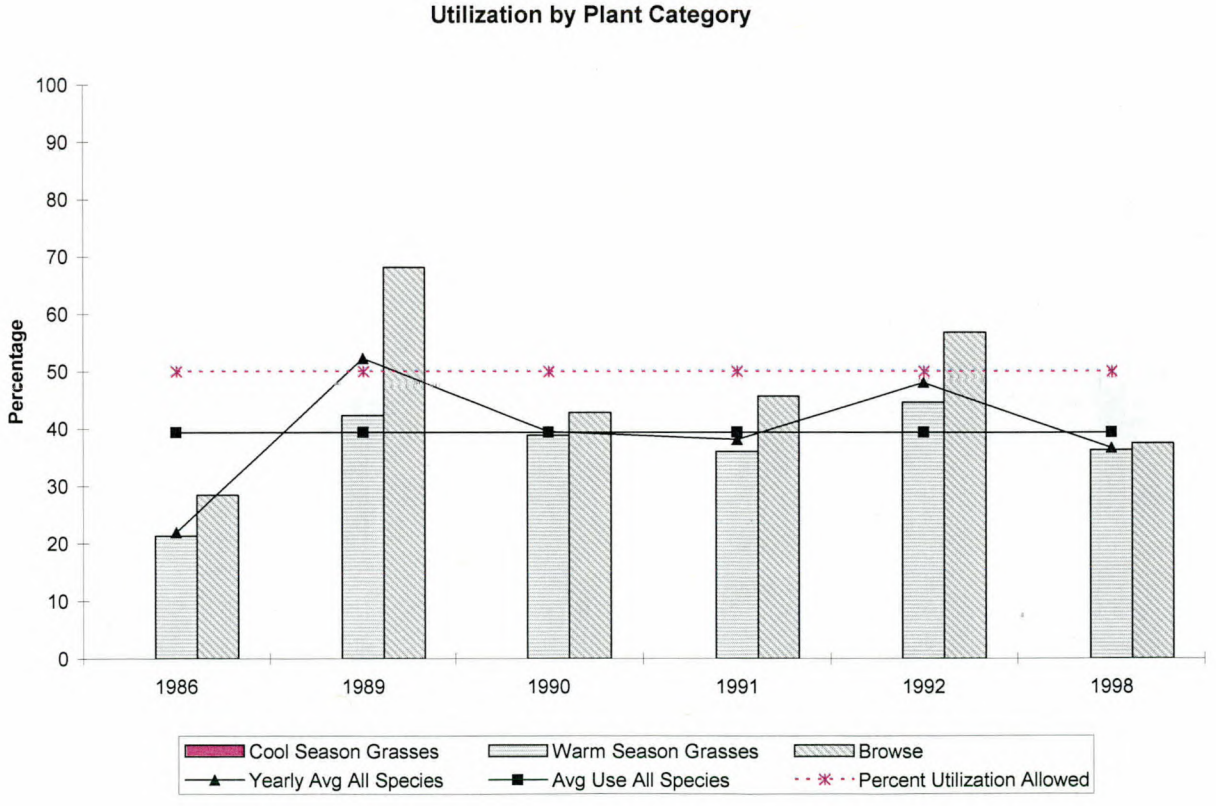
ARIZONA STRIP				UTILIZATION STUDY SUMMARY																	
ALLOTMENT = MAINSTREET				PASTURE = POVERTY MT				KEY AREA NUMBER =				Page 1								07/07/03	
Utilization expressed as a percent use for each species as of the particular year read.																					
Cool Season Grasses																					
	1992	1993	1997	1998																	AVG
CSGG																					
AVERAGE																					
WARM SEASON GRASSES																					
WSGG																					
AVERAGE																					
BROWSE																					
EPNE	11	24		10																	15
COME	11	29		20																	21
SSSS																					
AVERAGE	11	27		14																	18
AVG ALL SPEC	11	27		14																	18

Allotment: MAINSTREET **Pasture: POVERTY MT** **Key Area: 0**



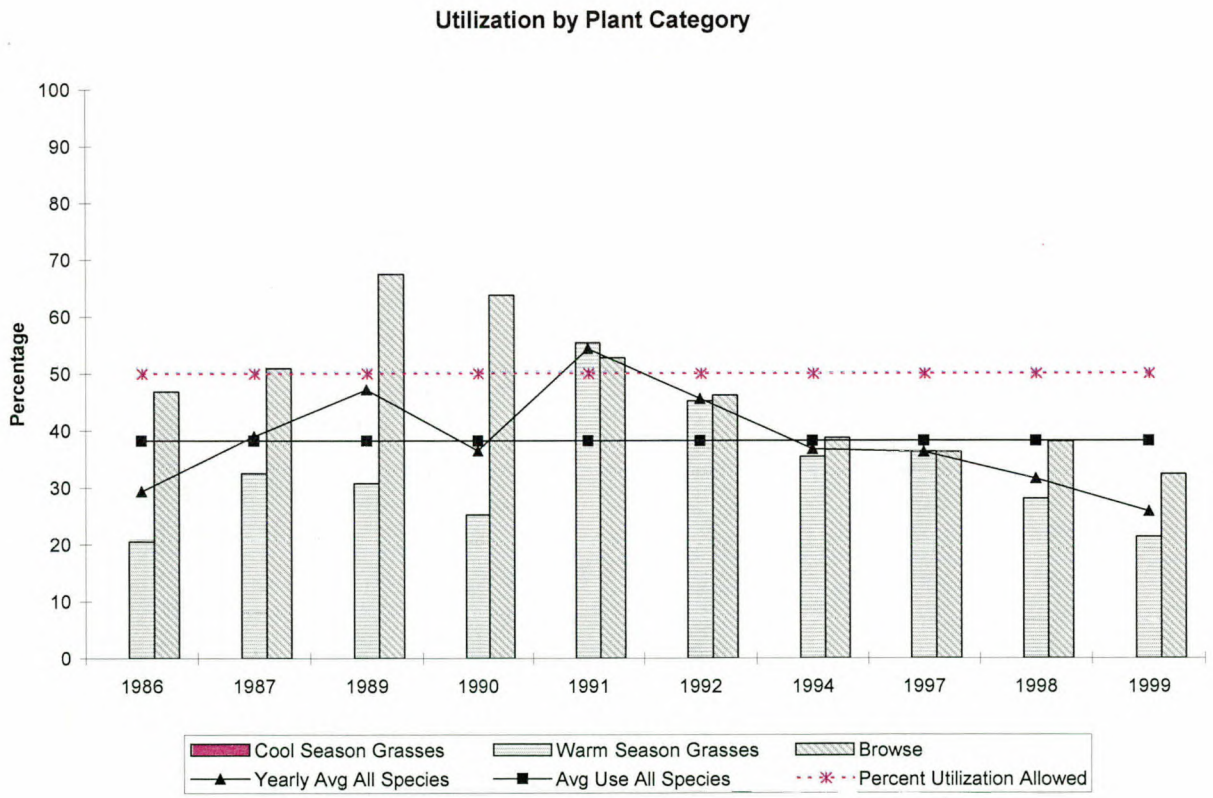
ARIZONA STRIP				UTILIZATION STUDY SUMMARY																	
ALLOTMENT = MAINSTREET				PASTURE = ROSENBERRY			KEY AREA NUMBER =							Page 1							07/07/03
Utilization expressed as a percent use for each species as of the particular year read.																					
Cool Season Grasses																					
	1986	1989	1990	1991	1992	1998															AVG
CSGG																					
AVERAGE																					
WARM SEASON GRASSES																					
HIJA	15	38	36	32	35	35															32
SPCR	28	48	45	44	55	39															42
WSGG																					
AVERAGE	21	42	39	36	45	36															36
BROWSE																					
CELA		74	55	50	58																66
ATCA	45	72	66	50	60	25															50
EPNE	21	57	34	44	56	45															45
SSSS																					
AVERAGE	28	68	43	46	57	38															51
AVG ALL SPEC	22	52	40	38	48	37															39

Allotment: MAINSTREET **Pasture: ROSENBERRY** **Key Area: 0**



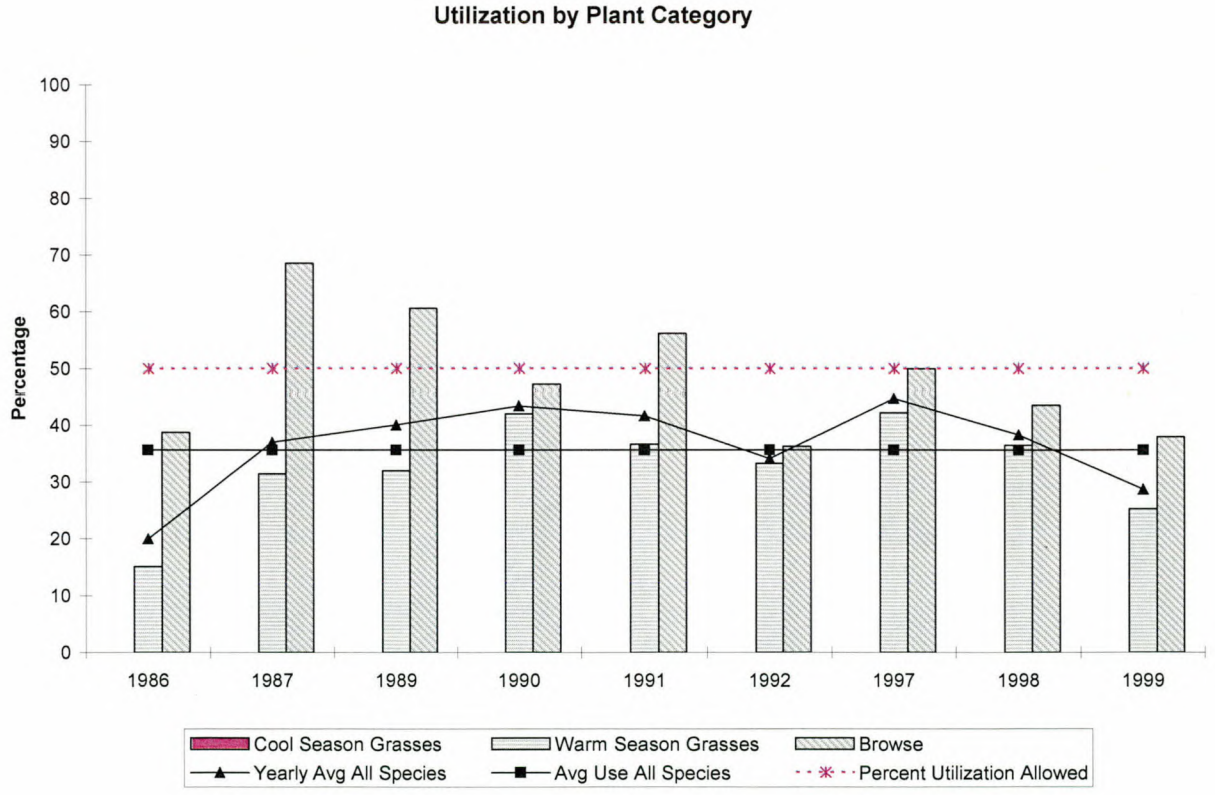
ARIZONA STRIP					UTILIZATION STUDY SUMMARY																
ALLOTMENT = MAINSTREET				PASTURE = ROUND POND				KEY AREA NUMBER =			Page 1									07/08/03	
Utilization expressed as a percent use for each species as of the particular year read.																					
Cool Season Grasses																					
	1986	1987	1989	1990	1991	1992	1994	1997	1998	1999											AVG
CSGG																					
AVERAGE																					
WARM SEASON GRASSES																					
HIJA	29	60	42	30	56	47	34	33	31	20											36
SPCR	17	26	23	20	55	43	38	42	24	23											30
WSGG																					
AVERAGE	21	33	31	25	55	45	35	36	28	21											33
BROWSE																					
CELA	51		66																		54
ATCA	45	64	69	68	47	47	35	34	40	31											50
EPNE	41	42	58	50	56	45	41	38	36	34											43
SSSS																					
AVERAGE	47	51	68	64	53	46	39	36	38	32											47
AVG ALL SPEC	29	39	47	37	54	46	37	36	32	26											38

Allotment: MAINSTREET **Pasture: ROUND POND** **Key Area: 0**



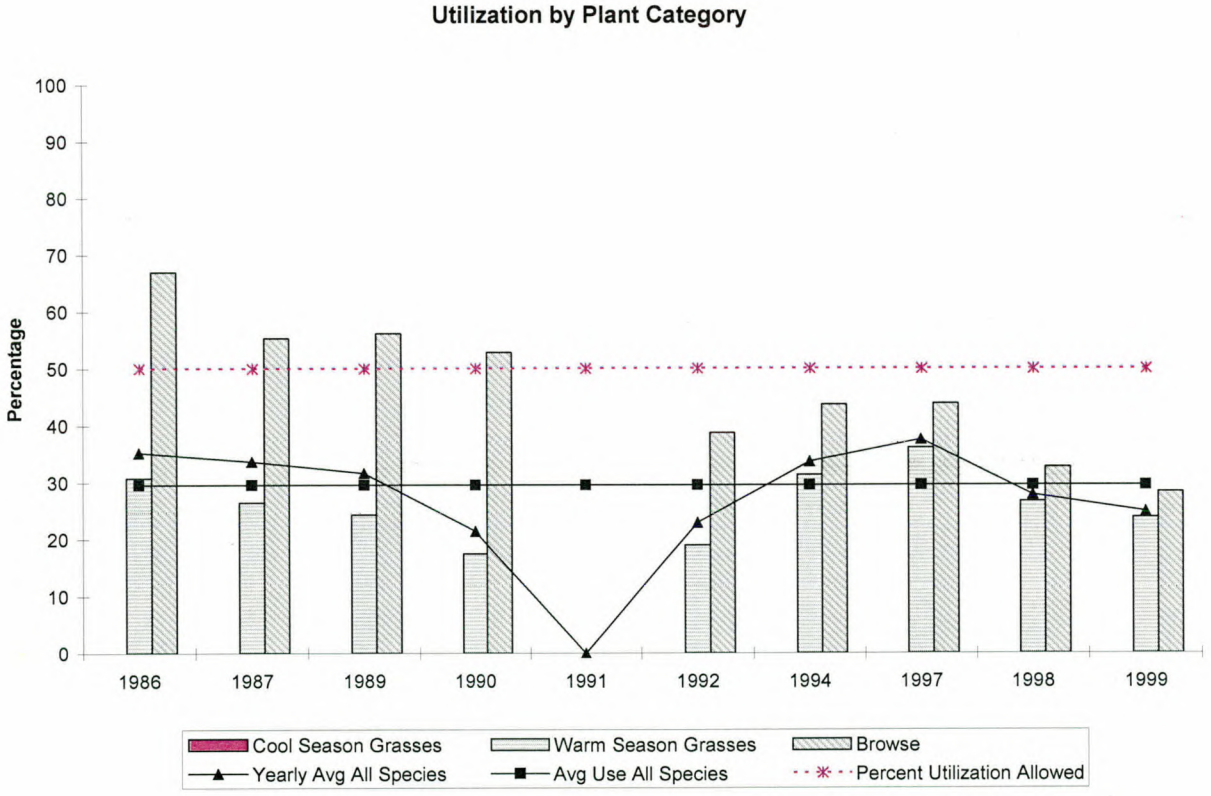
ARIZONA STRIP					UTILIZATION STUDY SUMMARY																
ALLOTMENT = MAINSTREET				PASTURE = SALARATUS			KEY AREA NUMBER =				Page 1									07/08/03	
Utilization expressed as a percent use for each species as of the particular year read.																					
Cool Season Grasses																					
	1986	1987	1989	1990	1991	1992	1997	1998	1999												AVG
CSGG																					
AVERAGE																					
WARM SEASON GRASSES																					
HIJA	15	23	28	42	36	31	38	35	28												30
SPCR	15	35	32	41	38	37		38	21												29
BOER		49	37	44			49	41	27												42
WSGG																					
AVERAGE	15	32	32	42	37	33	42	37	25												32
BROWSE																					
CELA	35	68	59	50	61	32	50	44	38												46
ATCA	30	70	63	45	50	42															51
EPNE	42																				42
SSSS																					
AVERAGE	39	69	61	47	56	36	50	44	38												47
AVG ALL SPEC	20	37	40	43	42	34	45	38	29												36

Allotment: MAINSTREET **Pasture: SALARATUS** **Key Area: 0**



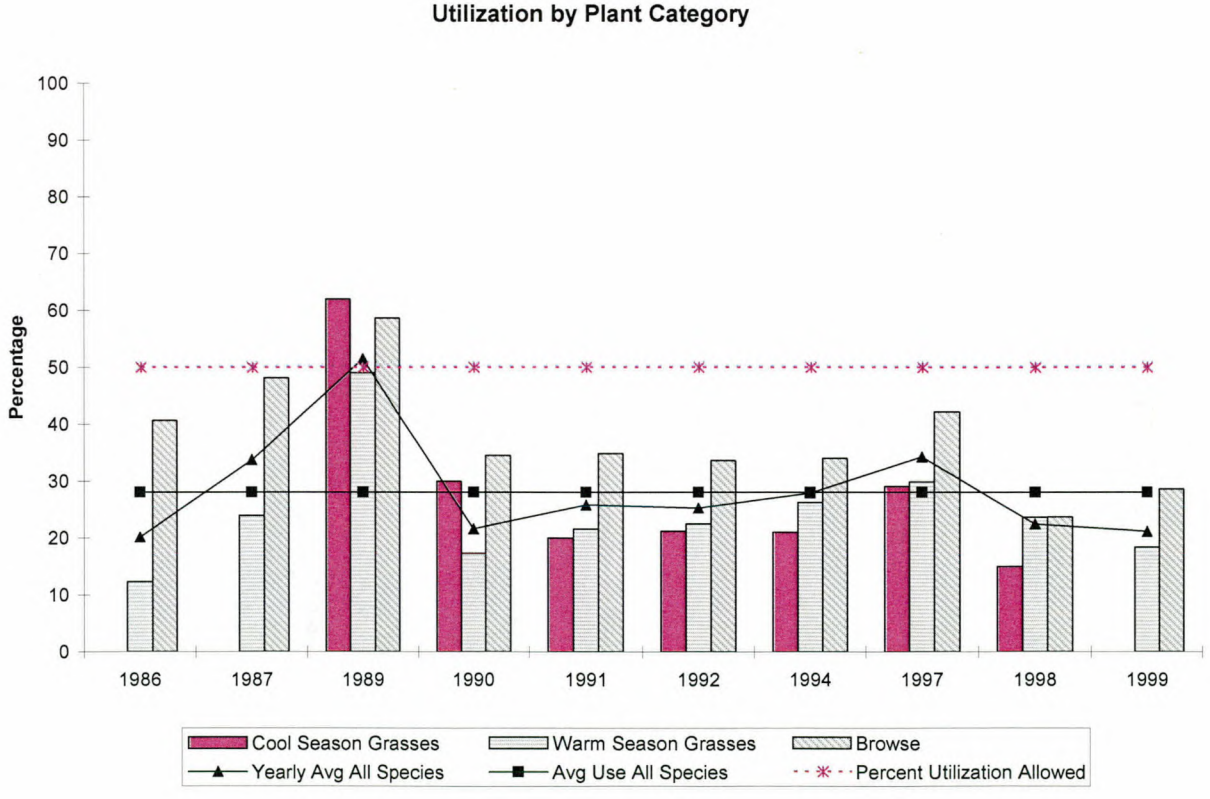
ARIZONA STRIP					UTILIZATION STUDY SUMMARY																
ALLOTMENT = MAINSTREET				PASTURE = SOUTH CECIL				KEY AREA NUMBER =				Page 1								07/08/03	
Utilization expressed as a percent use for each species as of the particular year read.																					
Cool Season Grasses																					
	1986	1987	1989	1990	1991	1992	1994	1997	1998	1999											AVG
CSGG																					
AVERAGE																					
WARM SEASON GRASSES																					
HIJA	28	22	26	10		13	35	38	30	25											26
SPCR	42	27	27	21		19	29	38	25	24											28
BOER	23	44	18	21		26	28	33	23	21											25
WSGG																					
AVERAGE	31	26	24	17		19	31	36	27	24											26
BROWSE																					
CELA	80	63	70	53		41	50	44	33												46
ATCA		53	54			38	39			28											40
EPNE	61																				61
SSSS																					
AVERAGE	67	55	56	53		39	44	44	33	28											44
AVG ALL SPEC	35	34	32	21		23	34	38	28	25											30

Allotment: MAINSTREET **Pasture: SOUTH CECIL** **Key Area: 0**



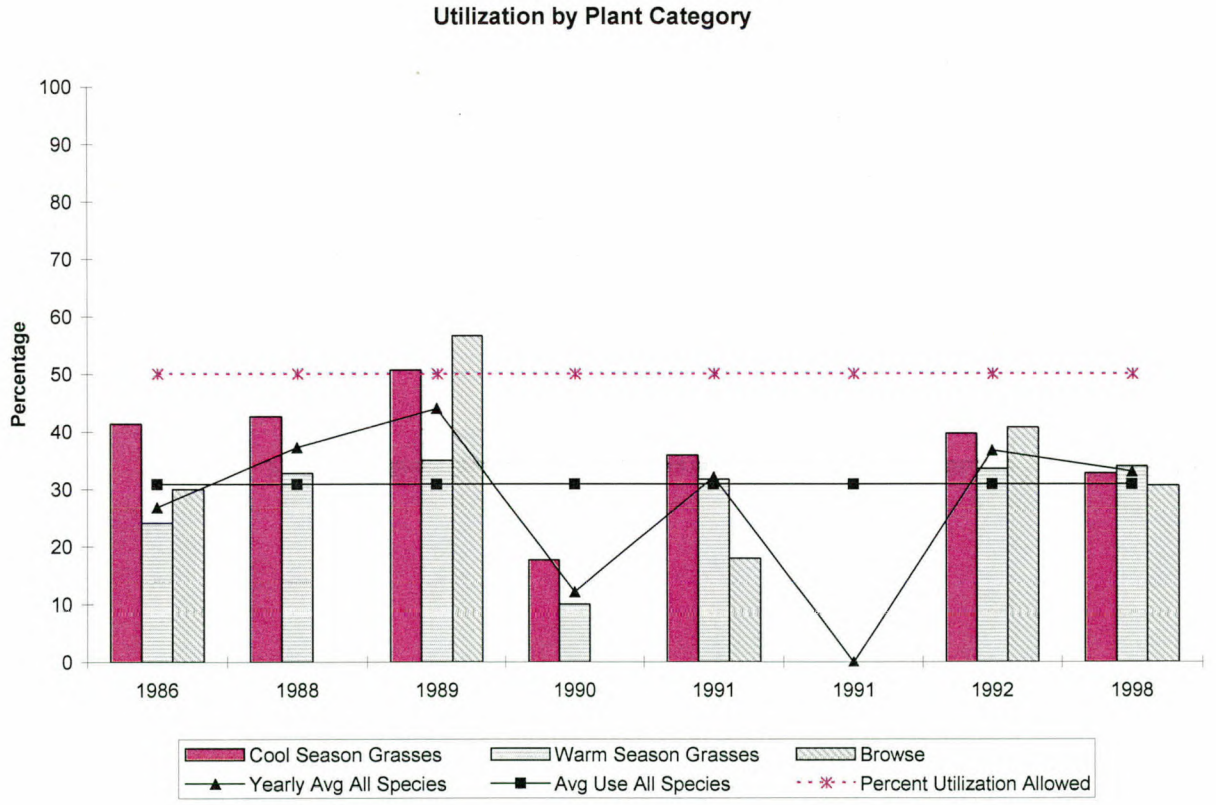
ARIZONA STRIP					UTILIZATION STUDY SUMMARY																
ALLOTMENT = MAINSTREET					PASTURE = SQUARE POND					KEY AREA NUMBER =						Page 1				07/08/03
Utilization expressed as a percent use for each species as of the particular year read.																				
Cool Season Grasses																				
	1986	1987	1989	1990	1991	1992	1994	1997	1998	1999										AVG
STIPA			62	30	20	21	21	29	15											23
CSGG																				
AVERAGE			62	30	20	21	21	29	15											23
WARM SEASON GRASSES																				
HIJA	10	24	52	19	24	21	30	31	27	15										26
SPCR	18	23	49	22	25	25	23	29	20	16										24
BOER			40	14	8	22				27										20
WSGG																				
AVERAGE	12	24	49	17	22	22	26	30	24	18										24
BROWSE																				
CELA	51	61	64	36	32	41	40			29										40
ATCA								42	24											37
EPNE	36	38	55	34	37	26	25													35
SSSS																				
AVERAGE	41	48	59	35	35	34	34	42	24	29										37
AVG ALL SPEC	20	34	52	22	26	25	28	34	22	21										28

Allotment: MAINSTREET **Pasture: SQUARE POND** **Key Area: 0**



ARIZONA STRIP					UTILIZATION STUDY SUMMARY																
ALLOTMENT = MAINSTREET				PASTURE = TWIN TANKS				KEY AREA NUMBER =								Page 1				07/08/03
Utilization expressed as a percent use for each species as of the particular year read.																				
Cool Season Grasses																				
	1986	1988	1989	1990	1991	1991	1992	1998												AVG
ORHY	51	55	53	18	21		34	24												35
SIHY		31	40		43		41	36												39
STIPA	31	47																		42
CSGG																				
AVERAGE	41	43	51	18	36		40	33												37
WARM SEASON GRASSES																				
HIJA	21	33	35	10	32		34	34												26
SPCR	29																			29
WSGG																				
AVERAGE	24	33	35	10	32		34	34												27
BROWSE																				
CELA	30		57		18		41	31												31
SSSS																				
AVERAGE	30		57		18		41	31												31
AVG ALL SPEC	27	37	44	12	32		37	33												31

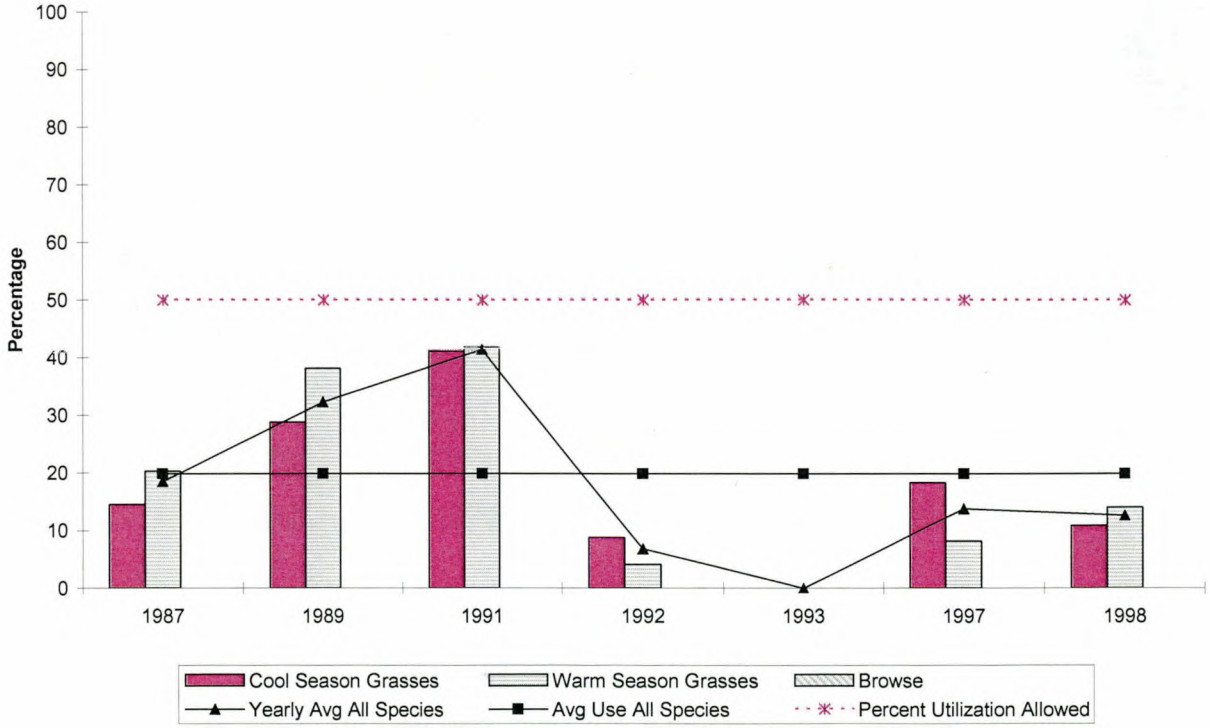
Allotment: MAINSTREET **Pasture: TWIN TANKS** **Key Area: 0**



ARIZONA STRIP					UTILIZATION STUDY SUMMARY																
ALLOTMENT = MAINSTREET					PASTURE = WEST DUTCHMAN			KEY AREA NUMBER =							Page 1						07/08/03
Utilization expressed as a percent use for each species as of the particular year read.																					
Cool Season Grasses																					
	1987	1989	1991	1992	1993	1997	1998														AVG
ORHY	10	32	38	8		18	11														19
SIHY	18	22	45	9																	21
CSGG																					
AVERAGE	14	29	41	9		18	11														20
WARM SEASON GRASSES																					
HIJA	16	29	34	3		6	18														16
SPCR	1	56	53	5		14	12														25
BOGR	29	30	45	5		7	10														22
WSGG																					
AVERAGE	20	38	42	4		8	14														20
BROWSE																					
SSSS																					
AVERAGE																					
AVG ALL SPEC	19	32	41	7		14	13														20

Allotment: MAINSTREET **Pasture: WEST DUTCHMAN** **Key Area: 0**

Utilization by Plant Category



PACE FREQUENCY TREND ANALYSIS

7/10/03	ALLOTMENT: MAINSTREET	PASTURE: CALVING	KEY AREA 1	PAGE NUMBER 1

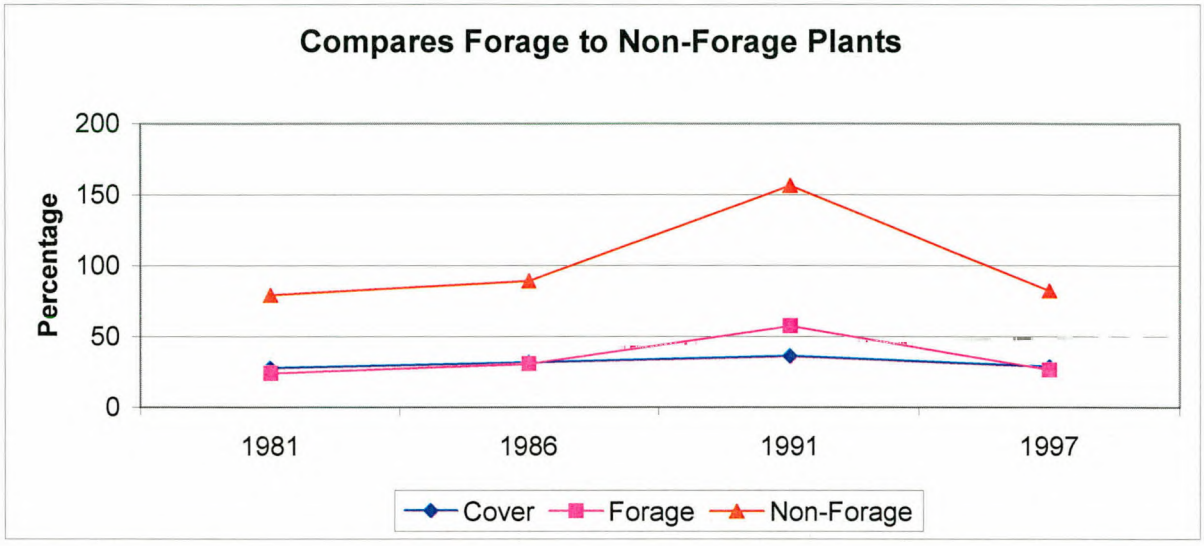
COVER CATEGORIES	YEARS PLOT WERE READ											TREND INDEX COMPARES DATA FROM THE YEAR READ BACK TO BASE YEAR TO DETERMINE INDEX (a significant change is more than 10%) BASE YEAR = 1982									
	1981	1986	1991	1997	2000	2003	2006	2009	2012	2015	2018	1986	1991	1997	2000	2003	2006	2009	2012	2015	2018
Bare Ground	73	69	64	72								-6	-12	-1							
Pers Litter	4		1	2									-72	-43							
Litter	17	25	26	19								46	53	11							
Rock	1	1	1	2								0	93	298							
Live Vegetation	6	6	8	5								0	29	-17							
% Ground Cover	27	32	36	28								16	32	3							
BROWSE																					
CELA	1	1	2	2								-50	93	99							
ATCA2	1	1	1	1								0	-3	-3							
OTHER BROWS																					
TOTALS	2	2	3	3								-25	45	48							
DESIRABLE GRASSES																					
Cool Season																					
SIHY		1	2	2								200	388	400							
Other Cool Season Grass																					
TOTALS		1	2	2								200	388	400							
Warm Season																					
HIJA	22	21	39	15								-5	80	-31							
SPCR		8	14	6								1500	2718	1200							
Other Warm Season Grass																					
TOTALS	22	28	52	21								30	143	-3							

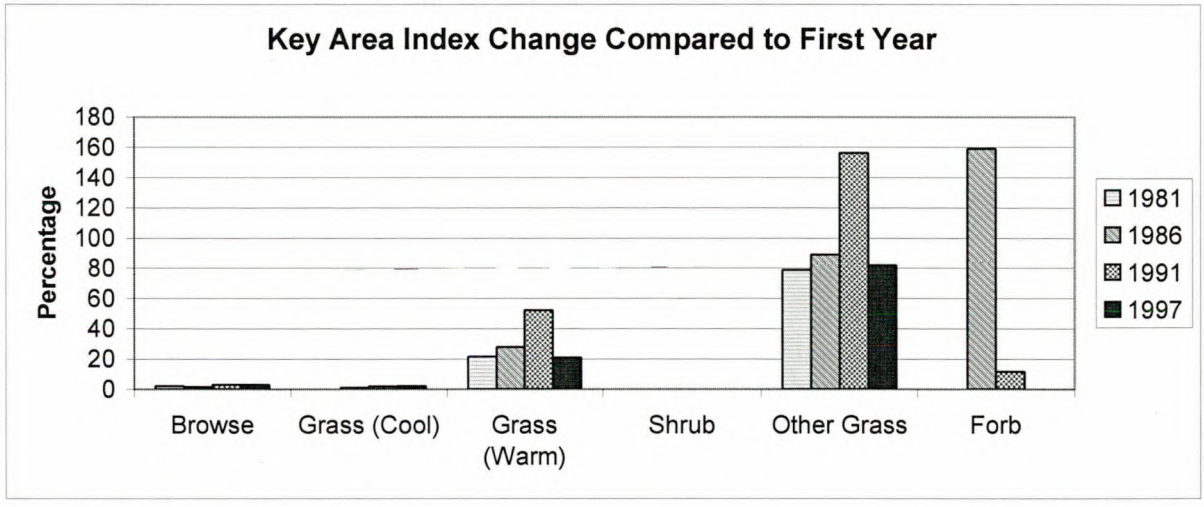
PACE FREQUENCY TREND ANALYSIS CONTINUED PAGE NUMBER 2

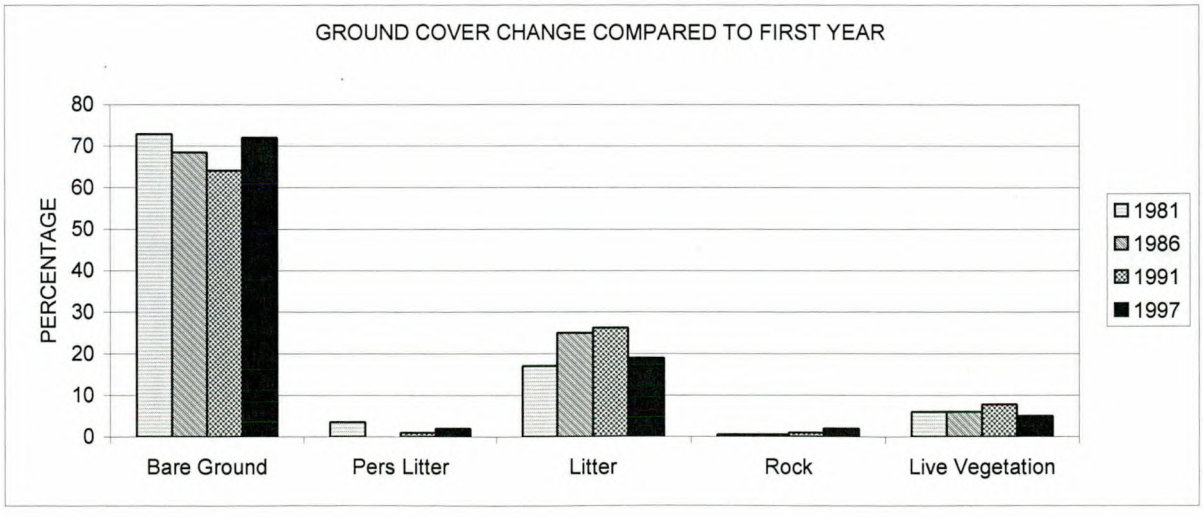
7/10/03	ALLOTMENT MAINSTREET	PASTURE CALVING	KEY AREA 1

COVER CATEGORIES	YEARS PLOT WERE READ											TREND INDEX COMPARES DATA FROM THE YEAR READ BACK TO BASE YEAR TO DETERMINE INDEX (a significant change is more than 10%) BASE YEAR = 1981									
	1981	1986	1991	1997	2000	2003	2006	2009	2012	2015	2018	1986	1991	1997	2000	2003	2006	2009	2012	2015	2018
OTHER SHRUBS																					
OTHERSHRUB																					
TOTALS																					
OTHER GRASSES																					
SCBR	79	89	156	82								13	98	4							
TOTALS	79	89	156	82								13	98	4							
FORBS																					
SAKA		4	9									700	1748								
SPHAE		1	3									100	583								
AAFF		70										13900									
MUSTARD		86										17100									
PPFF																					
TOTALS		159	12									31800	2330								

Allotment: MAINSTREET **Pasture: CALVING** **Key Area: 1**







PACE FREQUENCY TREND ANALYSIS

7/10/03	ALLOTMENT: MAINSTREET	PASTURE: CECIL	KEY AREA 1	PAGE NUMBER 1

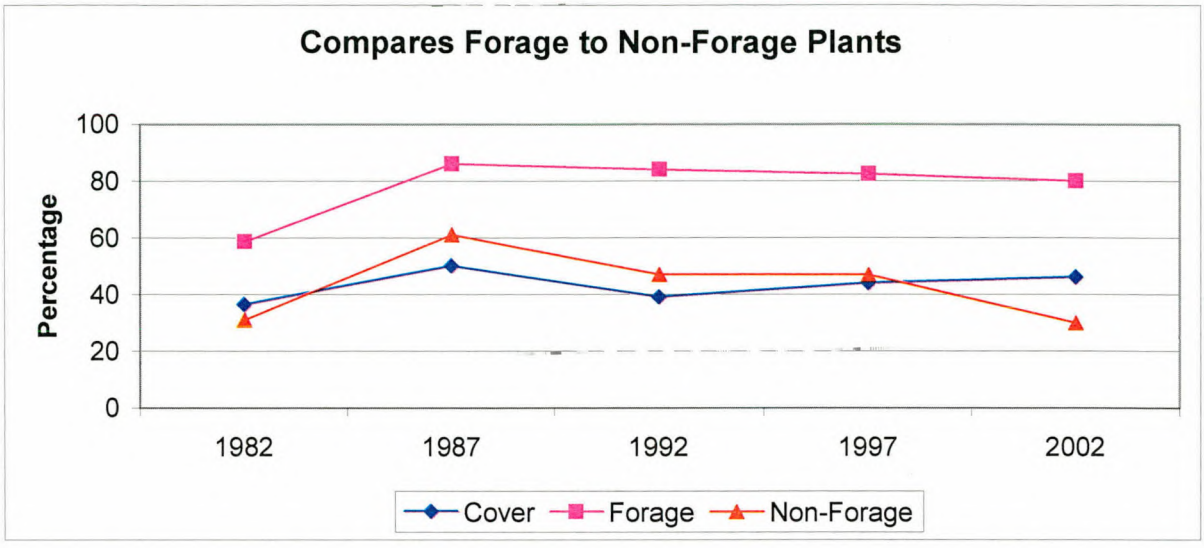
COVER CATEGORIES	YEARS PLOT WERE READ											TREND INDEX: COMPARES DATA FROM THE YEAR READ BACK TO BASE YEAR TO DETERMINE INDEX (a significant change is more than 10%) BASE YEAR = 1982									
	1982	1987	1992	1997	2002	2005	2008	2011	2014	2017	2020	1987	1992	1997	2002	2005	2008	2011	2014	2017	2020
Bare Ground	64	50	61	56	54							-21	-4	-12	-15						
Pers Litter		1	2	2	6							100	300	400	1200						
Litter	32	44	21	27	26							37	-36	-16	-19						
Rock		1	10	8	7							200	2000	1600	1400						
Live Vegetation	4	5	7	7	7							3	60	60	60						
% Ground Cover	36	50	39	44	46							37	7	21	26						
BROWSE																					
CELA	0			1										106							
ATCA2	2	4	4	4	8							44	44	44	230						
EPNE	0			1	2									106	312						
OTHER BROWS																					
TOTALS	3	4	4	6	10							3	3	62	194						
DESIRABLE GRASSES																					
Cool Season																					
Other Cool Season Grass																					
TOTALS																					
Warm Season																					
HIJA	53	67	66	61	46							25	23	14	-14						
SPCR	1	8	10	9	12							449	552	518	724						
BOER	0	8	6	7	12							1548	1033	1342	2372						
Other Warm Season Grass																					
TOTALS	55	83	81	77	70							49	45	39	26						

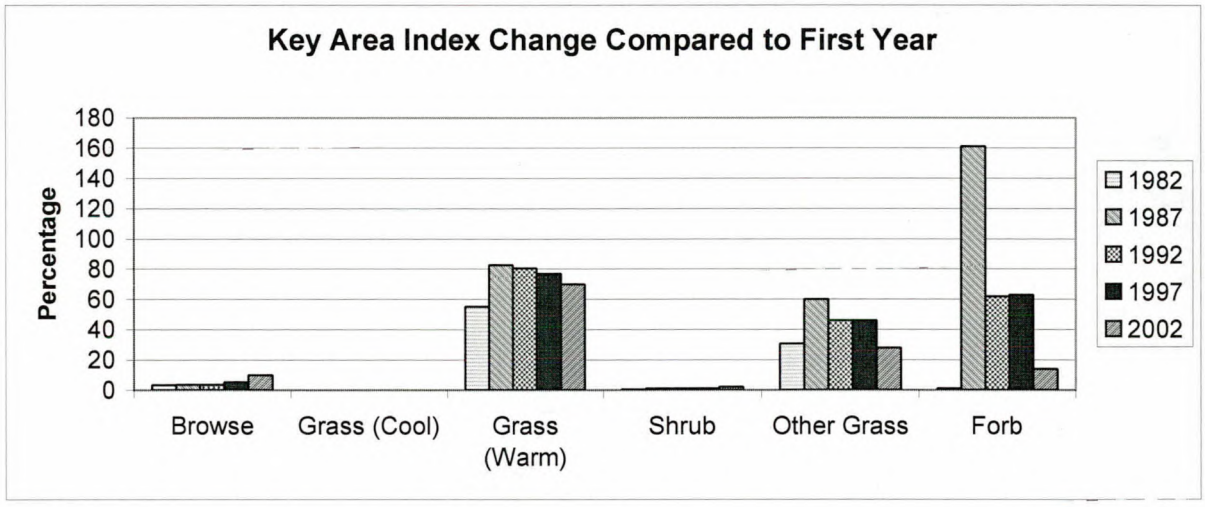
PACE FREQUENCY TREND ANALYSIS CONTINUED PAGE NUMBER 2

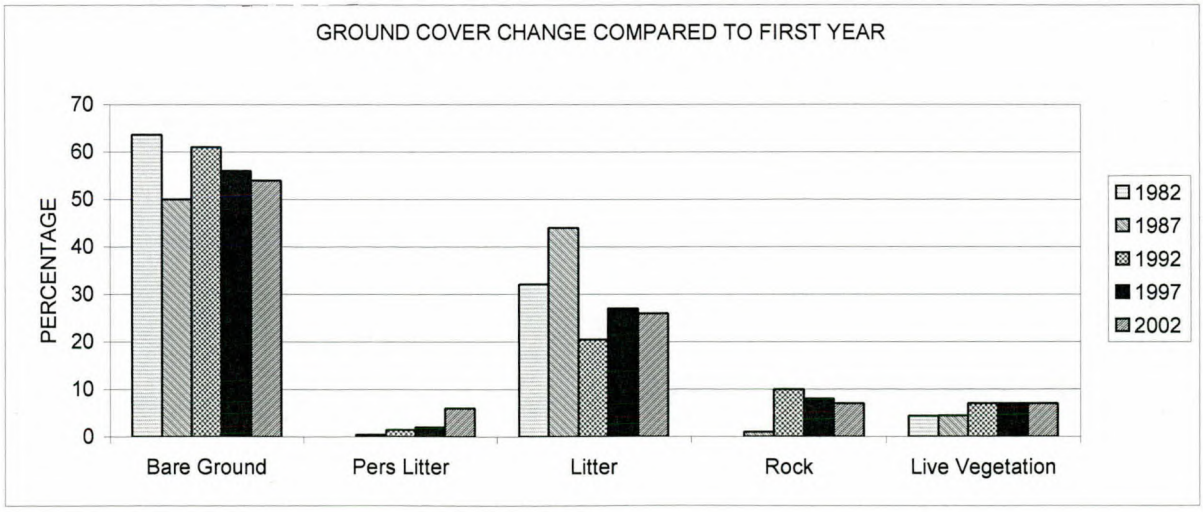
7/10/03	ALLOTMENT MAINSTREET	PASTURE CECIL	KEY AREA 1

COVER CATEGORIES	YEARS PLOT WERE READ											TREND INDEX: COMPARES DATA FROM THE YEAR READ BACK TO BASE YEAR TO DETERMINE INDEX (a significant change is more than 10%) BASE YEAR = 1982									
	1982	1987	1992	1997	2002	2005	2008	2011	2014	2017	2020	1987	1992	1997	2002	2005	2008	2011	2014	2017	2020
OTHER SHRUBS																					
GUSA2	0	1	1	1								106	106	106							
OPUNT					2										400						
OTHERSHRUB																					
TOTALS	0	1	1	1	2							106	106	106	312						
OTHER GRASSES																					
SCBR	31	36	45	44	28							16	47	44	-8						
TRPU			1	2									200	400							
PPGG		25										4900									
TOTALS	31	60	46	46	28							96	50	50	-8						
FORBS																					
SAKA		30	48	37	3							5900	9500	7400	600						
SPHAE	0		8	9	3								1445	1754	518						
AAFF		132	5	16	8							26300	900	3200	1600						
AAGG																					
ERIOG	0			1										106							
PPFF																					
ASTER			3										500								
TOTALS	1	161	62	63	14							16483	6286	6389	1342						

Allotment: MAINSTREET **Pasture: CECIL** **Key Area: 1**







PACE FREQUENCY TREND ANALYSIS

7/10/03	ALLOTMENT: MAINSTREET	PASTURE: COX/ATKIN	KEY AREA 1	PAGE NUMBER 1

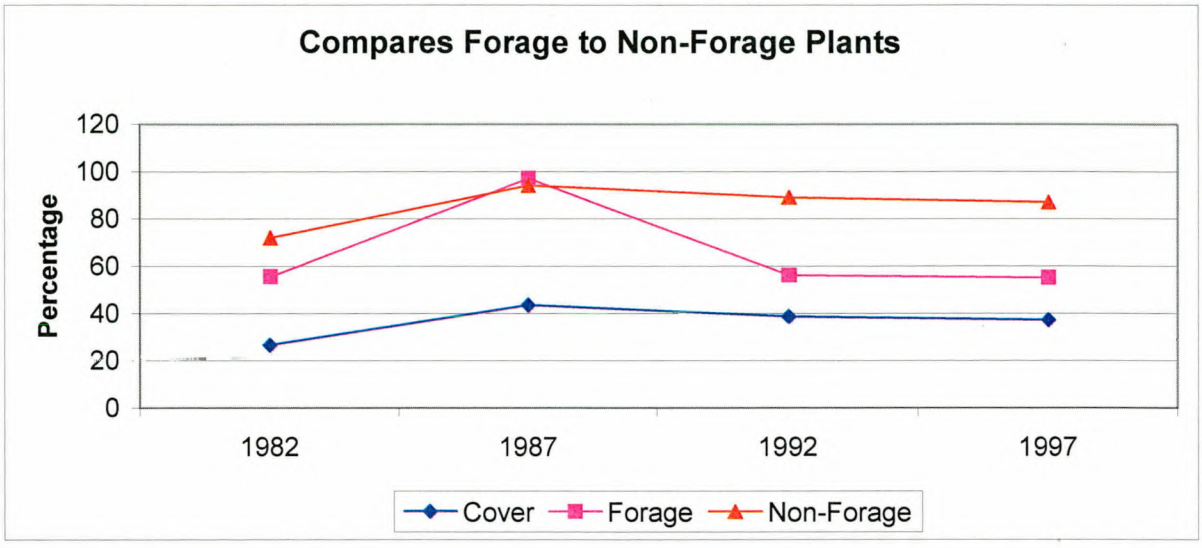
COVER CATEGORIES	YEARS PLOT WERE READ											TREND INDEX: COMPARES DATA FROM THE YEAR READ BACK TO BASE YEAR TO DETERMINE INDEX (a significant change is more than 10%) BASE YEAR = 1982								
	1982	1987	1992	1997	2000	2003	2006	2009	2012	2015	2018	1987	1992	1997	2000	2003	2006	2009	2012	2015	2018
Bare Ground	74	57	62	63								-23	-16	-14							
Pers Litter		12		7								2388		1400							
Litter	25	29	34	21								17	36	-16							
Rock	1		1	3										500							
Live Vegetation	1	2	4	6								99	300	500							
% Ground Cover	27	43	39	37								63	45	40							
BROWSE																					
CELA		0	1	2								100	100	400							
ATCA2		0	1	1								100	200	200							
OTHER BROWS																					
TOTALS		1	2	3								199	300	600							
DESIRABLE GRASSES																					
Cool Season																					
ORHY	4	8	7	7								142	100	100							
SIHY	35	60	27	27								71	-24	-23							
STIPA	1	1										99									
Other Cool Season Grass																					
TOTALS	39	69	34	34								77	-14	-13							
Warm Season																					
HIJA	8	10	9	5								31	6	-38							
SPCR	2	1	2	3								-50		50							
BOGR	7	15	11	10								137	62	54							
Other Warm Season Grass																					
TOTALS	17	27	21	18								63	27	9							

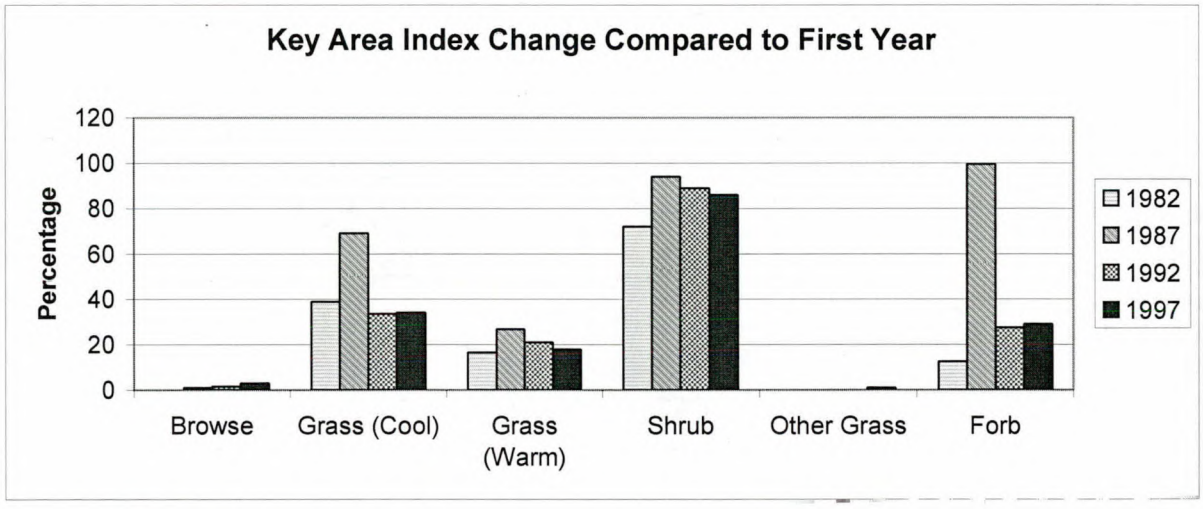
PACE FREQUENCY TREND ANALYSIS CONTINUED PAGE NUMBER 2

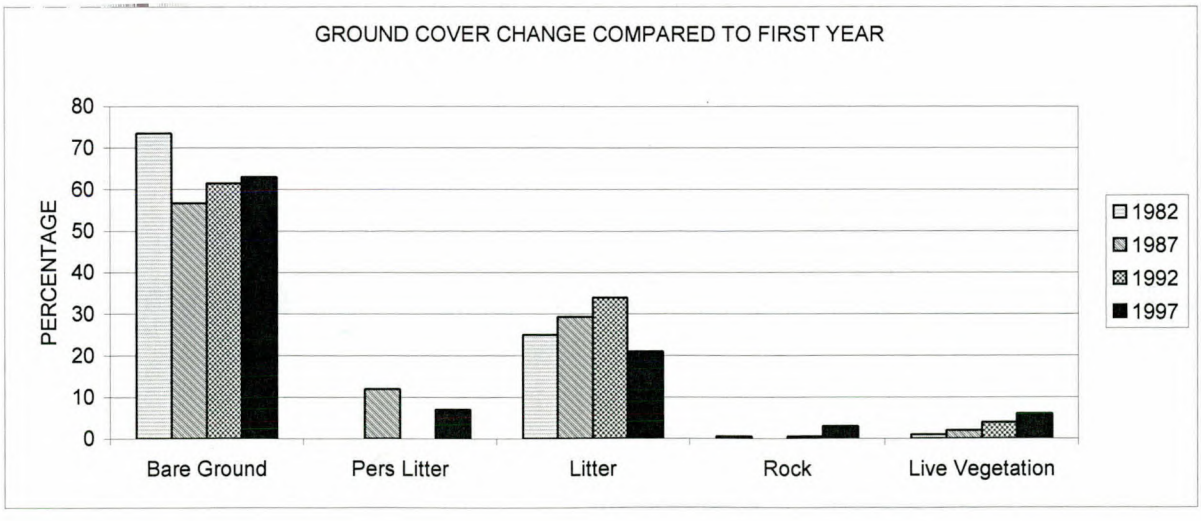
7/10/03	ALLOTMENT MAINSTREET	PASTURE COX/ATKIN	KEY AREA 1

COVER CATEGORIES	YEARS PLOT WERE READ											TREND INDEX: COMPARES DATA FROM THE YEAR READ BACK TO BASE YEAR TO DETERMINE INDEX (a significant change is more than 10%) BASE YEAR = 1982								
	1982	1987	1992	1997	2000	2003	2006	2009	2012	2015	2018	1987	1992	1997	2000	2003	2006	2009	2012	2015	2018
OTHER SHRUBS																					
GUSA2	9	34	36	33								304	324	288							
CHVI8				2										400							
CHRYSO	7	3										-46									
ARTR2	55	56	53	51								2	-3	-6							
HAPP_ACAMP	3	0										-80									
OTHERSHRUB																					
TOTALS	72	94	89	86								31	24	19							
OTHER GRASSES																					
ARLO				1										200							
PPGG																					
TOTALS				1										200							
FORBS																					
ASTRA		0	3	6								100	500	1200							
SPHAE	12	18	25	22								56	117	91							
AAFF		33										6667									
AAGG																					
ERIOG				1										200							
MUSTARD		46										9254									
PPFF																					
ASTER	1	1										49									
ERCI6																					
TOTALS	13	100	28	29								696	120	132							

Allotment: MAINSTREET **Pasture: COX/ATKIN** **Key Area: 1**







PACE FREQUENCY TREND ANALYSIS

7/10/03	ALLOTMENT: MAINSTREET	PASTURE: DAVE POND	KEY AREA 1	PAGE NUMBER 1

COVER CATEGORIES	YEARS PLOT WERE READ											TREND INDEX COMPARES DATA FROM THE YEAR READ BACK TO BASE YEAR TO DETERMINE INDEX (a significant change is more than 10%) BASE YEAR = 1982									
	1992	1995	1998	2001	2004	2007	2010	2013	2016	2019	2022	1995	1998	2001	2004	2007	2010	2013	2016	2019	2022
Bare Ground	48																				
Pers Litter																					
Litter	44																				
Rock																					
Live Vegetation	8																				
% Ground Cover	52																				
BROWSE																					
CELA	1																				
OTHER BROWS																					
TOTALS	1																				
DESIRABLE GRASSES																					
Cool Season																					
SIHY	2																				
STIPA	10																				
Other Cool Season Grass																					
TOTALS	12																				
Warm Season																					
HIJA	19																				
SPCR	29																				
BOGR	73																				
BOER	5																				
Other Warm Season Grass																					
TOTALS	126																				

PACE FREQUENCY TREND ANALYSIS CONTINUED PAGE NUMBER 2

7/10/03	ALLOTMENT MAINSTREET	PASTURE DAVE POND	KEY AREA 1

COVER CATEGORIES	YEARS PLOT WERE READ											TREND INDEX COMPARES DATA FROM THE YEAR READ BACK TO BASE YEAR TO DETERMINE INDEX (a significant change is more than 10%) BASE YEAR = 1992									
	1992	1995	1998	2001	2004	2007	2010	2013	2016	2019	2022	1995	1998	2001	2004	2007	2010	2013	2016	2019	2022
OTHER SHRUBS																					
GUSA2	4																				
OPUNT	1																				
LYAN	10																				
ERIOG_SHRB	1																				
OTHERSHRUB																					
TOTALS	16																				
OTHER GRASSES																					
ARLO	13																				
TRPU	1																				
PPGG																					
TOTALS	15																				
FORBS																					
SAKA	1																				
AAFF																					
AAGG	11																				
PPFF																					
TOTALS	13																				

PACE FREQUENCY TREND ANALYSIS

7/10/03 | ALLOTMENT: MAINSTREET | PASTURE: ENGLESTEAD | KEY AREA 1 | PAGE NUMBER 1

COVER CATEGORIES	YEARS PLOT WERE READ											TREND INDEX (COMPARES DATA FROM THE YEAR READ BACK TO BASE YEAR TO DETERMINE INDEX; a significant change is more than 10%) BASE YEAR = 1982									
	1983	1985	1988	1991	1994	1997	2003	2006	2009	2012	2015	1985	1988	1991	1994	1997	2003	2006	2009	2012	2015
Bare Ground	48	55	29	31	44	33	32					14	-40	-35	-9	-31	-33				
Pers Litter	1	2	8	8	7	7	65					55	724	673	654	621	6595				
Litter	48	39	62	56	20	55						-20	28	17	-58	14					
Rock				1		1								200		200					
Live Vegetation	3	5	2	5	28	4	3					72	-49	55	877	37	3				
% Ground Cover	52	45	71	69	56	67	68					-13	37	33	8	29	31				
BROWSE																					
CELA	0	1	1	1								3	3	106							
OTHER BROWS																					
TOTALS	0	1	1	1								3	3	106							
DESIRABLE GRASSES																					
Cool Season																					
ORHY	3	3	2	4	2	4	1					3	-31	20	-44	37	-66				
SIHY	13	6	14	12	14	14	15					-52	7	-9	10	11	19				
AGSM	59	43	39	40	32	37	42					-27	-34	-32	-46	-37	-28				
Other Cool Season Grass																					
TOTALS	74	52	55	55	47	55	58					-30	-27	-26	-37	-26	-22				
Warm Season																					
HIJA							1										200				
SPCR			8	8		9	1						1500	1500		1800	200				
BOGR	3	3		3		2						-12		-26		-41					
Other Warm Season Grass																					
TOTALS	3	3	8	10		11	2					-12	121	194		224	-41				

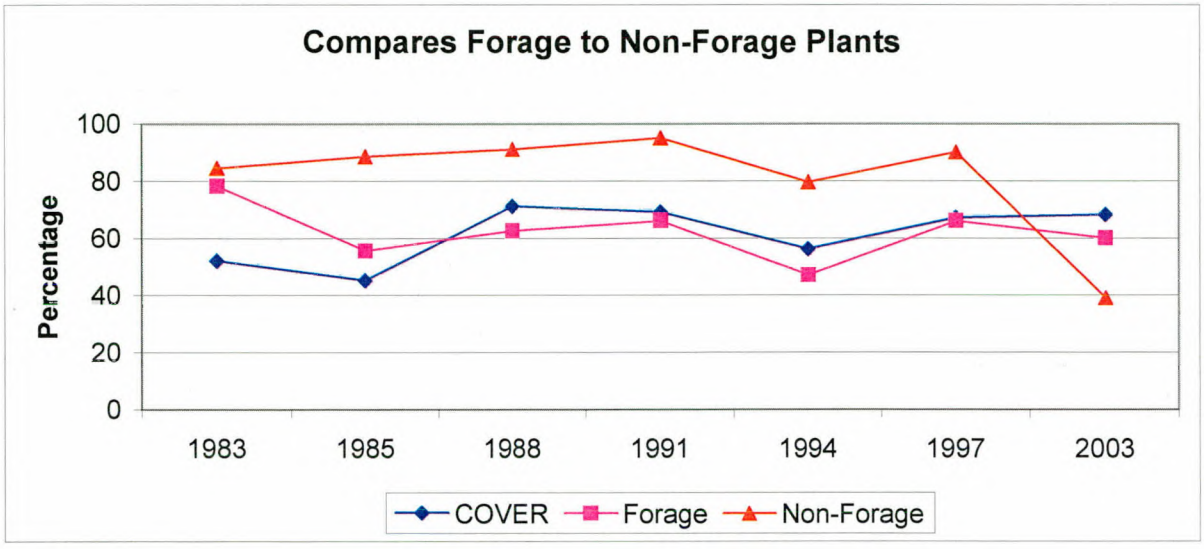
PACE FREQUENCY TREND ANALYSIS CONTINUED

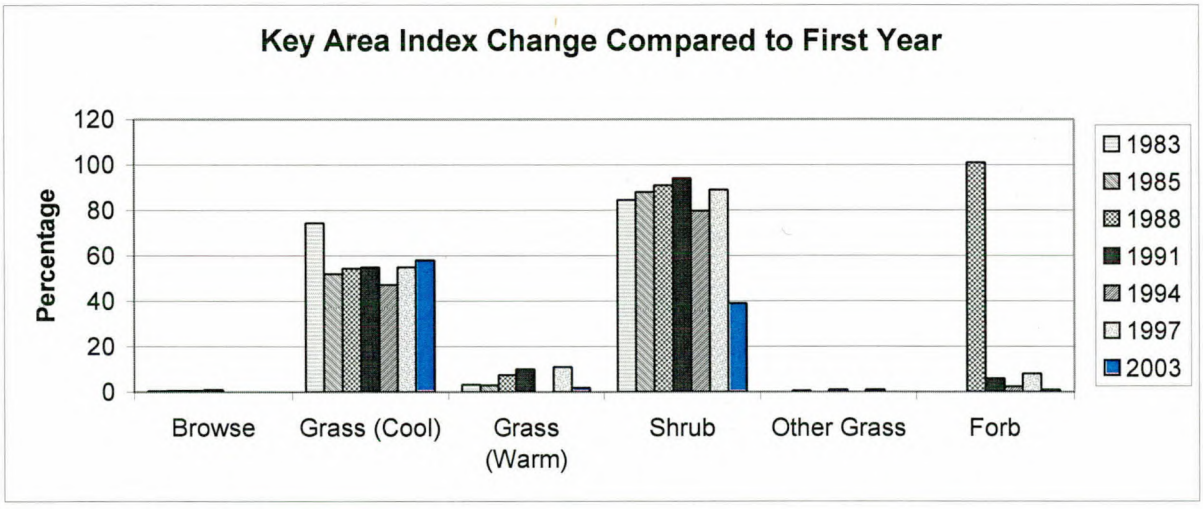
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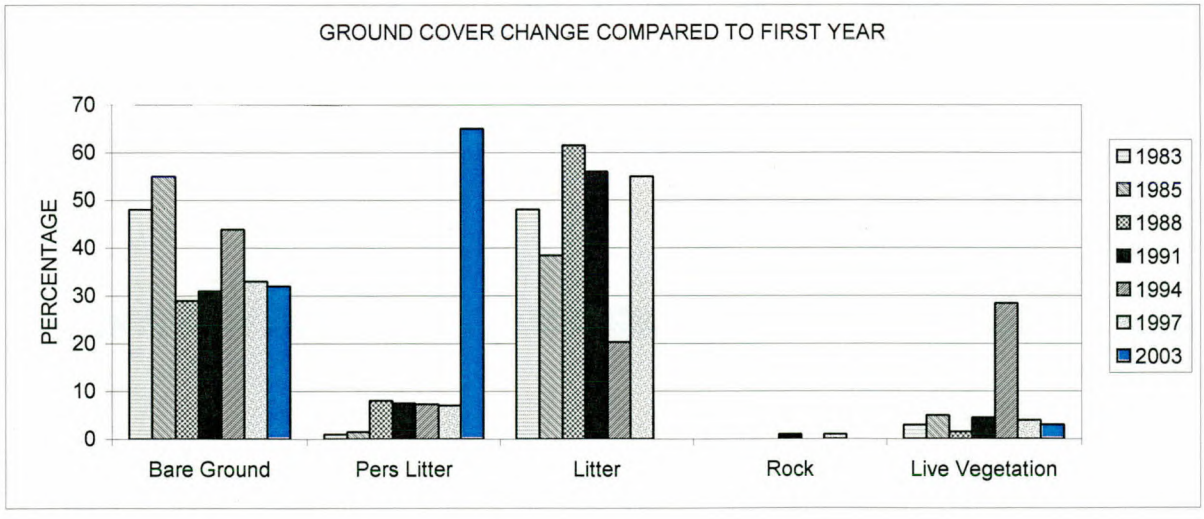
7/10/03 | ALLOTMENT MAINSTREET | PASTURE ENGLESTEAD | KEY AREA 1

COVER CATEGORIES	YEARS PLOT WERE READ											TREND INDEX (COMPARES DATA FROM THE YEAR READ BACK TO BASE YEAR TO DETERMINE INDEX; a significant change is more than 10%) BASE YEAR = 1983								
	1983	1985	1988	1991	1994	1997	2003	2006	2009	2012	2015	1985	1988	1991	1994	1997	2003	2006	2009	2012
OTHER SHRUBS																				
GUSA2	3	9	1	2	5	3	1					150	-85	-56	44	-12	-71			
ARTR2	80	79	90	92	75	86	38					-1	12	14	-7	7	-53			
OPUNT			1	1									100	100						
JUOS	1	1		1								-49		-49						
OTHERSHRUB																				
TOTALS	84	88	91	94	80	89	39					4	8	11	-6	5	-54			
OTHER GRASSES																				
ARIST		1										100								
ARLO				1		1								200		200				
PPGG																				
TOTALS		1		1		1						100		200		200				
FORBS																				
SPHAE			1	3	2	5							100	500	325	1000				
AAFF			101			3	1						20100			600	200			
AAGG																				
PPFF				4										700						
ASTER					1										163					
TOTALS			101	6	2	8	1						20200	1200	488	1600	200			

Allotment: MAINSTREET **Pasture: ENGLESTEAD** **Key Area: 1**







PACE FREQUENCY TREND ANALYSIS

7/10/03	ALLOTMENT: MAINSTREET	PASTURE: HIGLEY	KEY AREA 1	PAGE NUMBER 1

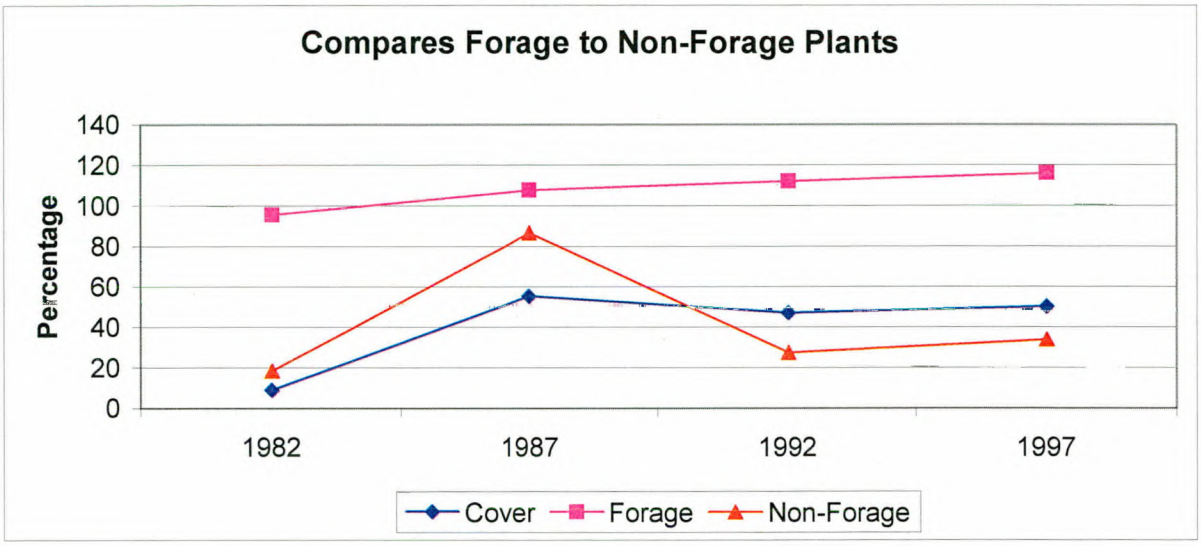
COVER	YEARS PLOT WERE READ											TREND INDEX: COMPARES DATA FROM THE YEAR READ BACK TO BASE YEAR TO DETERMINE INDEX (a significant change is more than 10%) BASE YEAR = 1982									
CATEGORIES	1982	1987	1992	1997	2000	2003	2006	2009	2012	2015	2018	1987	1992	1997	2000	2003	2006	2009	2012	2015	2018
Bare Ground	91	45	53	50								-51	-42	-45							
Pers Litter			1	2									200	400							
Litter	6	44	36	38								648	504	546							
Rock		1	1	2								100	200	400							
Live Vegetation	3	11	10	8								257	223	172							
% Ground Cover	9	55	47	50								523	433	467							
BROWSE																					
CELA	1	2	2	2								53	104	104							
EPNE		1	1	2								100	200	400							
OTHER BROWS																					
TOTALS	1	2	3	4								104	206	308							
DESIRABLE GRASSES																					
Cool Season																					
SIHY		1	1	2								100	200	400							
Other Cool Season Grass																					
TOTALS		1	1	2								100	200	400							
Warm Season																					
HIJA	85	98	100	98								16	17	16							
SPCR	3	7	8	9								121	155	206							
BOER	7	1	1	3								-93	-85	-56							
Other Warm Season Grass																					
TOTALS	95	105	108	110								11	14	16							

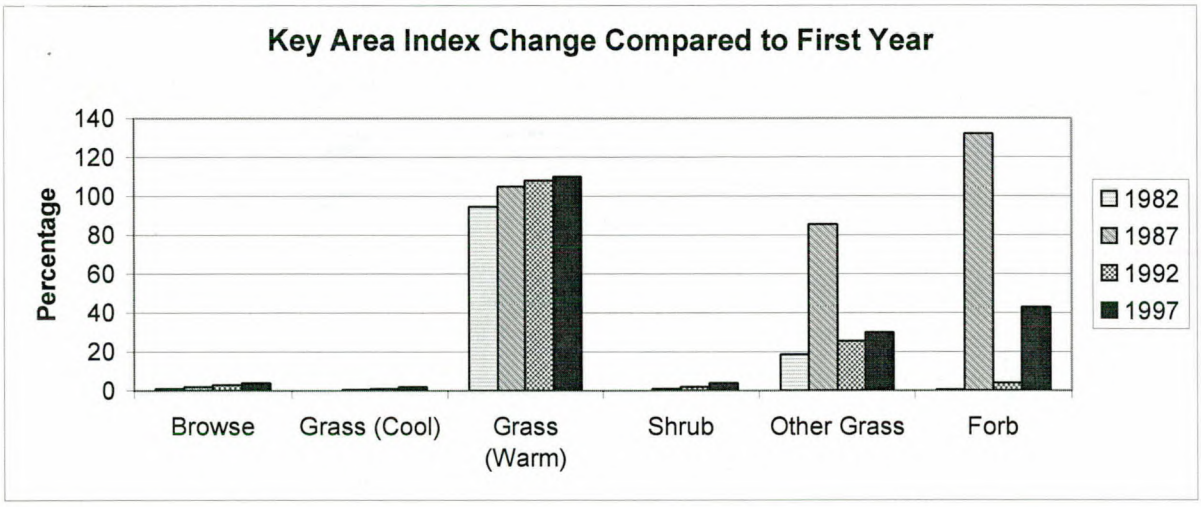
PACE FREQUENCY TREND ANALYSIS CONTINUED PAGE NUMBER 2

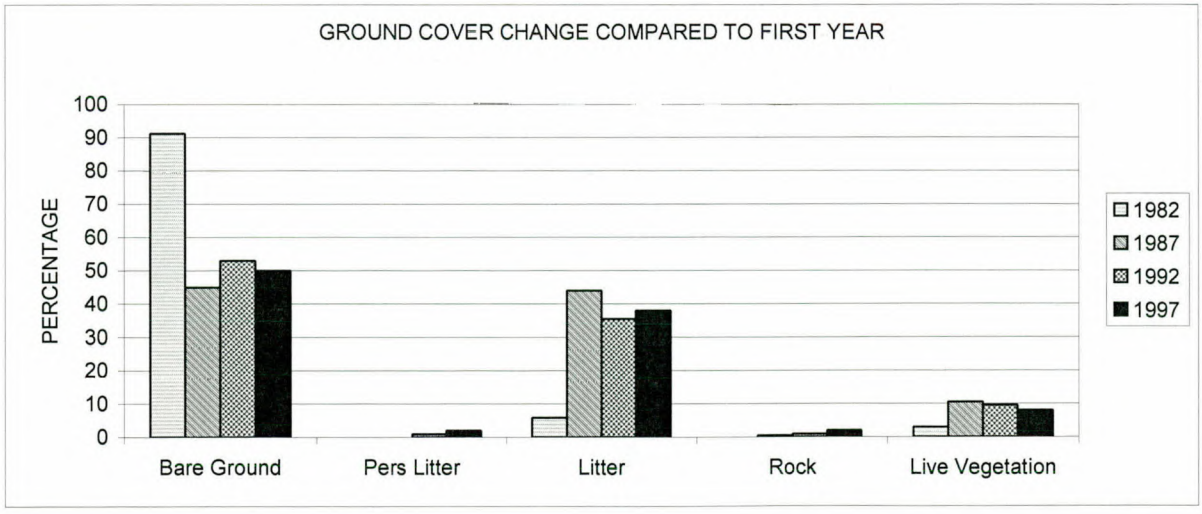
7/10/03	ALLOTMENT MAINSTREET	PASTURE HIGLEY	KEY AREA 1

COVER	YEARS PLOT WERE READ											TREND INDEX: COMPARES DATA FROM THE YEAR READ BACK TO BASE YEAR TO DETERMINE INDEX (a significant change is more than 10%) BASE YEAR = 1982									
CATEGORIES	1982	1987	1992	1997	2000	2003	2006	2009	2012	2015	2018	1987	1992	1997	2000	2003	2006	2009	2012	2015	2018
OTHER SHRUBS																					
GUSA2		1	1	2								100	200	400							
OPUNT		1	1	2								100	200	400							
OTHERSHRUB																					
TOTALS		1	2	4								200	400	800							
OTHER GRASSES																					
ARIST																					
ARLO																					
SCBR	19	24	26	30								29	37	61							
PPGG		62										12300									
TOTALS	19	86	26	30								359	37	61							
FORBS																					
SPHAE	0	3	4	6								410	716	1124							
AAFF		75										15000									
AAGG																					
PLANTAGO		55		37								10900		7400							
TOTALS	0	132	4	43								26828	716	8672							

Allotment: MAINSTREET **Pasture: HIGLEY** **Key Area: 1**







PACE FREQUENCY TREND ANALYSIS

7/10/03 | ALLOTMENT: MAINSTREET | PASTURE: LITTLE JOE | KEY AREA 1 | PAGE NUMBER 1

TREND INDEX

COVER CATEGORIES	YEARS PLOT WERE READ											COMPARES DATA FROM THE YEAR READ BACK TO BASE YEAR TO DETERMINE INDEX (a significant change is more than 10%) BASE YEAR = 1982									
	1981	1986	1991	1997	2000	2003	2006	2009	2012	2015	2018	1986	1991	1997	2000	2003	2006	2009	2012	2015	2018
Bare Ground	45	36	45	49								-20	1	9							
Pers Litter	19	11	15	12								-39	-19	-35							
Litter	33	51	37	34								54	13	2							
Rock	1	0	1	3								-67	-34	105							
Live Vegetation	2	1	1	2								-25	-25	3							
% Ground Cover	55	64	55	51								16	0	-7							
BROWSE																					
OTHER BROWS																					
TOTALS																					
DESIRABLE GRASSES																					
Cool Season																					
ORHY		5	3	2								980	680	400							
SIHY	42	46	52	52								9	25	24							
Other Cool Season Grass																					
TOTALS	42	50	56	54								20	33	29							
Warm Season																					
HIJA		1	1	2								196	194	400							
SPCR		3	1	2								588	291	400							
BOGR	2	3	4	5								51	99	156							
Other Warm Season Grass																					
TOTALS	2	7	6	9								252	223	361							

PACE FREQUENCY TREND ANALYSIS CONTINUED PAGE NUMBER 2

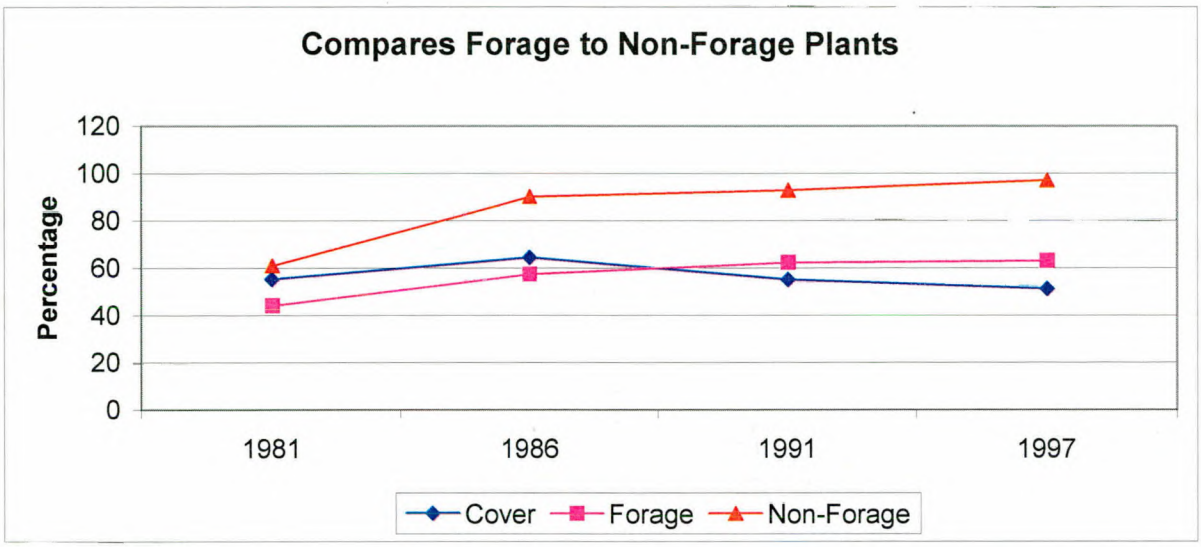
7/10/03 | ALLOTMENT MAINSTREET | PASTURE LITTLE JOE | KEY AREA 1

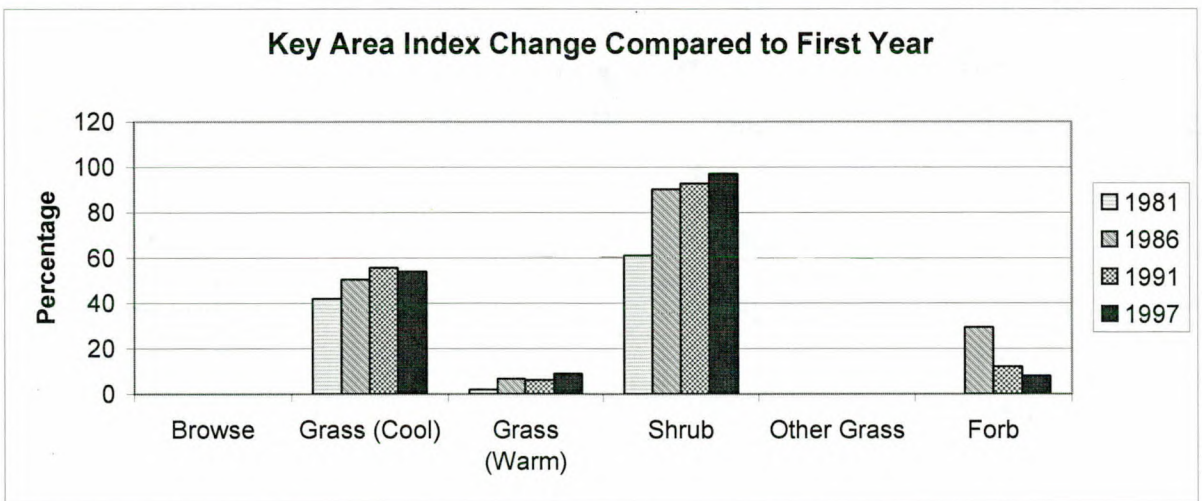
TREND INDEX

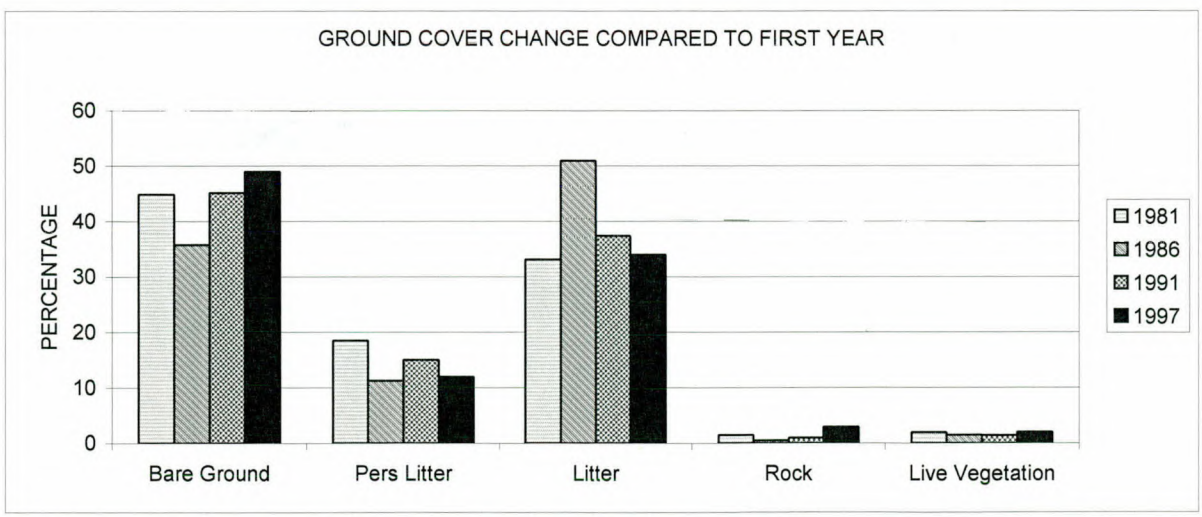
COMPARES DATA FROM THE YEAR READ BACK TO BASE YEAR TO DETERMINE INDEX

COVER CATEGORIES	YEARS PLOT WERE READ											(a significant change is more than 10%) BASE YEAR = 1981									
	1981	1986	1991	1997	2000	2003	2006	2009	2012	2015	2018	1986	1991	1997	2000	2003	2006	2009	2012	2015	2018
OTHER SHRUBS																					
GUSA2		2	1	2								490	194	400							
ARTR2	61	88	91	93								44	49	53							
OPUNT			1	2									194	400							
OTHERSHRUB																					
TOTALS	61	90	93	97								48	52	59							
OTHER GRASSES																					
PPGG																					
TOTALS																					
FORBS																					
SPHAE		5	10	8								980	2039	1600							
AAFF		15										3039									
AAGG																					
PPFF		9	2									1863	388								
TOTALS		29	12	8								5882	2427	1600							

Allotment: MAINSTREET **Pasture: LITTLE JOE** **Key Area: 1**







PACE FREQUENCY TREND ANALYSIS

7/10/03	ALLOTMENT: MAINSTREET	PASTURE: MUDHOLE	KEY AREA 1	PAGE NUMBER 1

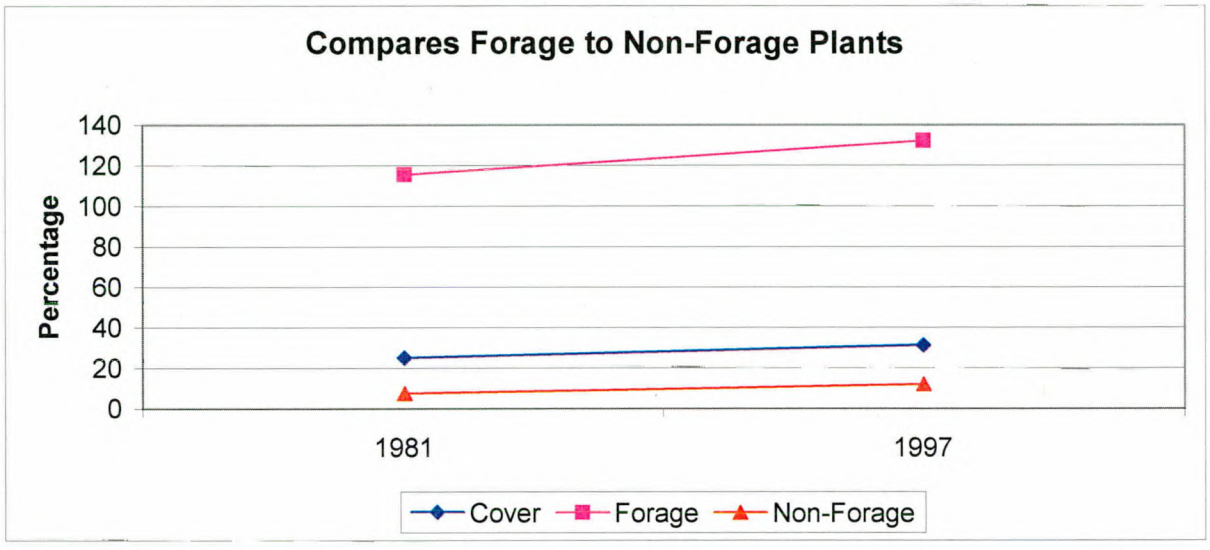
COVER CATEGORIES	YEARS PLOT WERE READ											TREND INDEX COMPARES DATA FROM THE YEAR READ BACK TO BASE YEAR TO DETERMINE INDEX (a significant change is more than 10%) BASE YEAR = 1982									
	1981	1997	2000	2003	2006	2009	2012	2015	2018	2021	2024	1997	2000	2003	2006	2009	2012	2015	2018	2021	2024
Bare Ground	75	69										-8									
Pers Litter		2										400									
Litter	19	23										22									
Rock		1										200									
Live Vegetation	6	5										-16									
% Ground Cover	25	31										25									
BROWSE																					
CELA	12	18										51									
OTHER BROWS																					
TOTALS	12	18										51									
DESIRABLE GRASSES																					
Cool Season																					
ORHY	4	8										101									
SIHY	0	2										302									
STIPA		1										200									
Other Cool Season Grass																					
TOTALS	4	11										146									
Warm Season																					
HIJA	94	95										2									
BOGR	5	8										46									
Other Warm Season Grass																					
TOTALS	99	103										4									

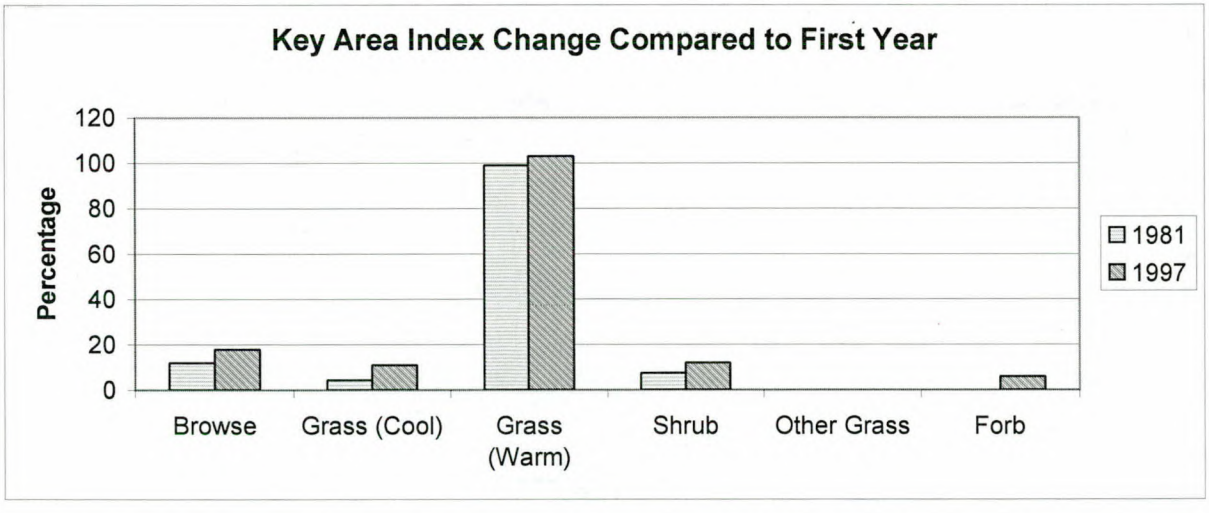
PACE FREQUENCY TREND ANALYSIS CONTINUED PAGE NUMBER 2

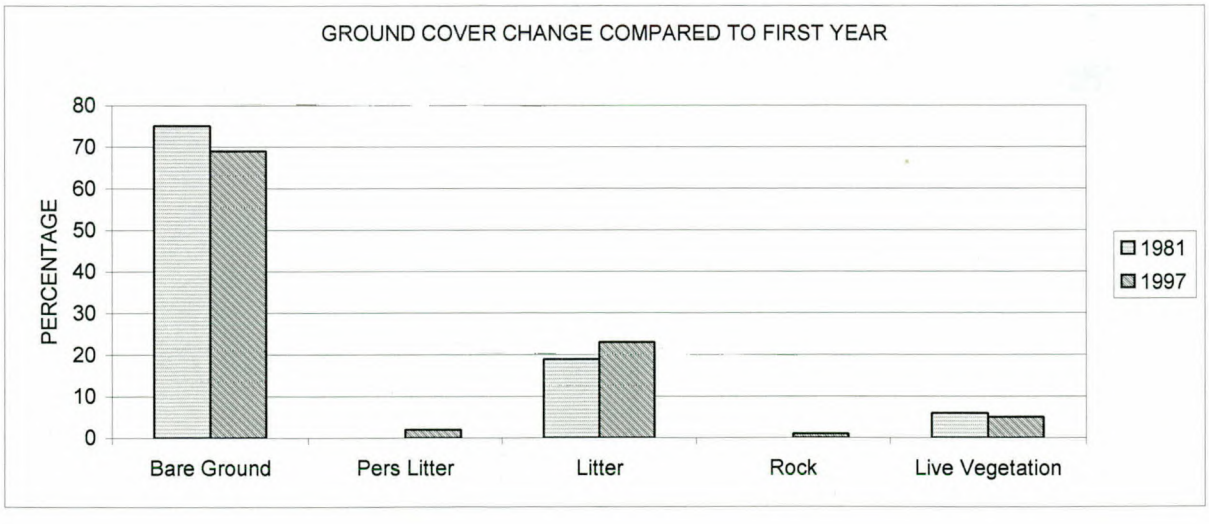
7/10/03	ALLOTMENT MAINSTREET	PASTURE MUDHOLE	KEY AREA 1

COVER CATEGORIES	YEARS PLOT WERE READ											TREND INDEX COMPARES DATA FROM THE YEAR READ BACK TO BASE YEAR TO DETERMINE INDEX (a significant change is more than 10%) BASE YEAR = 1981									
	1981	1997	2000	2003	2006	2009	2012	2015	2018	2021	2024	1997	2000	2003	2006	2009	2012	2015	2018	2021	2024
OTHER SHRUBS																					
GUSA2	7	11										58									
ARTR2	0	1										101									
TOTALS	7	12										61									
OTHER GRASSES																					
PPGG																					
TOTALS																					
FORBS																					
SPHAE		3										600									
AAFF		1										200									
ASTER		2										400									
TOTALS		6										1200									

Allotment: MAINSTREET **Pasture: MUDHOLE** **Key Area: 1**







PACE FREQUENCY TREND ANALYSIS

7/10/03	ALLOTMENT: MAINSTREET	PASTURE: MUSTANG	KEY AREA 1	PAGE NUMBER 1

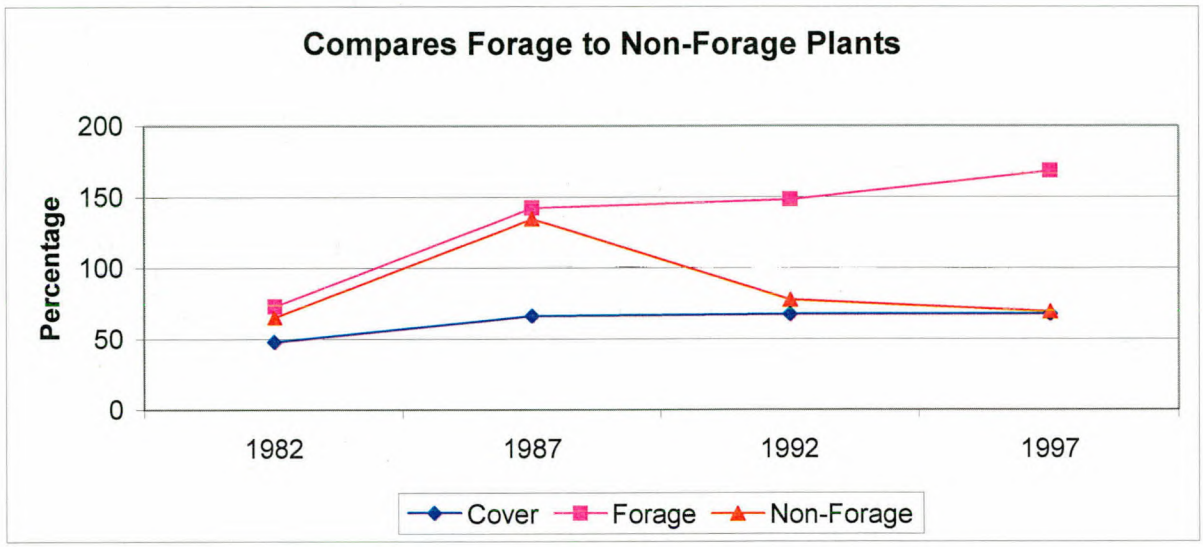
COVER	YEARS PLOT WERE READ											TREND INDEX: COMPARES DATA FROM THE YEAR READ BACK TO BASE YEAR TO DETERMINE INDEX (a significant change is more than 10%) BASE YEAR = 1982									
CATEGORIES	1982	1987	1992	1997	2000	2003	2006	2009	2012	2015	2018	1987	1992	1997	2000	2003	2006	2009	2012	2015	2018
Bare Ground	53	34	33	33								-35	-37	-37							
Pers Litter		4	6	6								796	1200	1200							
Litter	28	45	45	49								65	64	78							
Rock	18	8	9	5								-56	-53	-72							
Live Vegetation	2	8	8	7								323	275	250							
% Ground Cover	48	66	67	67								38	41	41							
BROWSE																					
COME	2	1	2	1								-34		-33							
OTHER BROWS				2										400							
TOTALS	2	1	2	3								-34		100							
DESIRABLE GRASSES																					
Cool Season																					
ORHY		4	6	8								796	1100	1600							
SIHY	18	59	62	67								226	242	272							
STIPA	1	2	4	5								398	600	900							
POA		4										896									
Other Cool Season Grass																					
TOTALS	19	70	71	80								276	281	332							
Warm Season																					
HIJA	14	22	26	30								66	89	122							
SPCR	2	2	5	5								24	150	150							
BOGR	37	46	46	50								25	23	35							
Other Warm Season Grass																					
TOTALS	53	71	76	85								36	45	62							

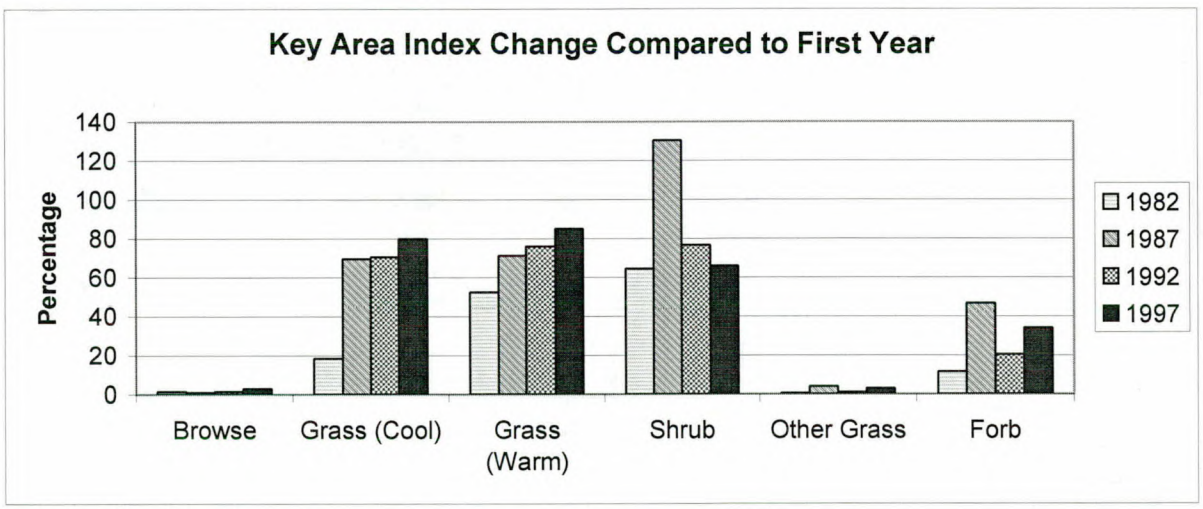
PACE FREQUENCY TREND ANALYSIS CONTINUED PAGE NUMBER 2

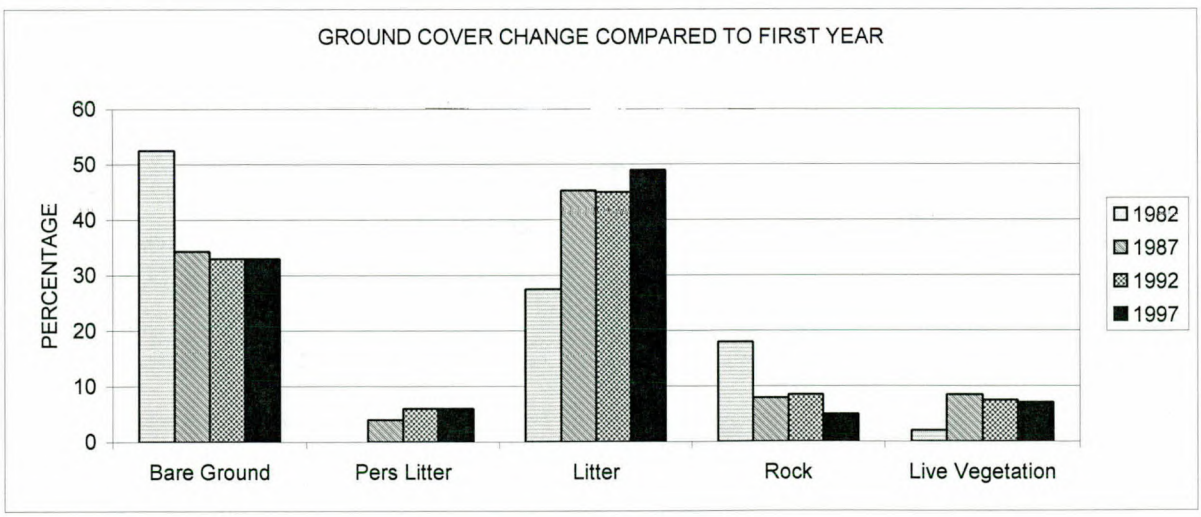
7/10/03	ALLOTMENT MAINSTREET	PASTURE MUSTANG	KEY AREA 1

COVER	YEARS PLOT WERE READ											TREND INDEX: COMPARES DATA FROM THE YEAR READ BACK TO BASE YEAR TO DETERMINE INDEX (a significant change is more than 10%) BASE YEAR = 1982									
CATEGORIES	1982	1987	1992	1997	2000	2003	2006	2009	2012	2015	2018	1987	1992	1997	2000	2003	2006	2009	2012	2015	2018
OTHER SHRUBS																					
GUSA2	22	66	29	30								208	35	40							
ARTR2	41	55	44	34								35	9	-16							
OPUNT	1	1	2	2								49	50	100							
SENECIO		2										498									
BERBERIS	2	5	2									265	33								
OTHERSHRUB																					
TOTALS	65	130	77	66								102	19	2							
OTHER GRASSES																					
ARLO	1	3	1	3								597	100	500							
TRPU		0										100									
PPGG																					
TOTALS	1	4	1	3								696	100	500							
FORBS																					
ASTRA	1	1	2	2								99	200	300							
SPHAE	4	7	5	11								74	13	175							
AAFF		20	2									3980	400								
AAGG		0										100									
ERIOG		12	5	8								2388	1000	1600							
MUSTARD		6										1294									
PPFF																					
ASTER	7		8	11									7	57							
PHACE				2										400							
TOTALS	12	47	21	34								307	78	196							

Allotment: MAINSTREET **Pasture: MUSTANG** **Key Area: 1**







PACE FREQUENCY TREND ANALYSIS

7/10/03 | ALLOTMENT: MAINSTREET | PASTURE: POLYG | KEY AREA 1 | PAGE NUMBER 1

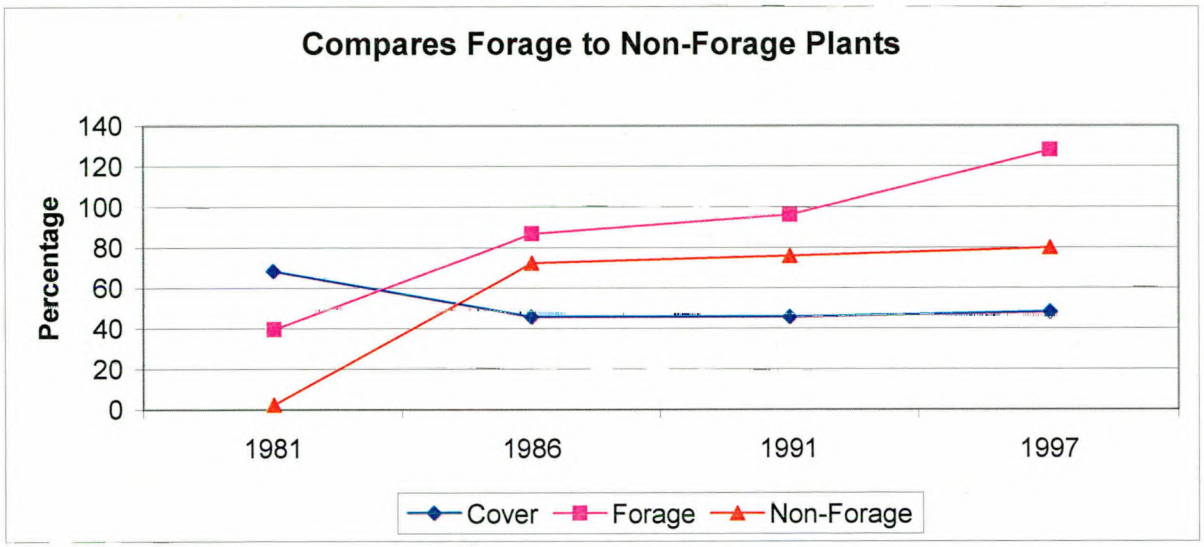
COVER CATEGORIES	YEARS PLOT WERE READ											TREND INDEX COMPARES DATA FROM THE YEAR READ BACK TO BASE YEAR TO DETERMINE INDEX (a significant change is more than 10%) BASE YEAR = 1982								
	1981	1986	1991	1997	2000	2003	2006	2009	2012	2015	2018	1986	1991	1997	2000	2003	2006	2009	2012	2015	2018
Bare Ground	32	54	54	52								72	72	64							
Pers Litter			0	2									99	400							
Litter	65	36	37	38								-44	-43	-41							
Rock	0	0	1	3									200	506							
Live Vegetation	3	9	6	5								200	117	68							
% Ground Cover	68	46	46	48								-33	-33	-30							
BROWSE																					
CELA		1	2	5								297	495	1000							
OTHER BROWS																					
TOTALS		1	2	5								297	495	1000							
DESIRABLE GRASSES																					
Cool Season																					
ORHY	1		0	1									-67	-33							
SIHY		2	3	4								396	594	800							
STIPA		2	4	5								396	792	1000							
Other Cool Season Grass																					
TOTALS	1	4	7	10								167	400	573							
Warm Season																					
HIJA	3	7	10	17								100	200	391							
SPCR		9	13	31								1881	2574	6200							
BOGR	35	65	63	65								87	81	88							
Other Warm Season Grass																					
TOTALS	38	81	86	113								113	126	196							

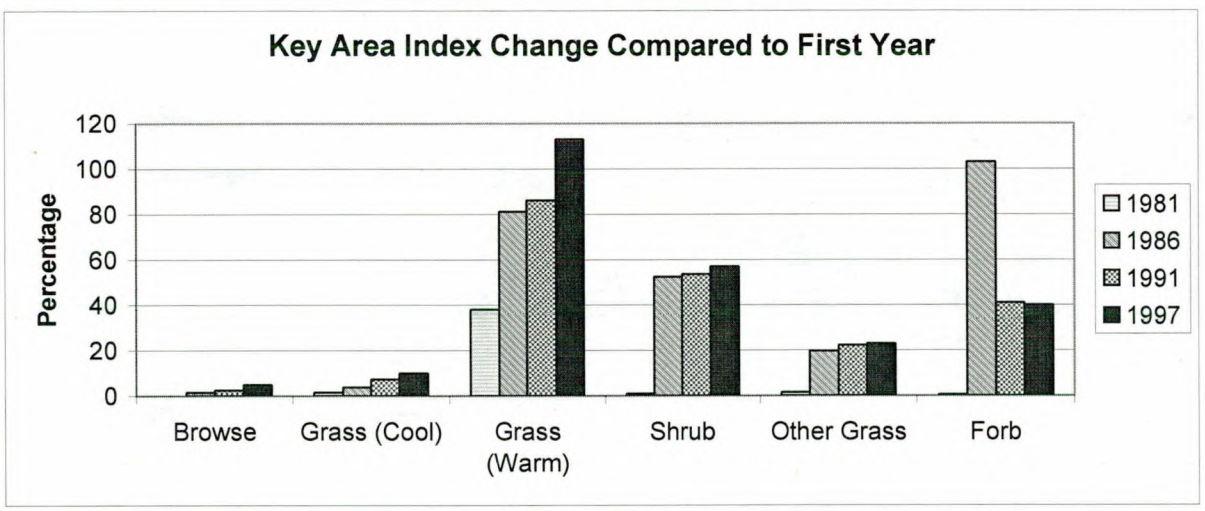
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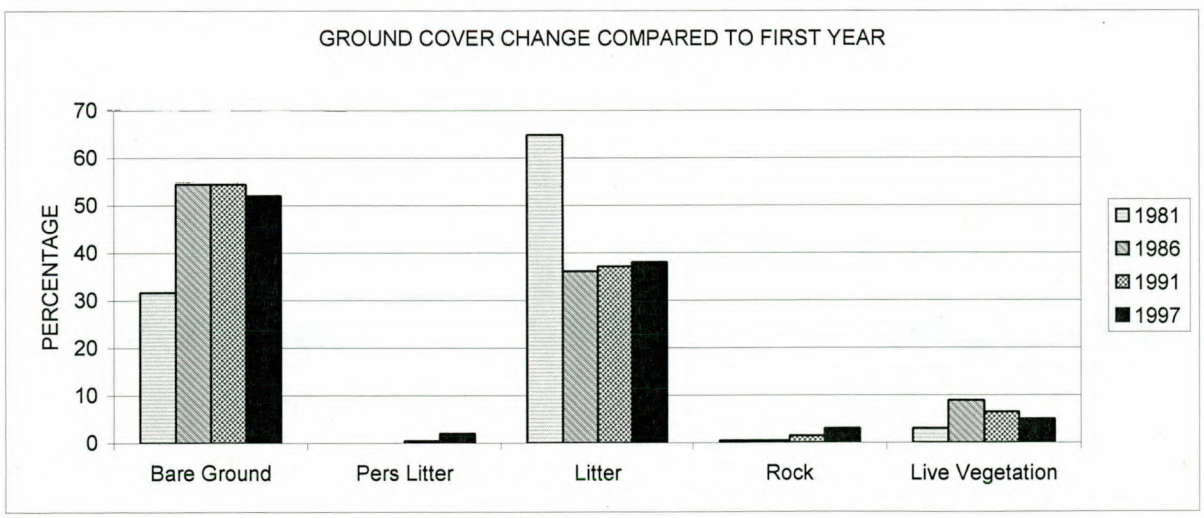
7/10/03 | ALLOTMENT MAINSTREET | PASTURE POLYG | KEY AREA 1

COVER CATEGORIES	YEARS PLOT WERE READ											TREND INDEX COMPARES DATA FROM THE YEAR READ BACK TO BASE YEAR TO DETERMINE INDEX (a significant change is more than 10%) BASE YEAR = 1981								
	1981	1986	1991	1997	2000	2003	2006	2009	2012	2015	2018	1986	1991	1997	2000	2003	2006	2009	2012	2015	2018
OTHER SHRUBS																					
GUSA2	0	50	52	54								10100	10400	10808							
ARTR2		0	1	2								99	198	400							
OPUNT			0	1									99	200							
HAPP_ACAMP	0	0																			
OTHERSHRUB		1										198									
TOTALS	1	52	53	57								5200	5300	5657							
OTHER GRASSES																					
ARLO	1	13	16	17								767	967	1045							
TRPU				6										1200							
PPGG		7	6									1386	1287								
TOTALS	1	20	22	23								1233	1400	1449							
FORBS																					
ASTRA		0										99									
SPHAE		29	29	35								5743	5743	7000							
AAFF		32		2								6436		400							
AAGG																					
MUSTARD		5										1089									
PPFF	0	27	4									5400	700								
ASTER		9	8	3								1782	1683	600							
TOTALS	0	103	41	40								20700	8200	7980							

Allotment: MAINSTREET **Pasture: POLYG** **Key Area: 1**







PACE FREQUENCY TREND ANALYSIS

7/10/03	ALLOTMENT: MAINSTREET	PASTURE: ROUND POND	KEY AREA 1	PAGE NUMBER 1

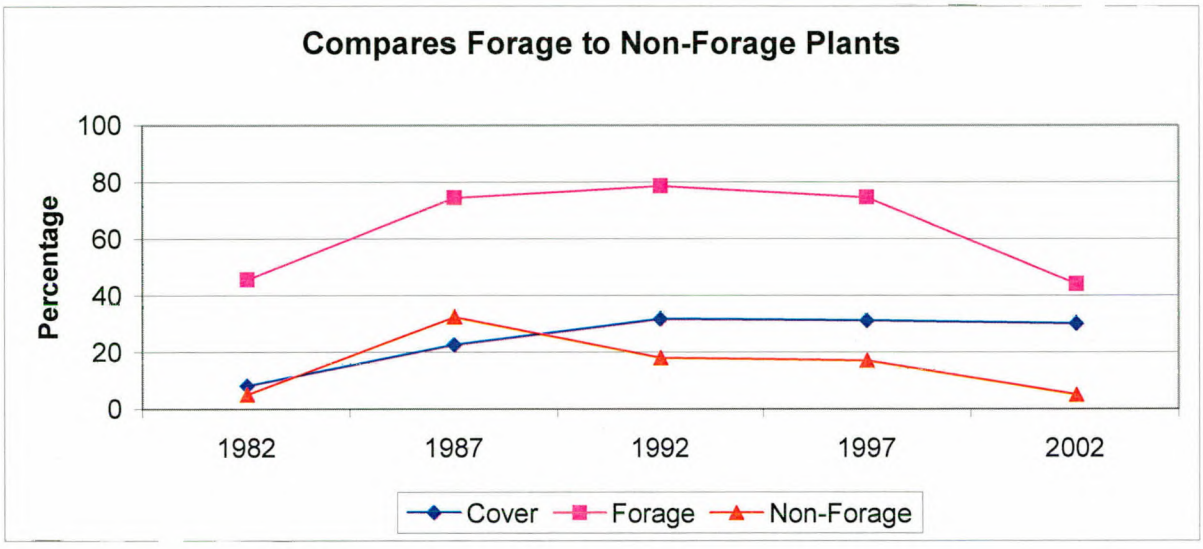
COVER	YEARS PLOT WERE READ											TREND INDEX: COMPARES DATA FROM THE YEAR READ BACK TO BASE YEAR TO DETERMINE INDEX (a significant change is more than 10%) BASE YEAR = 1982									
CATEGORIES	1982	1987	1992	1997	2002	2005	2008	2011	2014	2017	2020	1987	1992	1997	2002	2005	2008	2011	2014	2017	2020
Bare Ground	92	78	69	69	70							-16	-26	-25	-24						
Pers Litter				1	3									200	600						
Litter	8	20	29	25	15							150	256	213	88						
Rock				2	9									400	1800						
Live Vegetation		3	3	3	3							500	600	600	600						
% Ground Cover	8	23	32	31	30							181	294	288	275						
BROWSE																					
CELA	3	4	4	4								40	60	60							
ATCA2	5	8	9	9	2							67	89	89	-56						
OTHER BROWS																					
TOTALS	7	11	13	13	2							57	79	79	-71						
DESIRABLE GRASSES																					
Cool Season																					
Other Cool Season Grass																					
TOTALS																					
Warm Season																					
HIJA	27	39	43	40	25							43	57	48	-7						
SPCR	12	25	24	22	17							117	104	91	48						
Other Warm Season Grass																					
TOTALS	39	64	66	62	42							65	71	61	9						

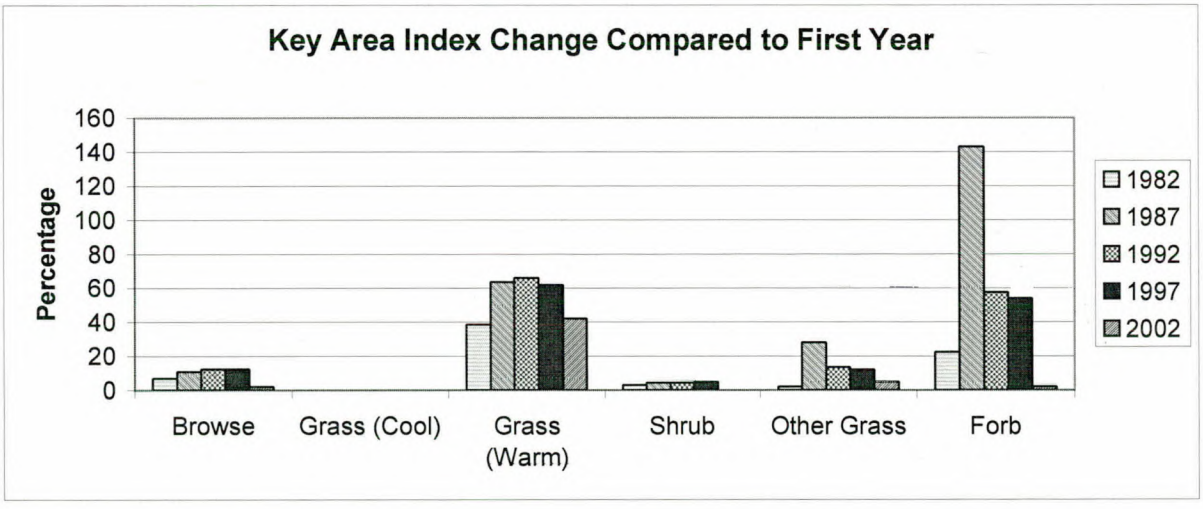
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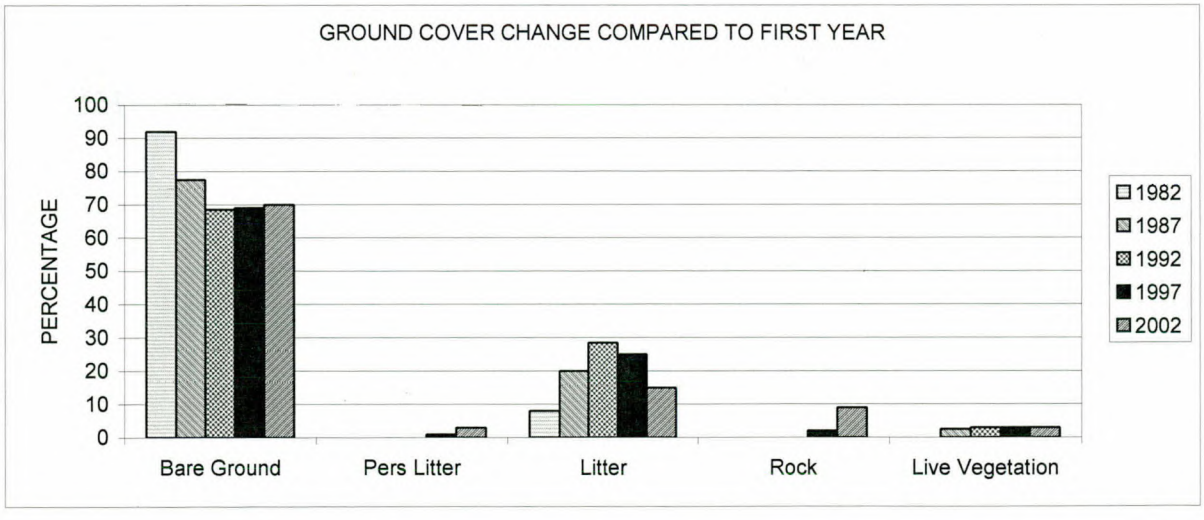
7/10/03	ALLOTMENT MAINSTREET	PASTURE ROUND POND	KEY AREA 1

COVER	YEARS PLOT WERE READ											TREND INDEX: COMPARES DATA FROM THE YEAR READ BACK TO BASE YEAR TO DETERMINE INDEX (a significant change is more than 10%) BASE YEAR = 1982									
CATEGORIES	1982	1987	1992	1997	2002	2005	2008	2011	2014	2017	2020	1987	1992	1997	2002	2005	2008	2011	2014	2017	2020
OTHER SHRUBS																					
GUSA2	3	5	5	5								50	50	67							
OTHERSHRUB																					
TOTALS	3	5	5	5								50	50	67							
OTHER GRASSES																					
SCBR	2	13	14	12	5							550	575	500	150						
PPGG		15										3000									
TOTALS	2	28	14	12	5							1300	575	500	150						
FORBS																					
SAKA		63		2								12500		400							
SPHAE	1	2	3	5	1							300	500	900	100						
AAFF		14		3								2800		600							
AAGG																					
ERIOG	22	65	55	44	1							193	148	100	-95						
TOTALS	23	143	58	54	2							536	156	140	-91						

Allotment: MAINSTREET **Pasture: ROUND POND** **Key Area: 1**







PACE FREQUENCY TREND ANALYSIS

7/10/03 | ALLOTMENT: MAINSTREET | PASTURE: SALARATUS | KEY AREA 1 | PAGE NUMBER 1

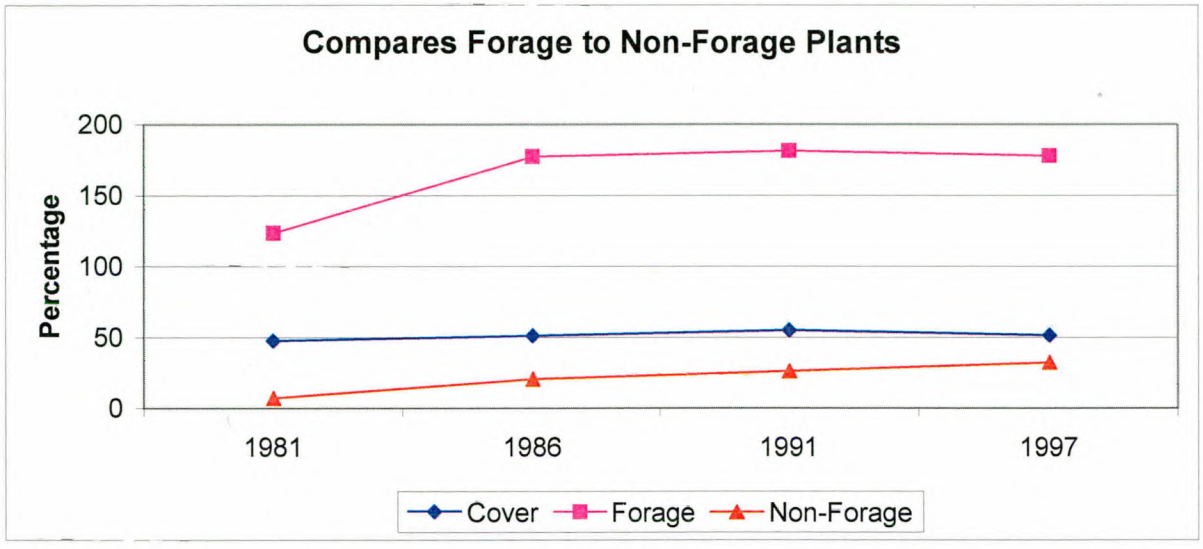
COVER CATEGORIES	YEARS PLOT WERE READ											TREND INDEX COMPARES DATA FROM THE YEAR READ BACK TO BASE YEAR TO DETERMINE INDEX (a significant change is more than 10%) BASE YEAR = 1982									
	1981	1986	1991	1997	2000	2003	2006	2009	2012	2015	2018	1986	1991	1997	2000	2003	2006	2009	2012	2015	2018
Bare Ground	53	49	46	49								-7	-14	-7							
Pers Litter		1	1	1								199	200	200							
Litter	30	36	41	31								19	36	3							
Rock	14	8	8	14								-42	-42	2							
Live Vegetation	3	6	5	5								73	31	45							
% Ground Cover	47	51	55	51								7	15	8							
BROWSE																					
CELA	2	7	8	6								183	205	144							
ATCA2	0	1	3	3								203	408	408							
EPNE	2	6	8	8								142	225	225							
OTHER BROWS																					
TOTALS	5	14	18	17								166	232	205							
DESIRABLE GRASSES																					
Cool Season																					
Other Cool Season Grass																					
TOTALS																					
Warm Season																					
HIJA	50	56	56	55								11	10	9							
SPCR	33	66	70	68								102	115	109							
BOGR	1		2	1									52	1							
BOER	34	41	36	37								21	6	9							
Other Warm Season Grass																					
TOTALS	118	163	163	161								38	38	37							

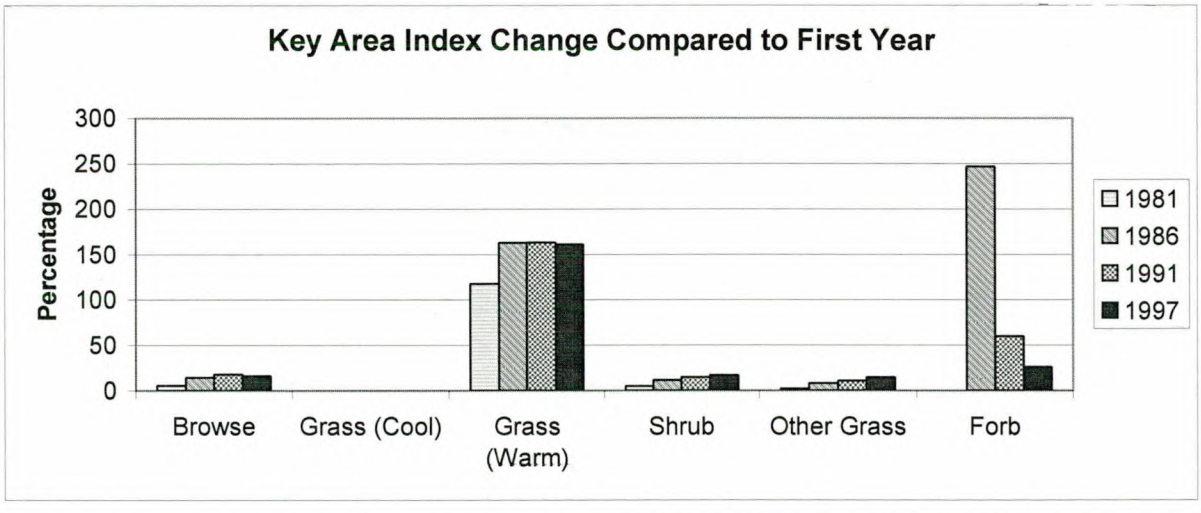
PACE FREQUENCY TREND ANALYSIS CONTINUED PAGE NUMBER 2

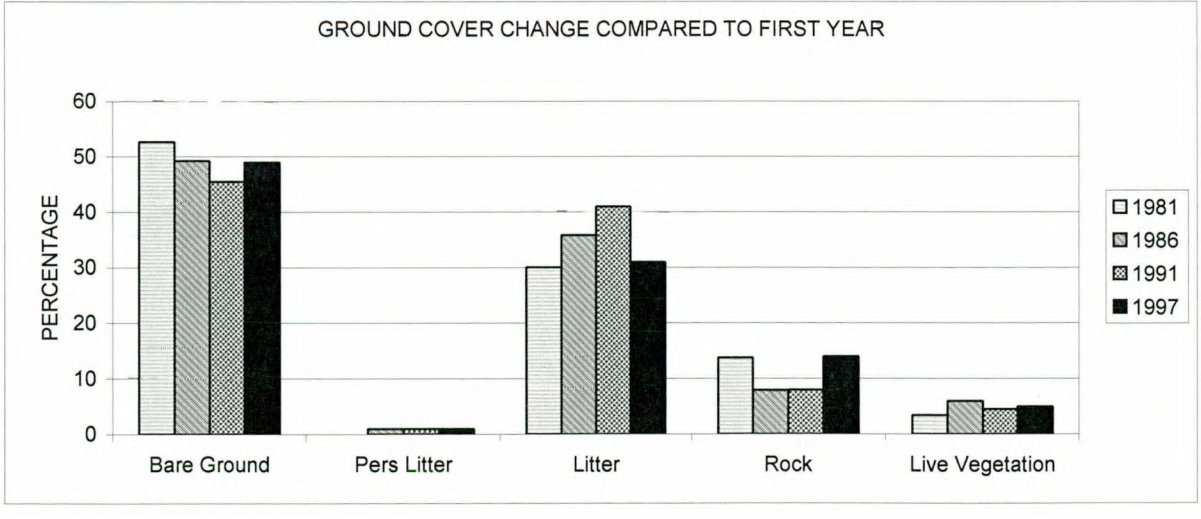
7/10/03 | ALLOTMENT MAINSTREET | PASTURE SALARATUS | KEY AREA 1

COVER CATEGORIES	YEARS PLOT WERE READ											TREND INDEX COMPARES DATA FROM THE YEAR READ BACK TO BASE YEAR TO DETERMINE INDEX (a significant change is more than 10%) BASE YEAR = 1981									
	1981	1986	1991	1997	2000	2003	2006	2009	2012	2015	2018	1986	1991	1997	2000	2003	2006	2009	2012	2015	2018
OTHER SHRUBS																					
GUSA2	5	9	14	15								82	174	205							
OPUNT		2	2	2								498	300	400							
OTHERSHRUB																					
TOTALS	5	12	15	17								142	205	245							
OTHER GRASSES																					
ARLO	2	1	3	5								-24	27	154							
SCBR		7	9	8								1393	1700	1600							
PPGG				2										400							
TOTALS	2	8	11	15								329	458	661							
FORBS																					
SAKA		6	7	10								1194	1400	2000							
SPHAE		3	5	7								597	1000	1400							
AAFF		174	46	9								34726	9200	1800							
AAGG		64										12836									
PPFF			2										400								
TOTALS		247	60	26								49353	12000	5200							

Allotment: MAINSTREET **Pasture: SALARATUS** **Key Area: 1**







PACE FREQUENCY TREND ANALYSIS

7/10/03 | ALLOTMENT: MAINSTREET | PASTURE: SOUTH CECIL | KEY AREA 1 | PAGE NUMBER 1

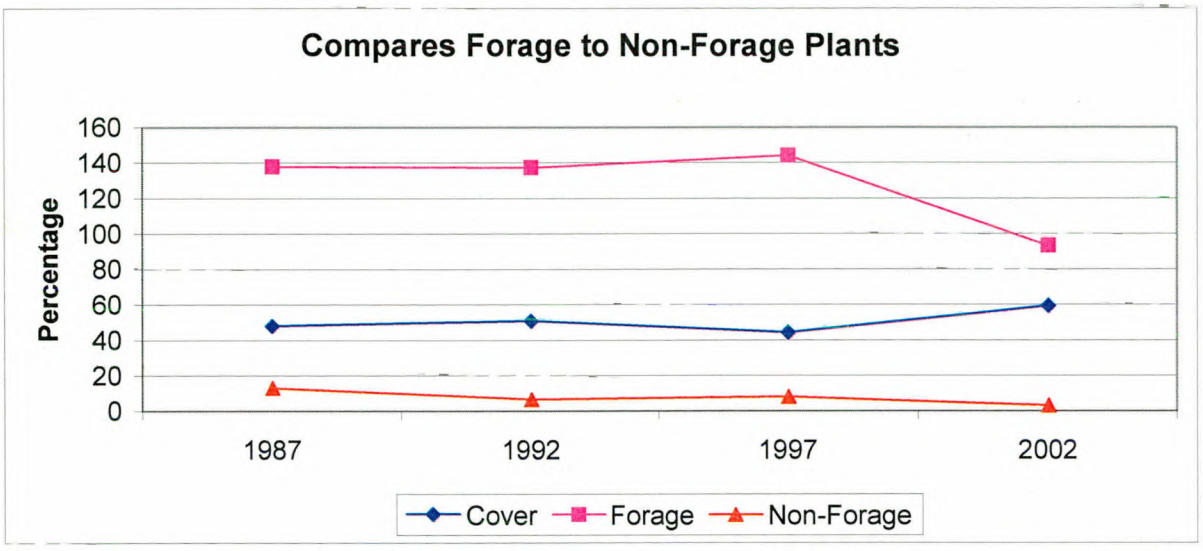
COVER CATEGORIES	YEARS PLOT WERE READ											TREND INDEX COMPARES DATA FROM THE YEAR READ BACK TO BASE YEAR TO DETERMINE INDEX (a significant change is more than 10%) BASE YEAR = 1982									
	1987	1992	1997	2002	2005	2008	2011	2014	2017	2020	2023	1992	1997	2002	2005	2008	2011	2014	2017	2020	2023
Bare Ground	52	50	56	41								-5	7	-22							
Pers Litter	0	1	2	4								101	302	704							
Litter	38	24	24	31								-38	-37	-18							
Rock	2	19	11	18								830	453	805							
Live Vegetation	7	8	7	6								1	-6	-20							
% Ground Cover	48	51	44	59								6	-8	24							
BROWSE																					
CELA	1	1	2	1								0	101	0							
ATCA2	1	1	2	2								-33	34	34							
EPNE	1	2	2	1								101	101	0							
OTHER BROWS																					
TOTALS	3	4	6	4								15	72	15							
DESIRABLE GRASSES																					
Cool Season																					
ORHY				1										200							
Other Cool Season Grass																					
TOTALS				1										200							
Warm Season																					
HIJA	53	65	65	30								22	23	-43							
SPCR	38	26	30	10								-32	-22	-74							
BOER	43	43	43	48								-2	-1	11							
Other Warm Season Grass																					
TOTALS	134	133	138	88								-1	3	-34							

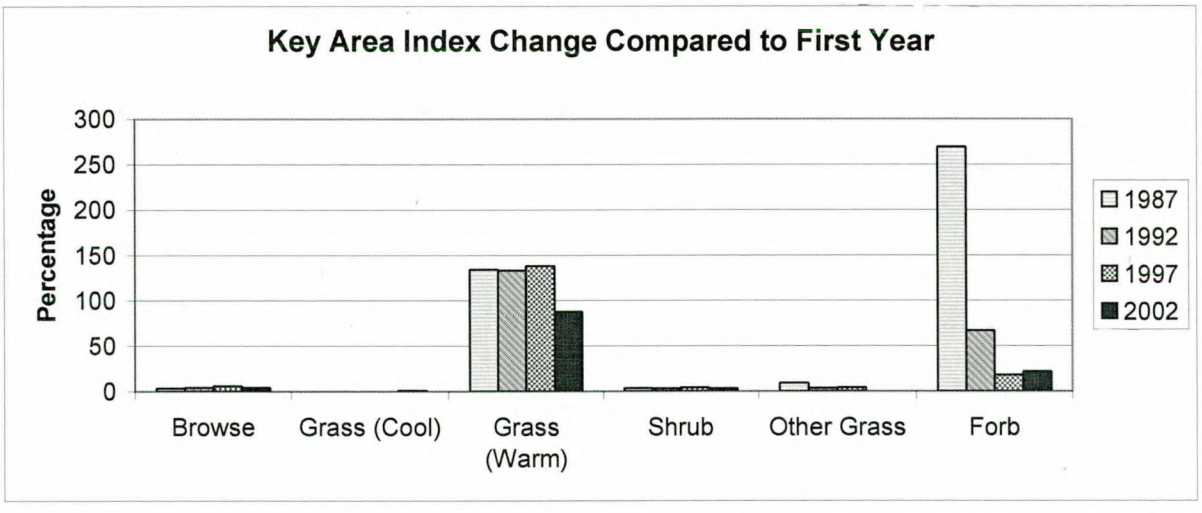
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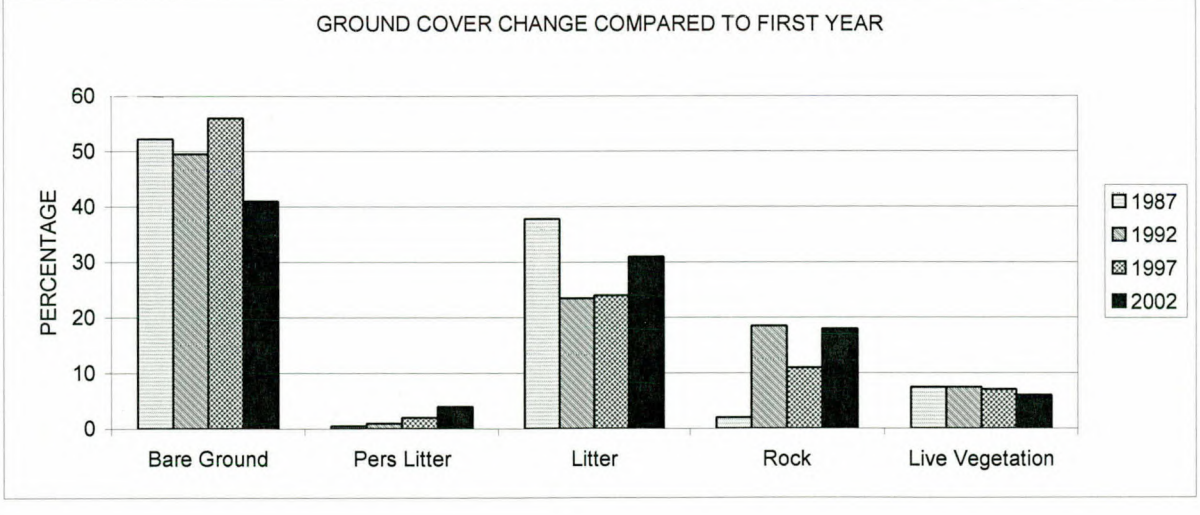
7/10/03 | ALLOTMENT MAINSTREET | PASTURE SOUTH CECIL | KEY AREA 1

COVER CATEGORIES	YEARS PLOT WERE READ											TREND INDEX COMPARES DATA FROM THE YEAR READ BACK TO BASE YEAR TO DETERMINE INDEX (a significant change is more than 10%) BASE YEAR = 1987									
	1987	1992	1997	2002	2005	2008	2011	2014	2017	2020	2023	1992	1997	2002	2005	2008	2011	2014	2017	2020	2023
OTHER SHRUBS																					
GUSA2	3	2	3	3								-43	-14	-14							
OPUNT		1	1									200	200								
OTHERSHRUB																					
TOTALS	3	3	4	3								-14	15	-14							
OTHER GRASSES																					
SCBR	9	4	4									-63	-58								
PPGG																					
TOTALS	9	4	4									-63	-58								
FORBS																					
SAKA	2	49		20								1850		704							
SPHAE	1	1	2	2								-33	34	34							
AAFF	180	3										-98									
AAGG	18	5										-76									
PLANTAGO	48		4										-92								
MUSTARD	15																				
PPFF		9	12									1800	2400								
SENEC		1										200									
ASTER	4																				
TOTALS	269	67	18	22								-75	-93	-92							

Allotment: MAINSTREET **Pasture: SOUTH CECIL** **Key Area: 1**







PACE FREQUENCY TREND ANALYSIS

7/10/03 | ALLOTMENT: MAINSTREET | PASTURE: SQUARE POND | KEY AREA 1 | PAGE NUMBER 1

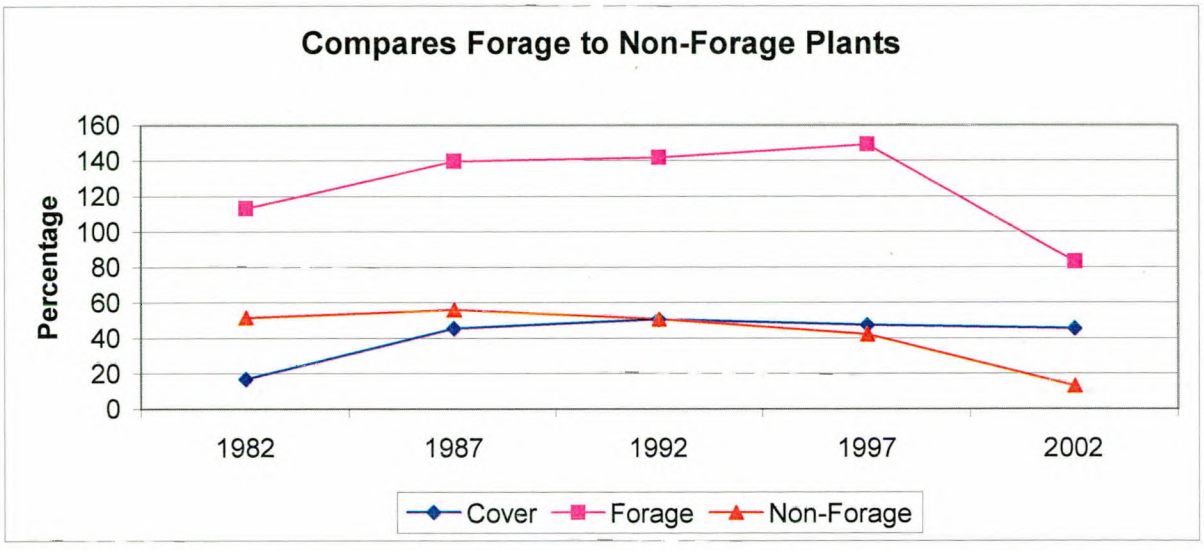
COVER	YEARS PLOT WERE READ											TREND INDEX: COMPARES DATA FROM THE YEAR READ BACK TO BASE YEAR TO DETERMINE INDEX (a significant change is more than 10%) BASE YEAR = 1982									
CATEGORIES	1982	1987	1992	1997	2002	2005	2008	2011	2014	2017	2020	1987	1992	1997	2002	2005	2008	2011	2014	2017	2020
Bare Ground	84	55	50	53	55							-34	-40	-37	-34						
Pers Litter					7										1400						
Litter	12	41	45	40	13							257	287	248	13						
Rock	1	1	2	2	18								50	100	1700						
Live Vegetation	4	3	4	5	7							-25		25	75						
% Ground Cover	17	45	50	47	45							173	203	185	173						
BROWSE																					
CELA		1	1	2	4							100	200	400	800						
EPNE	10	15	16	14	9							50	55	40	-10						
OTHER BROWS																					
TOTALS	10	16	17	16	13							55	65	60	30						
DESIRABLE GRASSES																					
Cool Season																					
SIHY		1	1	1	1							100	200	200	200						
STIPA		2	1	2	1							300	200	400	200						
Other Cool Season Grass																					
TOTALS		2	2	3	2							400	400	600	400						
Warm Season																					
HIJA	88	95	95	95	37							8	8	9	-58						
SPCR	3	8	9	13	11							200	260	420	340						
BOER	13	20	20	22	20							54	50	69	54						
Other Warm Season Grass																					
TOTALS	103	122	123	130	68							18	19	26	-34						

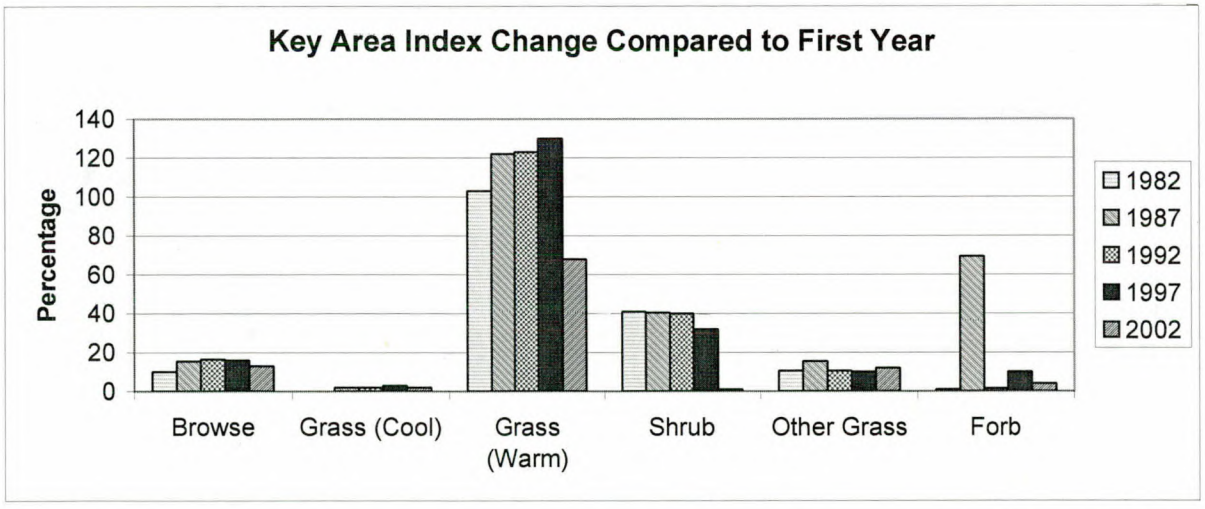
PACE FREQUENCY TREND ANALYSIS CONTINUED PAGE NUMBER 2

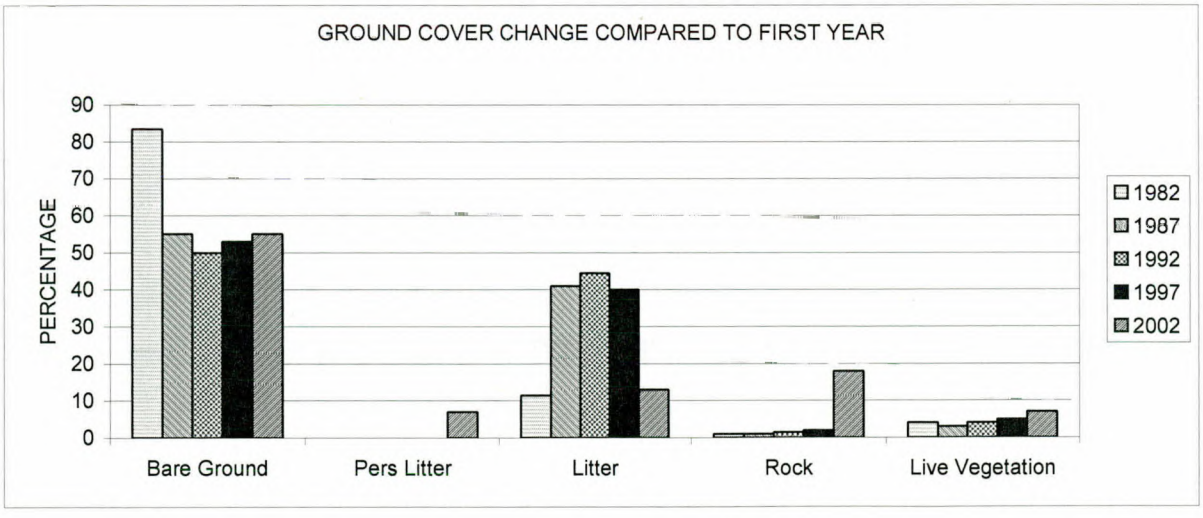
7/10/03 | ALLOTMENT MAINSTREET | PASTURE SQUARE POND | KEY AREA 1

COVER	YEARS PLOT WERE READ											TREND INDEX: COMPARES DATA FROM THE YEAR READ BACK TO BASE YEAR TO DETERMINE INDEX (a significant change is more than 10%) BASE YEAR = 1982									
CATEGORIES	1982	1987	1992	1997	2002	2005	2008	2011	2014	2017	2020	1987	1992	1997	2002	2005	2008	2011	2014	2017	2020
OTHER SHRUBS																					
GUSA2	41	40	40	30								-1	-2	-26							
LYAN	1	1	1	2										300							
LYCIU					1										200						
OTHERSHRUB																					
TOTALS	41	41	40	32	1							-1	-2	-22	-98						
OTHER GRASSES																					
ARIST	1																				
ARLO		2	3	4	7							400	600	800	1400						
SCBR	10	9	8	6	5							-15	-25	-40	-50						
PPGG		5										1000									
TOTALS	11	16	11	10	12							48		-5	14						
FORBS																					
SAKA		1		2								100		400							
SPHAE	1		2	4	2								50	300	100						
AAFF		54		4								10700		800							
AAGG																					
ERIOG					2										400						
PLANTAGO		9										1700									
PPFF		6										1200									
ASTER		1										200									
TOTALS	1	70	2	10	4							6850	50	900	300						

Allotment: MAINSTREET **Pasture: SQUARE POND** **Key Area: 1**







PACE FREQUENCY TREND ANALYSIS

7/10/03	ALLOTMENT: MAINSTREET	PASTURE: TEMPLE TRAIL	KEY AREA 1	PAGE NUMBER 1

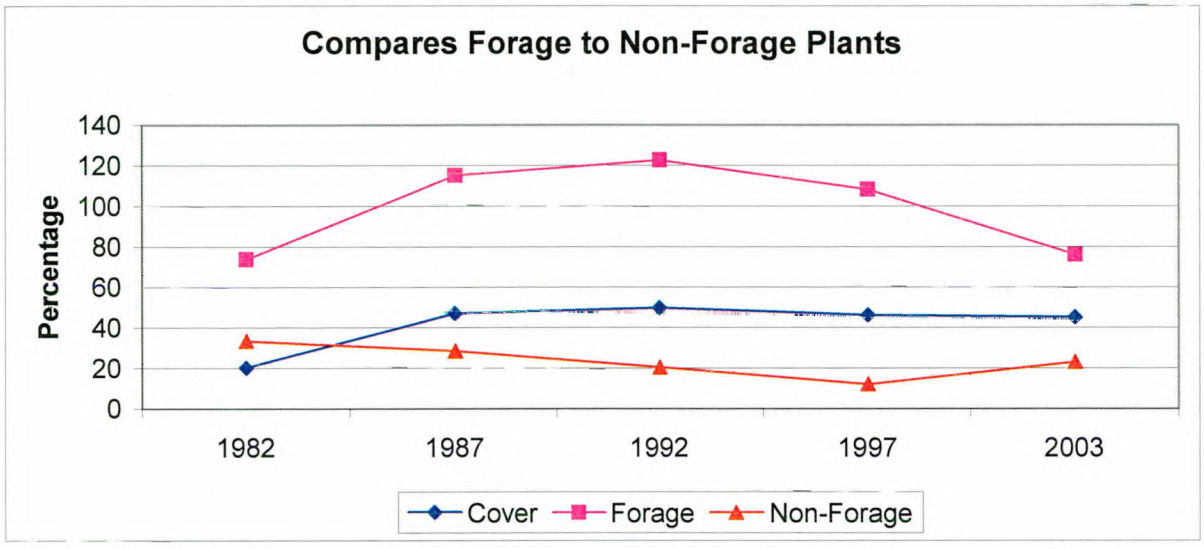
COVER	YEARS PLOT WERE READ											TREND INDEX: COMPARES DATA FROM THE YEAR READ BACK TO BASE YEAR TO DETERMINE INDEX (a significant change is more than 10%) BASE YEAR = 1982									
CATEGORIES	1982	1987	1992	1997	2003	2006	2009	2012	2015	2018	2021	1987	1992	1997	2003	2006	2009	2012	2015	2018	2021
Bare Ground	80	53	51	54	55							-34	-37	-33	-31						
Pers Litter		2	2	1	35							400	300	200	7000						
Litter	18	31	37	33	1							70	107	84	-94						
Rock		1			3							100			600						
Live Vegetation	2	14	11	12	6							604	453	503	202						
% Ground Cover	20	47	50	46	45							136	149	131	126						
BROWSE																					
CELA		1	1	1	1							100	200	200	200						
ATCA2	2	2	3	3	1							-20	21	21	-60						
EPNE	4	9	10	7	4							126	151	76	0						
OTHER BROWS																					
TOTALS	6	12	14	11	6							78	116	70	-7						
DESIRABLE GRASSES																					
Cool Season																					
SIHY		1	1	1								200	100	200							
Other Cool Season Grass																					
TOTALS		1	1	1								200	100	200							
Warm Season																					
HIJA	59	77	80	79	58							29	34	33	-2						
SPCR	2	13	14	3	3							403	463	21	21						
BOER	5	14	15	14	9							147	165	156	64						
Other Warm Season Grass																					
TOTALS	67	103	108	96	70							53	61	43	4						

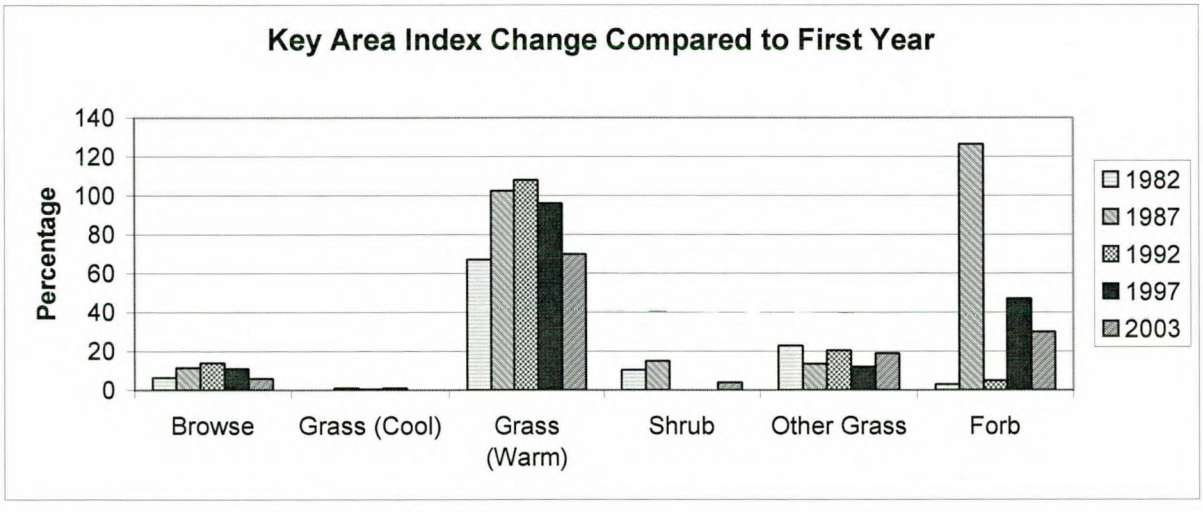
PACE FREQUENCY TREND ANALYSIS CONTINUED PAGE NUMBER 2

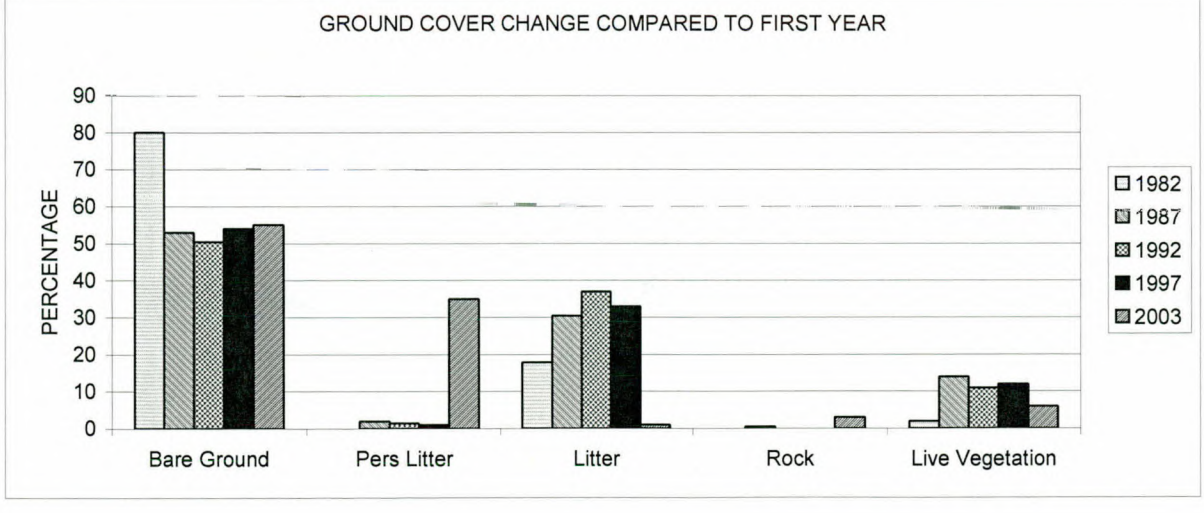
7/10/03	ALLOTMENT MAINSTREET	PASTURE TEMPLE TRAIL	KEY AREA 1

COVER	YEARS PLOT WERE READ											TREND INDEX: COMPARES DATA FROM THE YEAR READ BACK TO BASE YEAR TO DETERMINE INDEX (a significant change is more than 10%) BASE YEAR = 1982									
CATEGORIES	1982	1987	1992	1997	2003	2006	2009	2012	2015	2018	2021	1987	1992	1997	2003	2006	2009	2012	2015	2018	2021
OTHER SHRUBS																					
GUSA2	10	15			3							44			-71						
CHVI8					1										200						
OTHERSHRUB																					
TOTALS	10	15			4							44			-62						
OTHER GRASSES																					
ARLO		1	2	1								100	400	200							
SCBR	23	13	19	11	19							-43	-19	-52	-17						
PPGG																					
TOTALS	23	14	21	12	19							-41	-10	-48	-17						
FORBS																					
SAKA					20										4000						
SPHAE	3	4	4	4	6							17	17	34	101						
AAFF		36	2									7100	300								
AAGG																					
ERIOG				1	2									200	400						
PLANTAGO		62		42	2							12300		8400	400						
MUSTARD		26										5200									
PPFF																					
TOTALS	3	127	5	47	30							4138	68	1475	905						

Allotment: MAINSTREET **Pasture: TEMPLE TRAIL** **Key Area: 1**







PACE FREQUENCY TREND ANALYSIS

7/10/03 | ALLOTMENT: MAINSTREET | PASTURE: TWIN TANKS | KEY AREA 1 | PAGE NUMBER 1

TREND INDEX

COVER	YEARS PLOT WERE READ											COMPARES DATA FROM THE YEAR READ BACK TO BASE YEAR TO DETERMINE INDEX (a significant change is more than 10%) BASE YEAR = 1982									
CATEGORIES	1981	1986	1991	1997	2002	2005	2008	2011	2014	2017	2020	1986	1991	1997	2002	2005	2008	2011	2014	2017	2020
Bare Ground	75	66	67	68	45							-13	-11	-10	-40						
Pers Litter	4	7	7	10	20							98	98	183	466						
Litter	15	23	21	15	18							49	39	-1	19						
Rock	2	1	1	2	10							-34	-34	32	560						
Live Vegetation	5	4	4	5	7							-12	-12	10	54						
% Ground Cover	25	35	33	32	55							39	33	29	122						
BROWSE																					
CELA		1	2	2								100	400	400							
OTHER BROWS																					
TOTALS		1	2	2								100	400	400							
DESIRABLE GRASSES																					
Cool Season																					
ORHY	1	5	10	6	1							890	1880	1088	98						
SIHY	9	28	61	37	5							203	571	307	-45						
STIPA		3	5	4								600	1000	800							
Other Cool Season Grass																					
TOTALS	10	36	76	47	6							270	692	390	-37						
Warm Season																					
HIJA	57	64	125	60	26							11	119	5	-54						
SPCR	1	25		23	22							4850		4454	4256						
SPNE			46										9200								
BOGR	16	18	45	26	9							15	187	66	-43						
BOER		1	3	3								100	600	600							
MUTO2				1										200							
Other Warm Season Grass																					
TOTALS	73	107	219	113	57							46	199	54	-22						

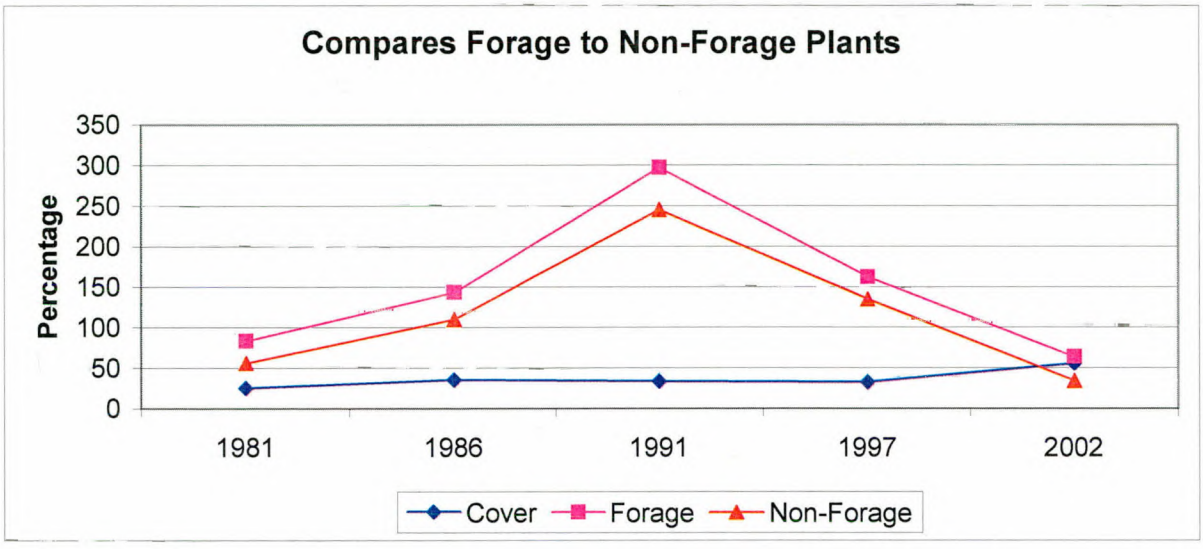
PACE FREQUENCY TREND ANALYSIS CONTINUED PAGE NUMBER 2

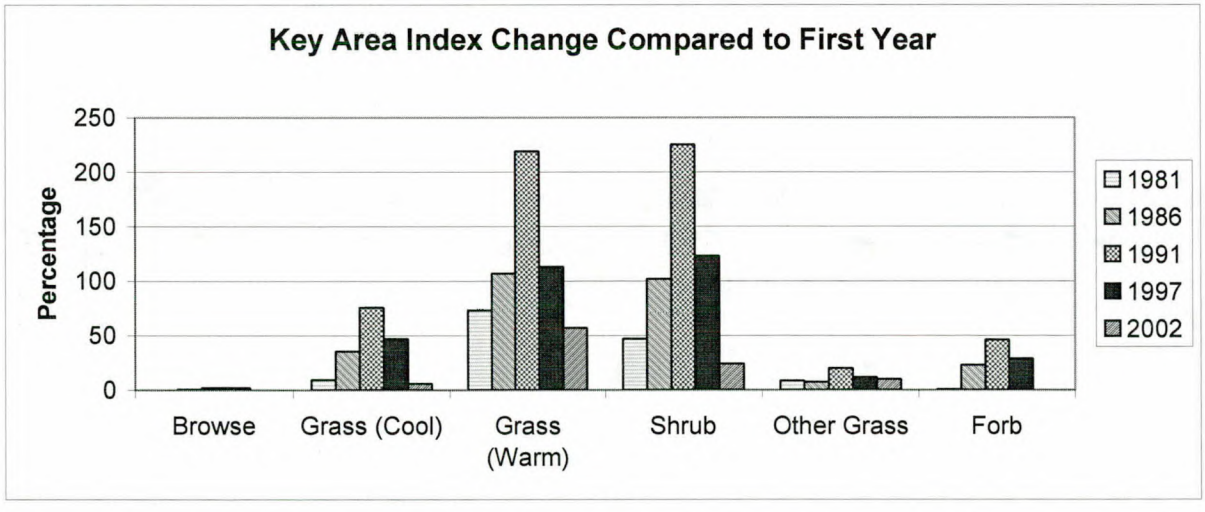
7/10/03 | ALLOTMENT MAINSTREET | PASTURE TWIN TANKS | KEY AREA 1

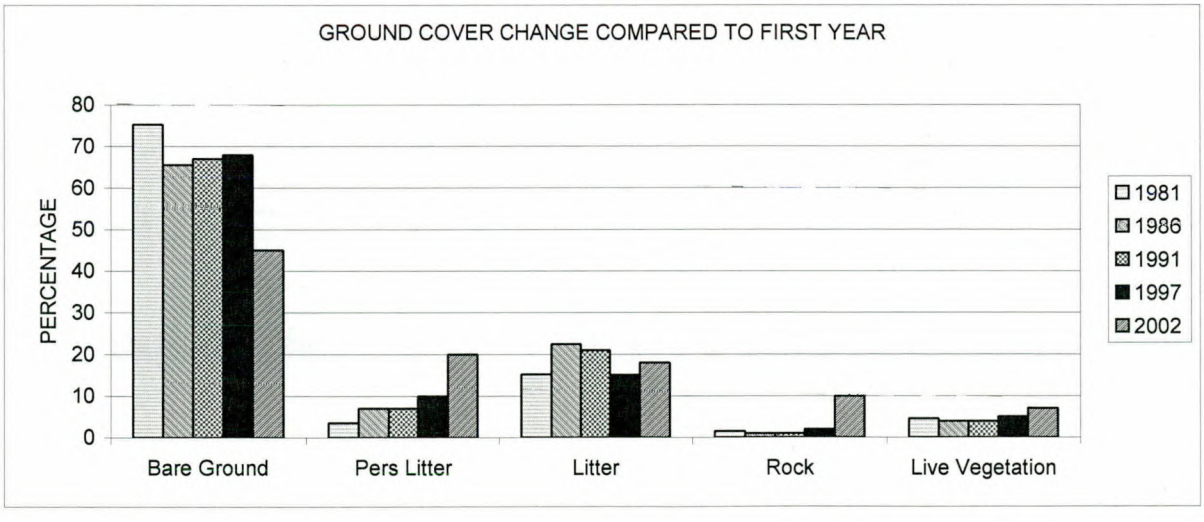
TREND INDEX

COVER	YEARS PLOT WERE READ											COMPARES DATA FROM THE YEAR READ BACK TO BASE YEAR TO DETERMINE INDEX (a significant change is more than 10%) BASE YEAR = 1981									
CATEGORIES	1981	1986	1991	1997	2002	2005	2008	2011	2014	2017	2020	1986	1991	1997	2002	2005	2008	2011	2014	2017	2020
OTHER SHRUBS																					
GUSA2	23	56	131	52	1							146	476	129	-96						
ARTR2	21	40	92	70	17							89	334	230	-20						
OPUNT		1	2	1	1							100	400	200	200						
LYAN		1			2							100			400						
HAPP_ACAMP	2	5			3							230			98						
OTHERSHRUB	2																				
TOTALS	47	102	225	123	24							117	379	162	-49						
OTHER GRASSES																					
ARLO	9	8	20	12	10							-13	133	40	16						
PPGG																					
TOTALS	9	8	20	12	10							-13	133	40	16						
FORBS																					
ASTRA	1	2	6	5								296	1088	890							
SPHAE		6	13	9								1100	2600	1800							
AAFF				7										1400							
PPFF		4	12									800	2400								
ASTER		12	15	8								2300	3000	1600							
TOTALS	1	23	46	29								4454	9008	5642							

Allotment: MAINSTREET **Pasture: TWIN TANKS** **Key Area: 1**







PACE FREQUENCY TREND ANALYSIS

7/10/03	ALLOTMENT: MAINSTREET	PASTURE: BULL POND	KEY AREA 10	PAGE NUMBER 1

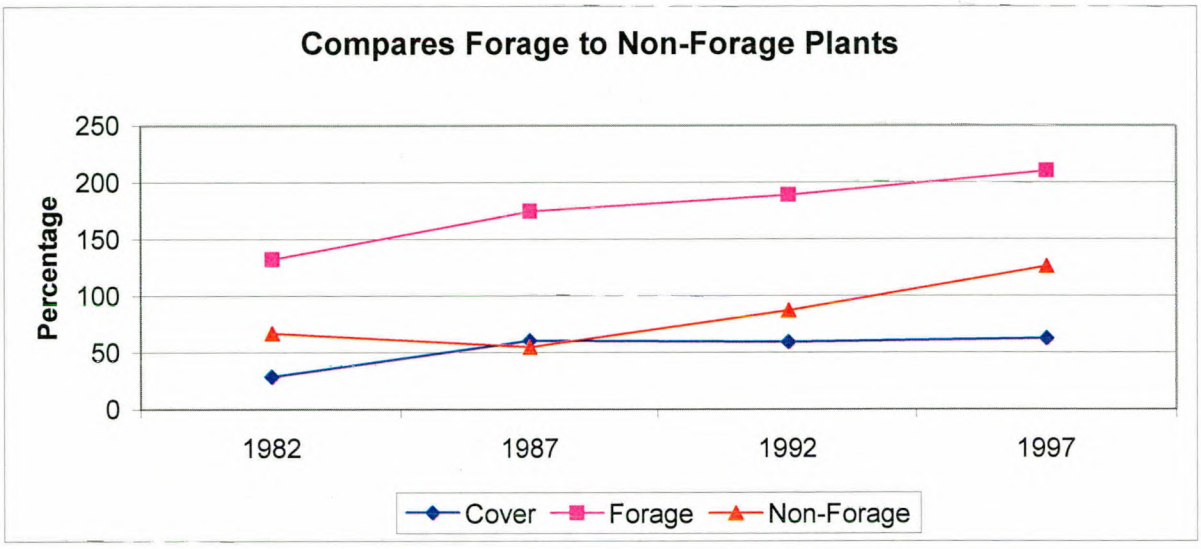
COVER CATEGORIES	YEARS PLOT WERE READ											TREND INDEX: COMPARES DATA FROM THE YEAR READ BACK TO BASE YEAR TO DETERMINE INDEX (a significant change is more than 10%) BASE YEAR = 1982									
	1982	1987	1992	1997	2000	2003	2006	2009	2012	2015	2018	1987	1992	1997	2000	2003	2006	2009	2012	2015	2018
Bare Ground	72	40	41	38								-44	-43	-47							
Pers Litter		3	3	9								585	693	1800							
Litter	18	41	42	39								125	126	112							
Rock	3	5	5	6								54	56	72							
Live Vegetation	6	10	8	8								58	30	24							
% Ground Cover	28	60	59	62								112	108	119							
BROWSE																					
EPNE				2										400							
OTHER BROWS																					
TOTALS				2										400							
DESIRABLE GRASSES																					
Cool Season																					
ORHY	0	0	1	3								-2	99	503							
SIHY	14	21	28	21								45	96	46							
STIPA	21	50	50	55								140	142	163							
Other Cool Season Grass																					
TOTALS	36	72	80	79								100	123	121							
Warm Season																					
HIJA	21	17	19	28								-18	-10	34							
SPCR	2	1	1	2								-51	-25	0							
BOGR	73	80	82	89								9	12	22							
BOER	0	4	7	10								782	1293	1910							
Other Warm Season Grass																					
TOTALS	97	102	109	129								6	13	34							

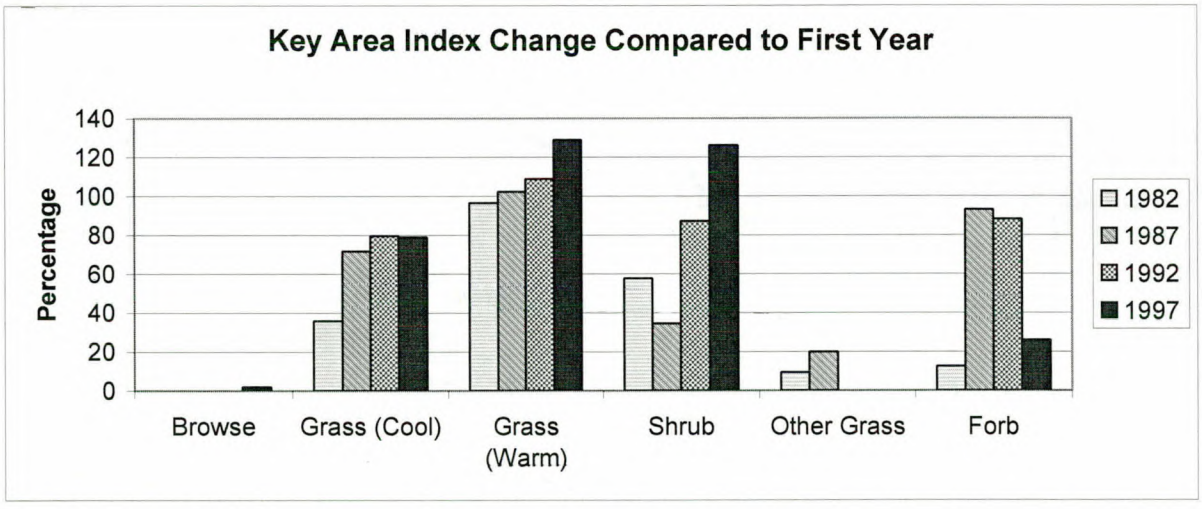
PACE FREQUENCY TREND ANALYSIS CONTINUED PAGE NUMBER 2

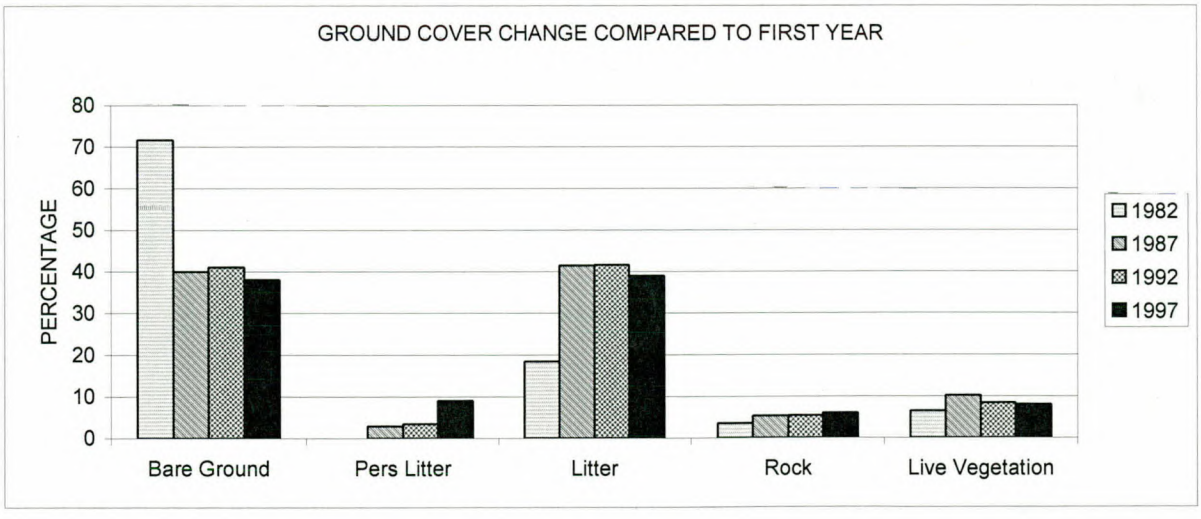
7/10/03	ALLOTMENT MAINSTREET	PASTURE BULL POND	KEY AREA 10

COVER CATEGORIES	YEARS PLOT WERE READ											TREND INDEX: COMPARES DATA FROM THE YEAR READ BACK TO BASE YEAR TO DETERMINE INDEX (a significant change is more than 10%) BASE YEAR = 1982									
	1982	1987	1992	1997	2000	2003	2006	2009	2012	2015	2018	1987	1992	1997	2000	2003	2006	2009	2012	2015	2018
OTHER SHRUBS																					
GUSA2	23	6	44	45								-75	88	92							
CHVI8	6																				
CHRYSO		8	8	8								1659	1584	1600							
ARTR2	7	10	9	8								31	26	7							
OPUNT		0	1	2								98	198	400							
LYAN	2		0	2									-80	-20							
ERIOG_SHRB				16										3200							
HAPP_ACAMP				24										4800							
OTHERSHRUB	13	8	22									-38	62								
TOTALS	58	35	87	126								-40	51	118							
OTHER GRASSES																					
ARIST	9																				
ARLO		18										3512									
PPGG		2										488									
TOTALS	9	20										112									
FORBS																					
ASTRA		1										195									
SAKA			2										495								
SPHAE	9	1	3	6								-84	-67	-33							
AAFF		17	55									3317	10990								
AAGG		5	6									976	1188								
ERIOG	1	12										1126									
MUSTARD		32										6341									
PPFF		25										5073									
ASTER	2		22	20									776	704							
TOTALS	12	93	88	26								649	608	109							

Allotment: MAINSTREET **Pasture: BULL POND** **Key Area: 10**







PACE FREQUENCY TREND ANALYSIS

7/10/03	ALLOTMENT: MAINSTREET	PASTURE: ROSENBERRY	KEY AREA 14	PAGE NUMBER 1

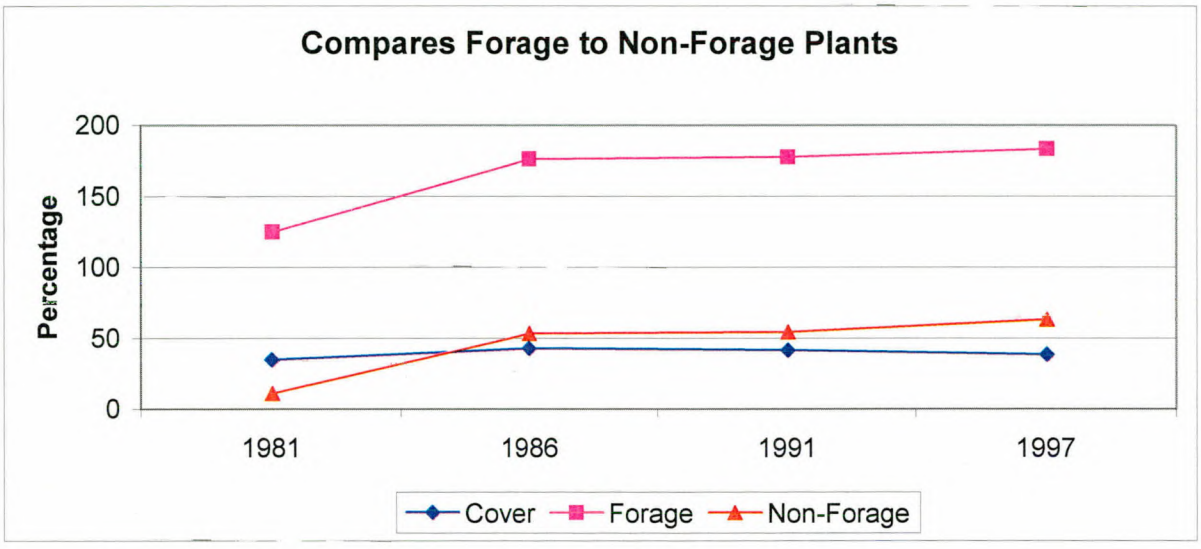
COVER	YEARS PLOT WERE READ											TREND INDEX COMPARES DATA FROM THE YEAR READ BACK TO BASE YEAR TO DETERMINE INDEX (a significant change is more than 10%) BASE YEAR = 1982									
CATEGORIES	1981	1986	1991	1997	2000	2003	2006	2009	2012	2015	2018	1986	1991	1997	2000	2003	2006	2009	2012	2015	2018
Bare Ground	66	58	59	62								-12	-10	-5							
Pers Litter	3	1	3	3								-67		2							
Litter	11	28	24	23								155	123	112							
Rock	12	5	6	5								-58	-46	-58							
Live Vegetation	9	9	7	7									-17	-21							
% Ground Cover	34	42	41	38								23	19	10							
BROWSE																					
CELA		0	1	1								99	197	200							
ATCA2			1	1									197	197							
EPNE	6	8	8	8								31	23	25							
OTHER BROWS																					
TOTALS	6	9	10	10								38	54	56							
DESIRABLE GRASSES																					
Cool Season																					
SIHY		2	3	4								394	591	800							
STIPA	1		0	2									-67	35							
Other Cool Season Grass																					
TOTALS	1	2	3	6								33	133	306							
Warm Season																					
HIJA	42	65	69	71								54	66	70							
SPCR		5	6	8								1084	1281	1600							
BOGR	64	74	70	69								17	10	9							
BOER	11	21	18	19								83	61	68							
Other Warm Season Grass																					
TOTALS	117	165	164	167								41	41	43							

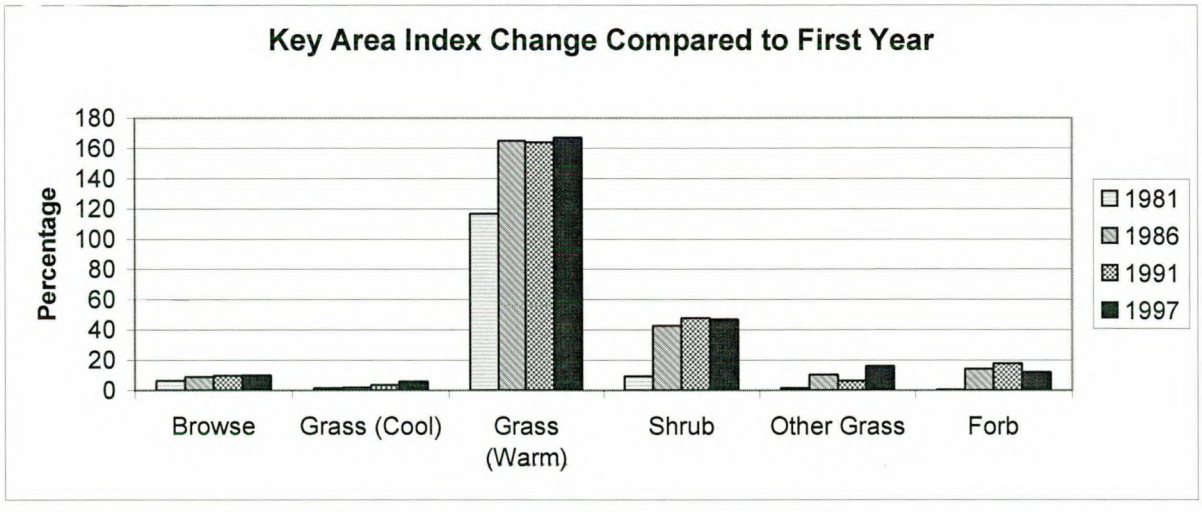
PACE FREQUENCY TREND ANALYSIS CONTINUED PAGE NUMBER 2

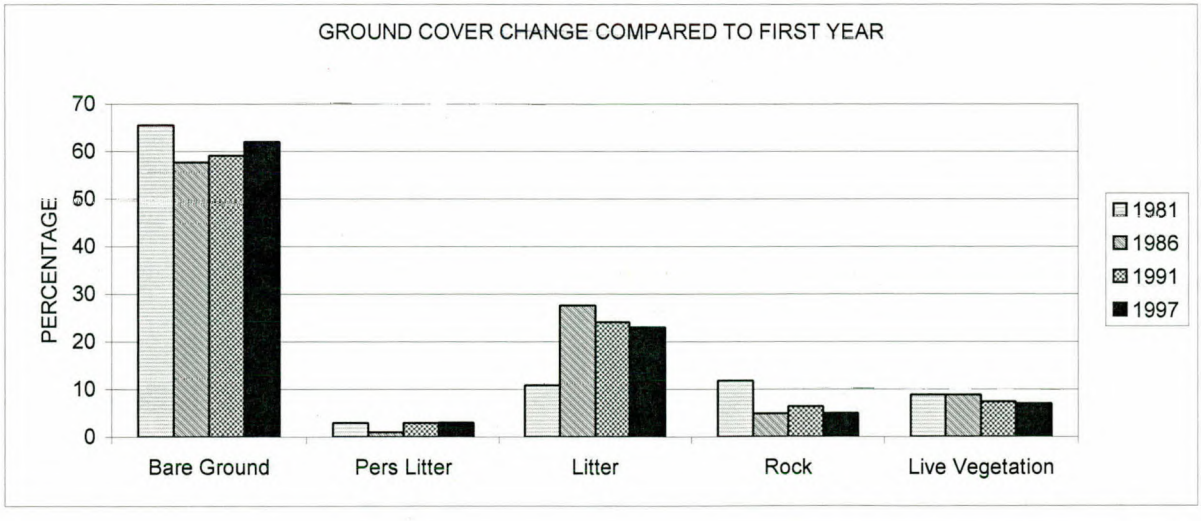
7/10/03	ALLOTMENT MAINSTREET	PASTURE ROSENBERRY	KEY AREA 14

COVER	YEARS PLOT WERE READ											TREND INDEX COMPARES DATA FROM THE YEAR READ BACK TO BASE YEAR TO DETERMINE INDEX (a significant change is more than 10%) BASE YEAR = 1981									
CATEGORIES	1981	1986	1991	1997	2000	2003	2006	2009	2012	2015	2018	1986	1991	1997	2000	2003	2006	2009	2012	2015	2018
OTHER SHRUBS																					
GUSA2		3	41	40								690	8177	8000							
ARTR2	0	0	1	1									100	103							
OPUNT		1	1	2								197	296	400							
LYAN	3	3	4	4								17	50	35							
HAPP_ACAMP	5	34										536									
OTHERSHRUB	0																				
TOTALS	9	43	48	47								358	411	402							
OTHER GRASSES																					
ARIST	1																				
ARLO		10	6	16								2069	1281	3200							
TOTALS	1	10	6	16								600	333	983							
FORBS																					
ASTRA	0		0	1										103							
SAKA		2	3									394	591								
SPHAE		0	2	1								99	394	200							
AAFF																					
AAGG																					
PLANTAGO		1	2	2								296	394	400							
PPFF		3	3	3								591	591	600							
ASTER		7	7	5								1478	1478	1000							
TOTALS	0	14	18	12								2800	3500	2336							

Allotment: MAINSTREET **Pasture: ROSENBERRY** **Key Area: 14**







PACE FREQUENCY TREND ANALYSIS

7/10/03	ALLOTMENT: MAINSTREET	PASTURE: KELLER	KEY AREA 15	PAGE NUMBER 1

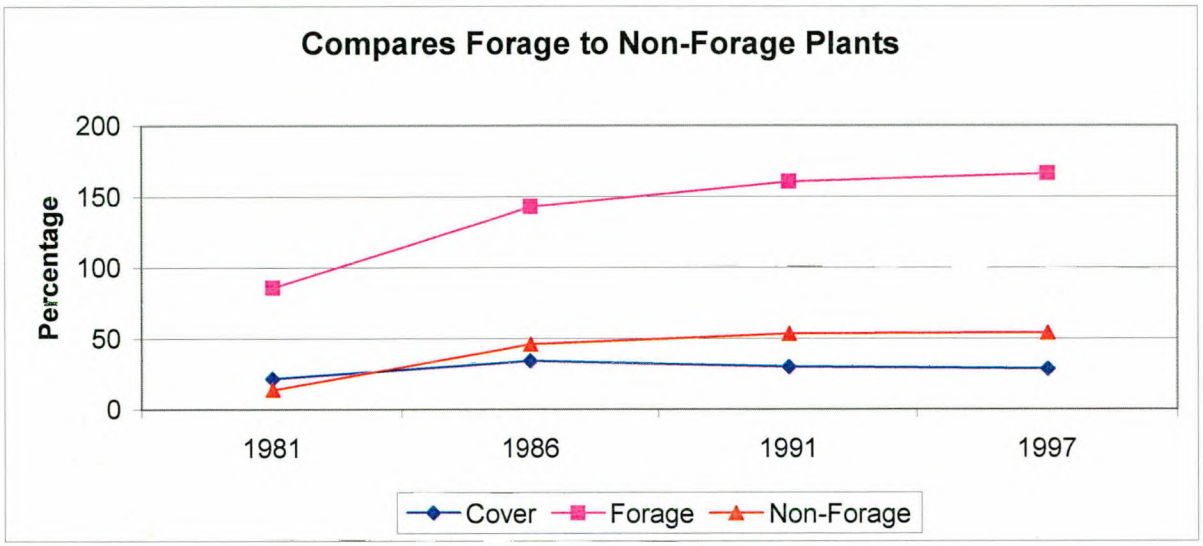
COVER	YEARS PLOT WERE READ											TREND INDEX: COMPARES DATA FROM THE YEAR READ BACK TO BASE YEAR TO DETERMINE INDEX (a significant change is more than 10%) BASE YEAR = 1982									
CATEGORIES	1981	1986	1991	1997	2000	2003	2006	2009	2012	2015	2018	1986	1991	1997	2000	2003	2006	2009	2012	2015	2018
Bare Ground	79	66	71	72								-16	-10	-9							
Pers Litter		1										199									
Litter	18	25	24	23								41	33	28							
Rock			1	1									199	200							
Live Vegetation	3	7	4	4								137	42	27							
% Ground Cover	21	34	29	28								60	39	32							
BROWSE																					
CELA	0		1	2									121	344							
ATCA2	1		1	1									-26	-26							
EPNE		0	1	1								100	199	200							
OTHER BROWS																					
TOTALS	2	0	3	4								-72	66	122							
DESIRABLE GRASSES																					
Cool Season																					
ORHY	0	4	5	8								784	1004	1676							
Other Cool Season Grass																					
TOTALS	0	4	5	8								784	1004	1676							
Warm Season																					
HIJA	58	66	74	80								14	29	39							
SPCR	4	20	24	22								403	489	443							
BOGR	22	52	54	52								139	151	141							
BOER		0										100									
Other Warm Season Grass																					
TOTALS	83	138	152	154								66	83	85							

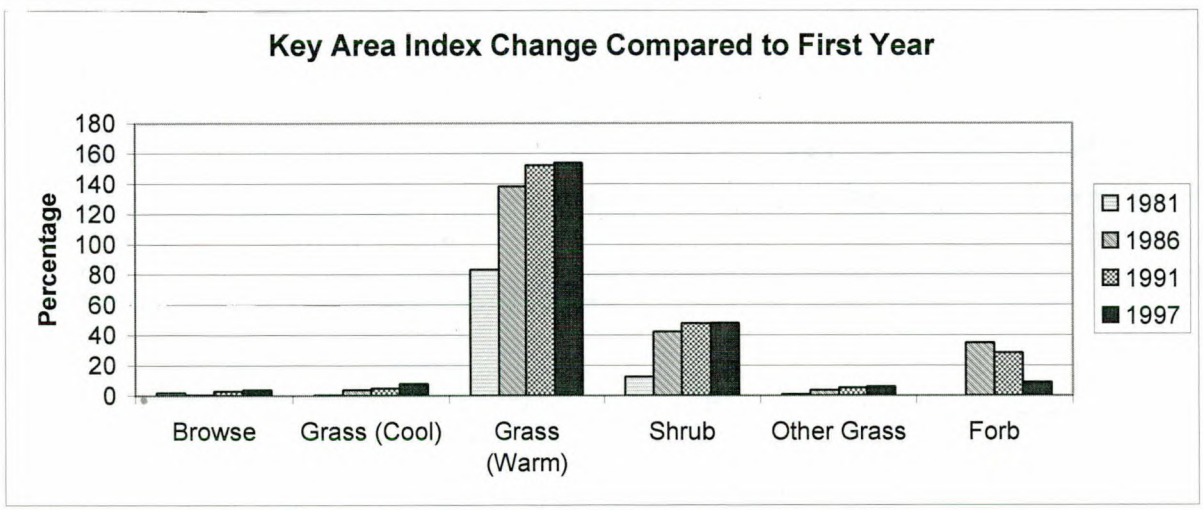
PACE FREQUENCY TREND ANALYSIS CONTINUED PAGE NUMBER 2

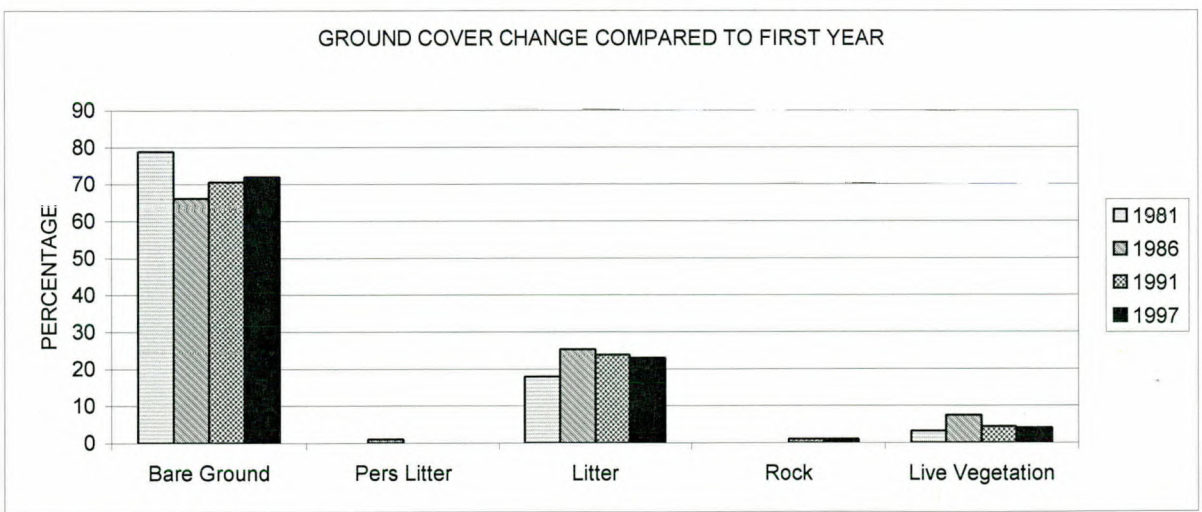
7/10/03	ALLOTMENT MAINSTREET	PASTURE KELLER	KEY AREA 15

COVER	YEARS PLOT WERE READ											TREND INDEX: COMPARES DATA FROM THE YEAR READ BACK TO BASE YEAR TO DETERMINE INDEX (a significant change is more than 10%) BASE YEAR = 1981									
CATEGORIES	1981	1986	1991	1997	2000	2003	2006	2009	2012	2015	2018	1986	1991	1997	2000	2003	2006	2009	2012	2015	2018
OTHER SHRUBS																					
GUSA2	6	31	40	41								435	588	600							
OPUNT			0	1									100	200							
LYAN	4	7	6	5								72	60	23							
HAPP_ACAMP	3	3										29									
YUCCA		0	0	1								100	100	200							
OTHERSHRUB																					
TOTALS	13	42	48	48								235	279	281							
OTHER GRASSES																					
ARLO	1	3	5	6								231	507	566							
PPGG		0										100									
TOTALS	1	3	5	6								287	507	566							
FORBS																					
SAKA		19	23									3781	4577								
SPHAE		1	3	6								299	697	1200							
AAFF		6										1294									
AAGG																					
PPFF		1										299									
ASTER		6	2	3								1294	398	600							
TOTALS		35	28	9								6965	5672	1800							

Allotment: MAINSTREET **Pasture: KELLER** **Key Area: 15**







PACE FREQUENCY TREND ANALYSIS

7/10/03 | ALLOTMENT: MAINSTREET | PASTURE: CALF | KEY AREA 17 | PAGE NUMBER 1

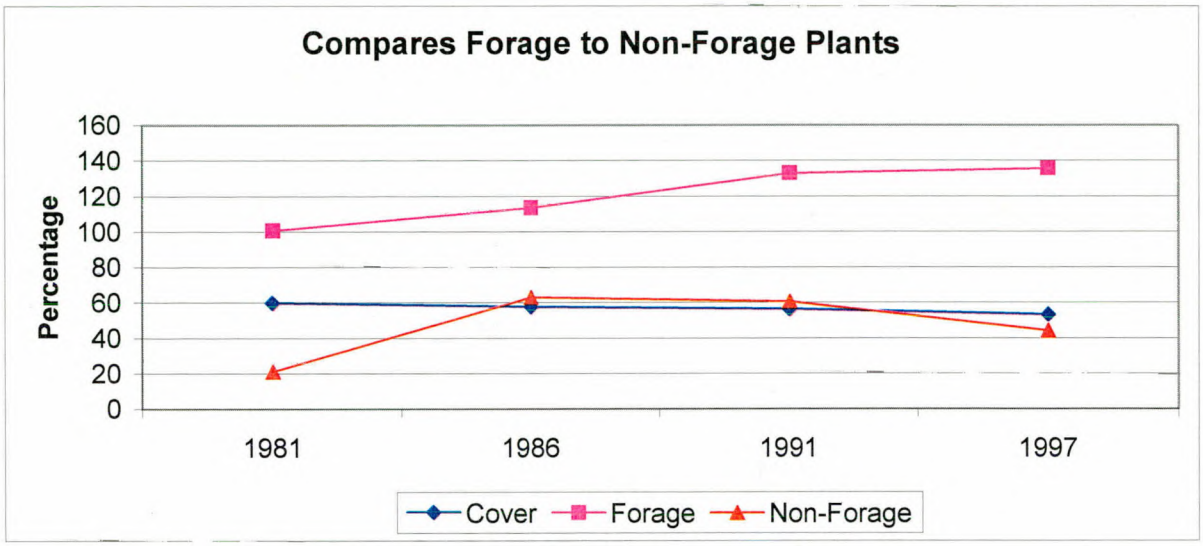
COVER CATEGORIES	YEARS PLOT WERE READ											TREND INDEX COMPARES DATA FROM THE YEAR READ BACK TO BASE YEAR TO DETERMINE INDEX (a significant change is more than 10%) BASE YEAR = 1982									
	1981	1986	1991	1997	2000	2003	2006	2009	2012	2015	2018	1986	1991	1997	2000	2003	2006	2009	2012	2015	2018
Bare Ground	41	43	44	47								5	8	16							
Pers Litter	3	0	1									-80	-41								
Litter	15	33	26	22								129	77	52							
Rock	36	19	25	27								-46	-29	-24							
Live Vegetation	7	4	4	4								-36	-44	-43							
% Ground Cover	60	57	56	53								-3	-6	-11							
BROWSE																					
CELA	3	2	3	3								-34	-1								
ATCA2		1	1	1								198	296	296							
EPNE		9	11	9								1782	2167	1800							
OTHER BROWS																					
TOTALS	3	12	15	13								296	409	349							
DESIRABLE GRASSES																					
Cool Season																					
ORHY		4	4	4								792	887	800							
STIPA		0	1	2								99	197	400							
Other Cool Season Grass																					
TOTALS		4	5	6								891	1084	1200							
Warm Season																					
HIJA	77	84	86	87								9	11	13							
SPCR	5	8	10	9								58	97	80							
BOGR	1	1	1	2								-1	48	100							
BOER	15	4	15	18								-73	5	24							
Other Warm Season Grass																					
TOTALS	98	97	112	116								0	15	19							

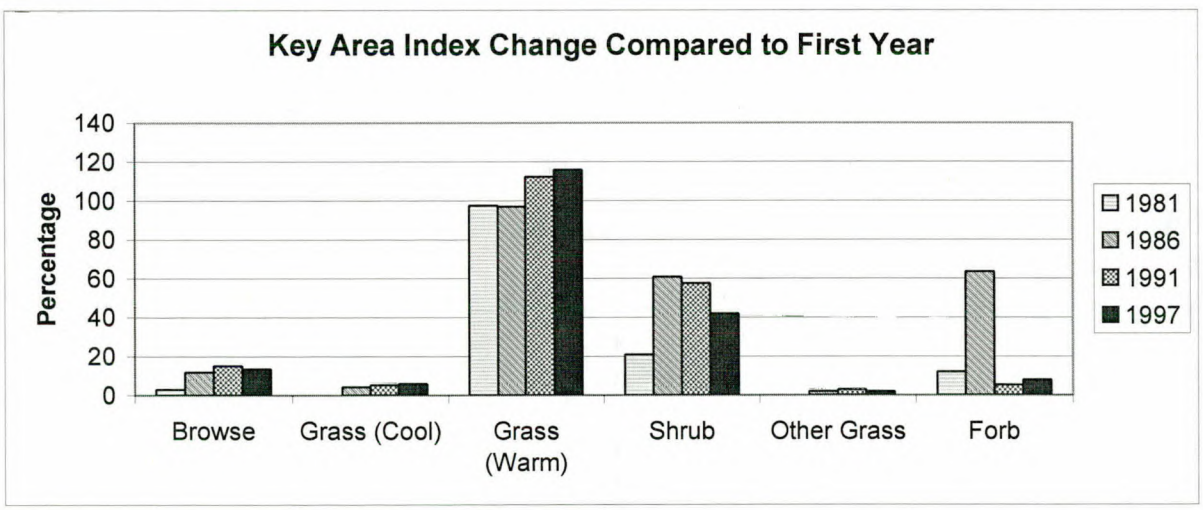
PACE FREQUENCY TREND ANALYSIS CONTINUED PAGE NUMBER 2

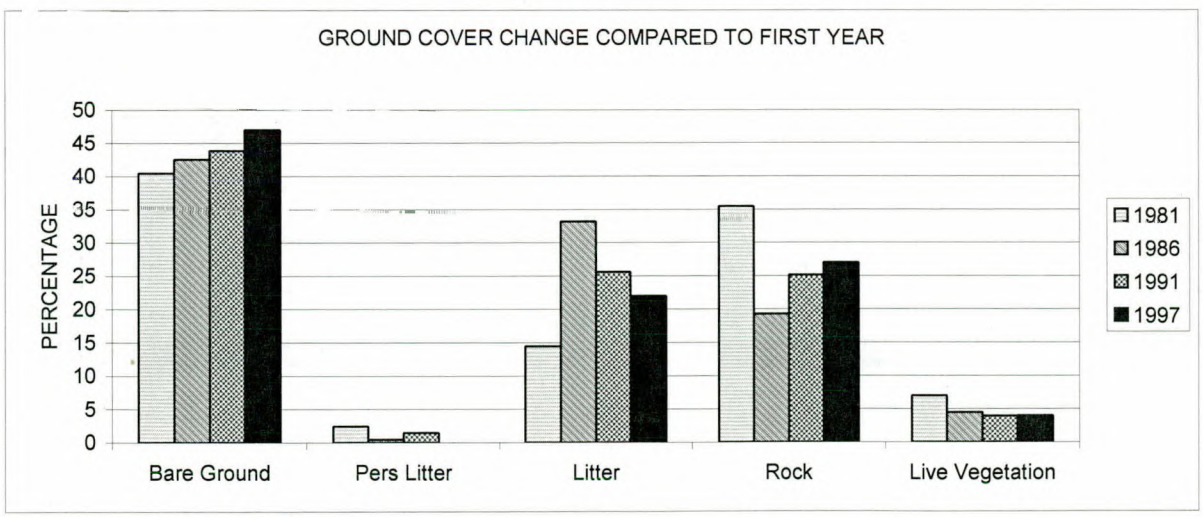
7/10/03 | ALLOTMENT MAINSTREET | PASTURE CALF | KEY AREA 17

COVER CATEGORIES	YEARS PLOT WERE READ											TREND INDEX COMPARES DATA FROM THE YEAR READ BACK TO BASE YEAR TO DETERMINE INDEX (a significant change is more than 10%) BASE YEAR = 1981									
	1981	1986	1991	1997	2000	2003	2006	2009	2012	2015	2018	1986	1991	1997	2000	2003	2006	2009	2012	2015	2018
OTHER SHRUBS																					
GUSA2	18	37	37	40								106	105	122							
CHVI8		22	18									4455	3547								
LYAN		1	1									198	296								
LYCIU	1																				
YUCCA			1	2									296	400							
EPVI	2																				
OTHERSHRUB		0										99									
TOTALS	21	61	58	42								190	174	100							
OTHER GRASSES																					
ARLO		2	3	2								396	591	400							
TOTALS		2	3	2								396	591	400							
FORBS																					
ASTRA	12	1	1	1								-92	-92	-92							
SPHAE		0	1	4								99	296	800							
AAFF		53		3								10693		600							
MUSTARD		4										891									
PPFF			3										591								
ASTER		4										792									
TOTALS	12	63	5	8								428	-55	-33							

Allotment: MAINSTREET **Pasture: CALF** **Key Area: 17**







PACE FREQUENCY TREND ANALYSIS

7/10/03		ALLOTMENT: MAINSTREET			PASTURE: COX/ATKIN				KEY AREA 2		PAGE NUMBER 1

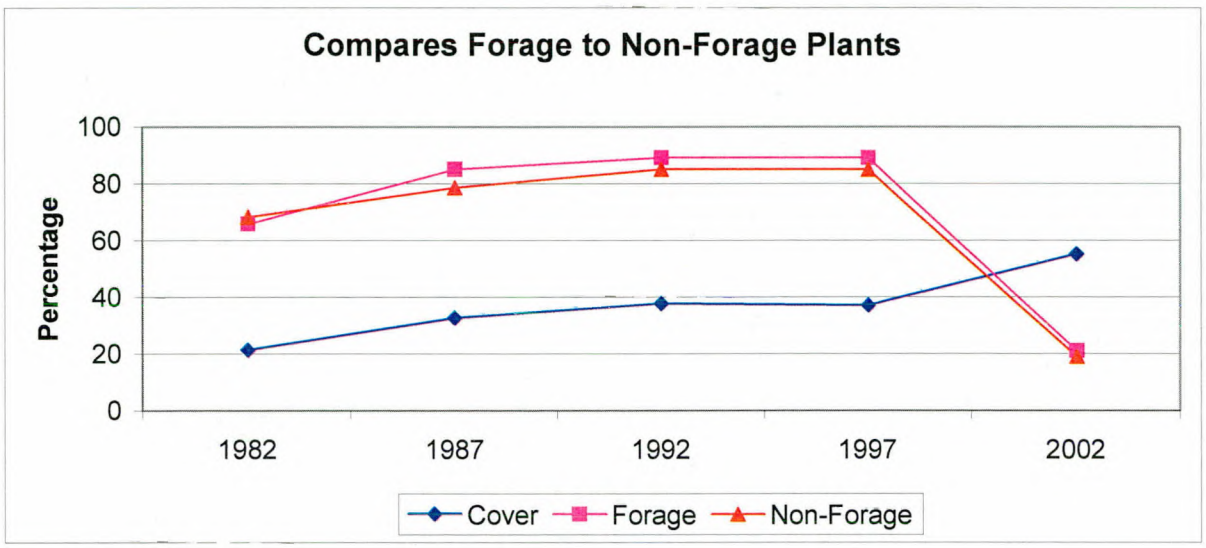
COVER	YEARS PLOT WERE READ											TREND INDEX COMPARES DATA FROM THE YEAR READ BACK TO BASE YEAR TO DETERMINE INDEX (a significant change is more than 10%) BASE YEAR = 1982									
CATEGORIES	1982	1987	1992	1997	2002	2005	2008	2011	2014	2017	2020	1987	1992	1997	2002	2005	2008	2011	2014	2017	2020
Bare Ground	79	68	63	63	45							-14	-21	-20	-43						
Pers Litter		4	6	3	19							700	1100	600	3800						
Litter	18	24	26	28	19							32	43	57	7						
Rock	2		1	1	12								-80	-60	385						
Live Vegetation	1	6	6	5	5							456	506	405	405						
% Ground Cover	21	33	38	37	55							53	76	74	158						
BROWSE																					
OTHER BROWS																					
TOTALS																					
DESIRABLE GRASSES																					
Cool Season																					
ORHY	1	7	6	5	1							607	506	405	1						
SIHY	21	42	42	42	6							100	100	102	-71						
STIPA	1	1	2	1								-50	52	1							
Other Cool Season Grass																					
TOTALS	23	49	49	48	7							115	115	111	-69						
Warm Season																					
HIJA	5	9	12	11	6							82	132	122	21						
SPCR	0	1	2	1	6							1	203	102	1112						
BOGR	38	27	27	29	2							-30	-28	-23	-95						
Other Warm Season Grass																					
TOTALS	43	36	40	41	14							-16	-7	-5	-67						

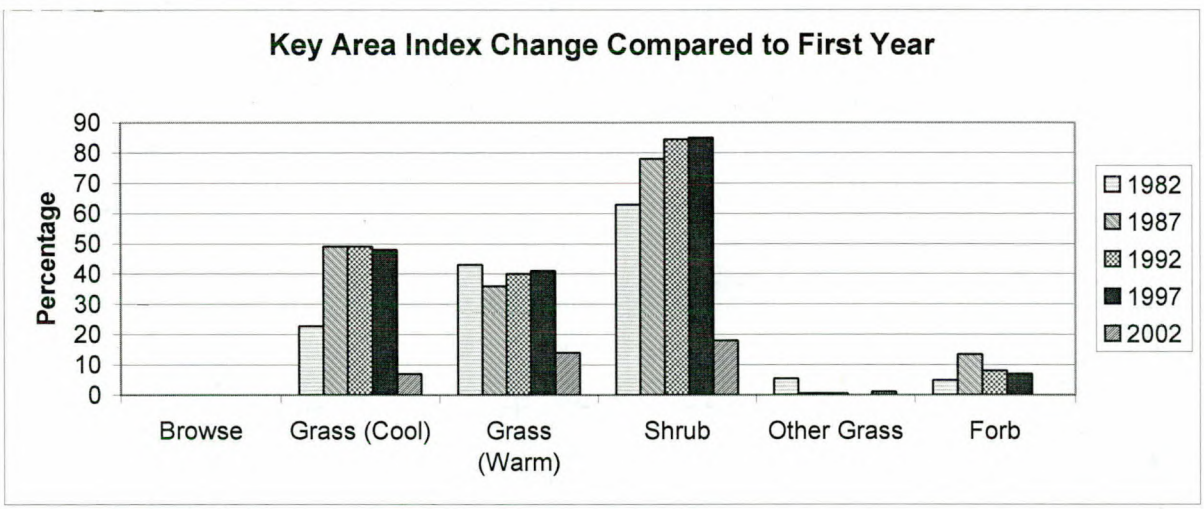
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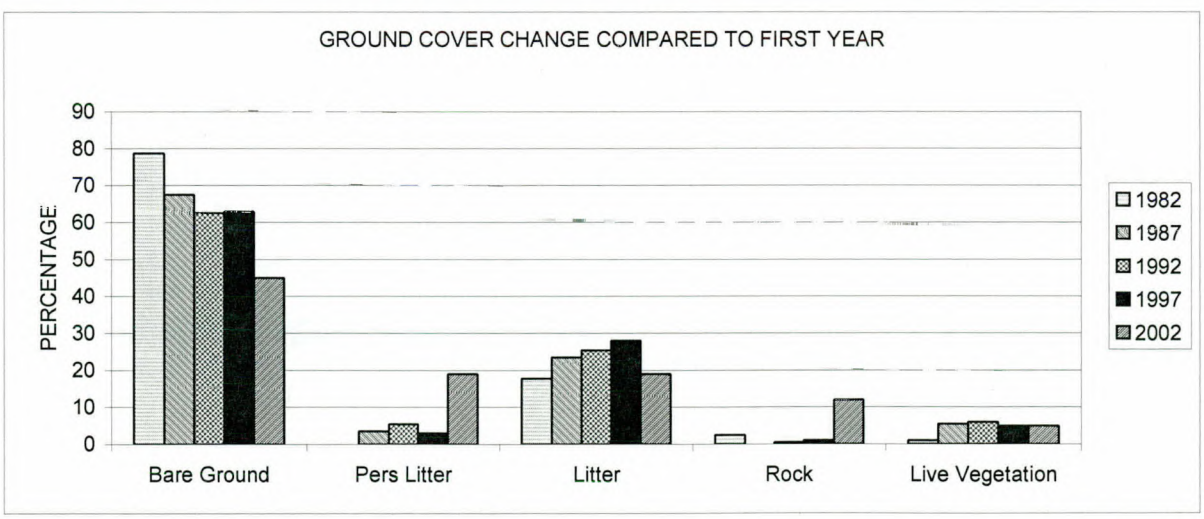
7/10/03	ALLOTMENT MAINSTREET	PASTURE COX/ATKIN	KEY AREA 2

COVER	YEARS PLOT WERE READ											TREND INDEX COMPARES DATA FROM THE YEAR READ BACK TO BASE YEAR TO DETERMINE INDEX (a significant change is more than 10%) BASE YEAR = 1982									
CATEGORIES	1982	1987	1992	1997	2002	2005	2008	2011	2014	2017	2020	1987	1992	1997	2002	2005	2008	2011	2014	2017	2020
OTHER SHRUBS																					
GUSA2	27	33	35	33	1							23	29	23	-96						
CHVI8				1	1									200	200						
CHRYSO			1										200								
ARTR2	36	45	49	51	16							25	36	41	-56						
OTHERSHRUB																					
TOTALS	63	78	85	85	18							24	34	35	-71						
OTHER GRASSES																					
ARIST	5																				
ARLO		1	1		1							100	100		200						
PPGG																					
TOTALS	5	1	1		1							-91	-91		-82						
FORBS																					
ASTRA		1	2	1								200	400	200							
SAKA		1										100									
SPHAE	5	4	5	5								-29	1	1							
AAFF		5										900									
AAGG																					
MUSTARD		4										700									
PPFF																					
ASTER		1	1	1								100	200	200							
TOTALS	5	14	8	7								173	62	41							

Allotment: MAINSTREET **Pasture: COX/ATKIN** **Key Area: 2**







PACE FREQUENCY TREND ANALYSIS

7/10/03	ALLOTMENT: MAINSTREET	PASTURE: DOOLITTLE	KEY AREA 2	PAGE NUMBER 1

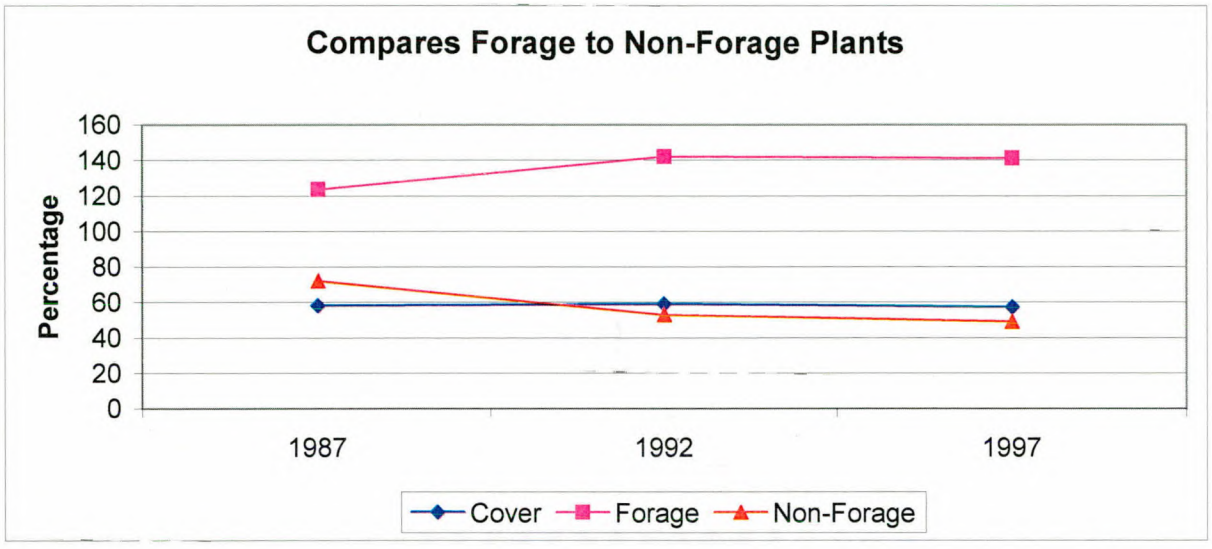
COVER	YEARS PLOT WERE READ											TREND INDEX: COMPARES DATA FROM THE YEAR READ BACK TO BASE YEAR TO DETERMINE INDEX (a significant change is more than 10%) BASE YEAR = 1982									
CATEGORIES	1987	1992	1997	2000	2003	2006	2009	2012	2015	2018	2021	1992	1997	2000	2003	2006	2009	2012	2015	2018	2021
Bare Ground	42	41	43									-2	2								
Pers Litter	4	4	3									0	-24								
Litter	46	45	43									-2	-7								
Rock	1	2	3									101	206								
Live Vegetation	7	7	8									8	17								
% Ground Cover	58	59	57									1	-1								
BROWSE																					
CELA	2	4	6									61	145								
ATCA2	6	8	10	10								31	57	57							
EPNE	5	7	6									37	11								
OTHER BROWS																					
TOTALS	14	20	22	10								39	55	-30							
DESIRABLE GRASSES																					
Cool Season																					
SIHY	7	9	8									21	9								
STIPA	2	3	5									76	155								
Other Cool Season Grass																					
TOTALS	9	12	13									32	40								
Warm Season																					
HIJA	75	79	76									6	1								
SPCR	10	12	11									20	7								
BOER	15	18	19									24	29								
Other Warm Season Grass																					
TOTALS	100	110	106									10	6								

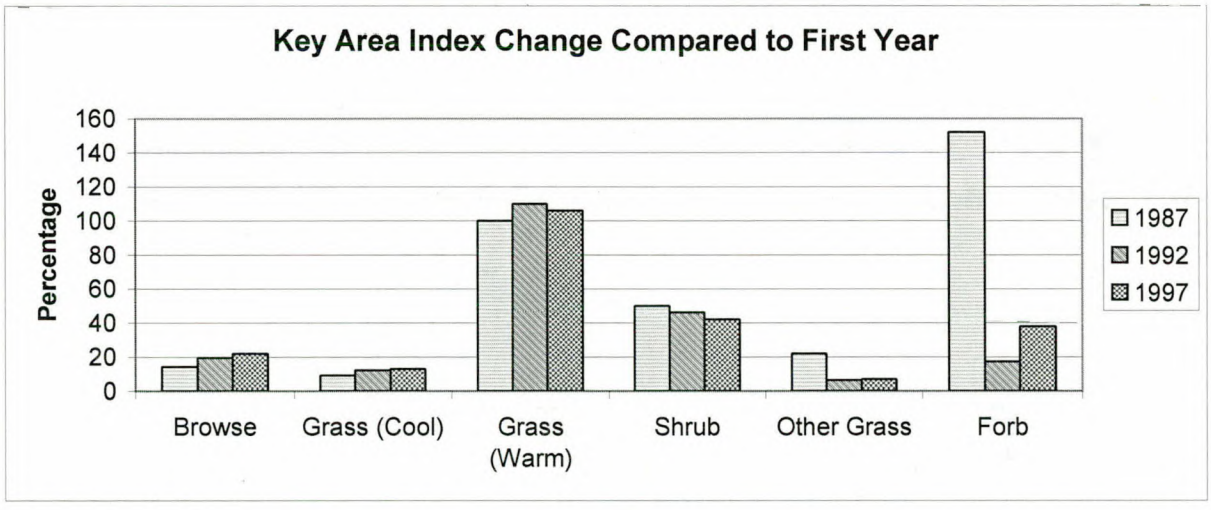
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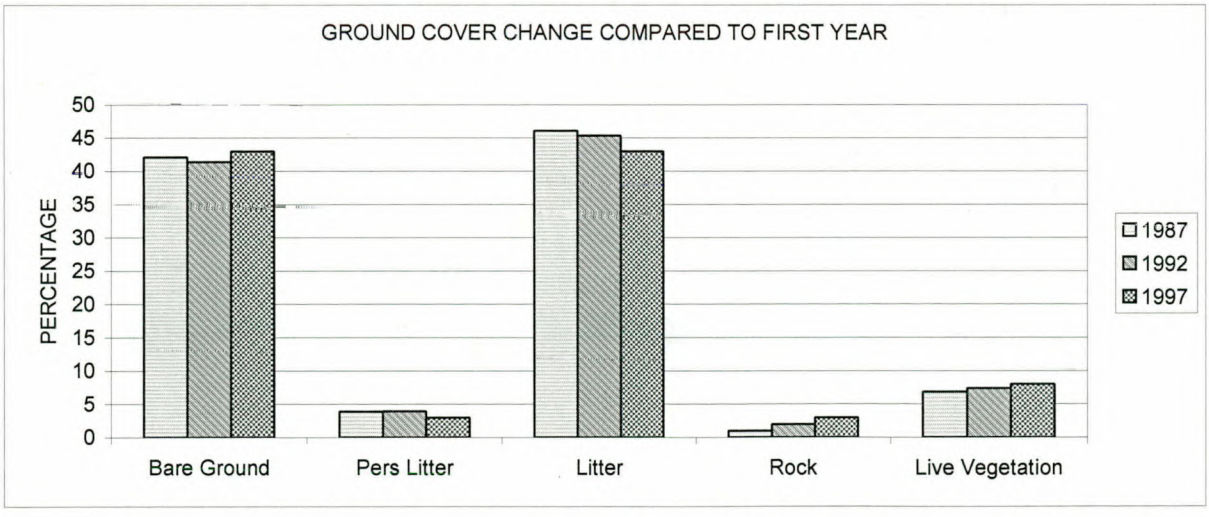
7/10/03	ALLOTMENT MAINSTREET	PASTURE DOOLITTLE	KEY AREA 2

COVER	YEARS PLOT WERE READ											TREND INDEX: COMPARES DATA FROM THE YEAR READ BACK TO BASE YEAR TO DETERMINE INDEX (a significant change is more than 10%) BASE YEAR = 1987									
CATEGORIES	1987	1992	1997	2000	2003	2006	2009	2012	2015	2018	2021	1992	1997	2000	2003	2006	2009	2012	2015	2018	2021
OTHER SHRUBS																					
GUSA2	39	37	35									-5	-11								
LYAN	11	9	7									-18	-35								
OTHERSHRUB																					
TOTALS	50	46	42									-7	-16								
OTHER GRASSES																					
ARLO	1	1	3									51	206								
SCBR	4	5	4									26	2								
PPGG	17																				
TOTALS	22	6	7									-71	-68								
FORBS																					
SPHAE	7	10	11									41	50								
AAFF	98	5	9									-95	-91								
AAGG	13																				
ERIOG	6		4										-32								
PLANTAGO	26		12										-55								
MUSTARD	0																				
PPFF																					
ASTER	1	2	2									34	36								
TOTALS	152	17	38									-89	-75								

Allotment: MAINSTREET **Pasture: DOOLITTLE** **Key Area: 2**







PACE FREQUENCY TREND ANALYSIS

7/10/03 | ALLOTMENT: MAINSTREET | PASTURE: DUTCHMAN | KEY AREA 2 | PAGE NUMBER 1

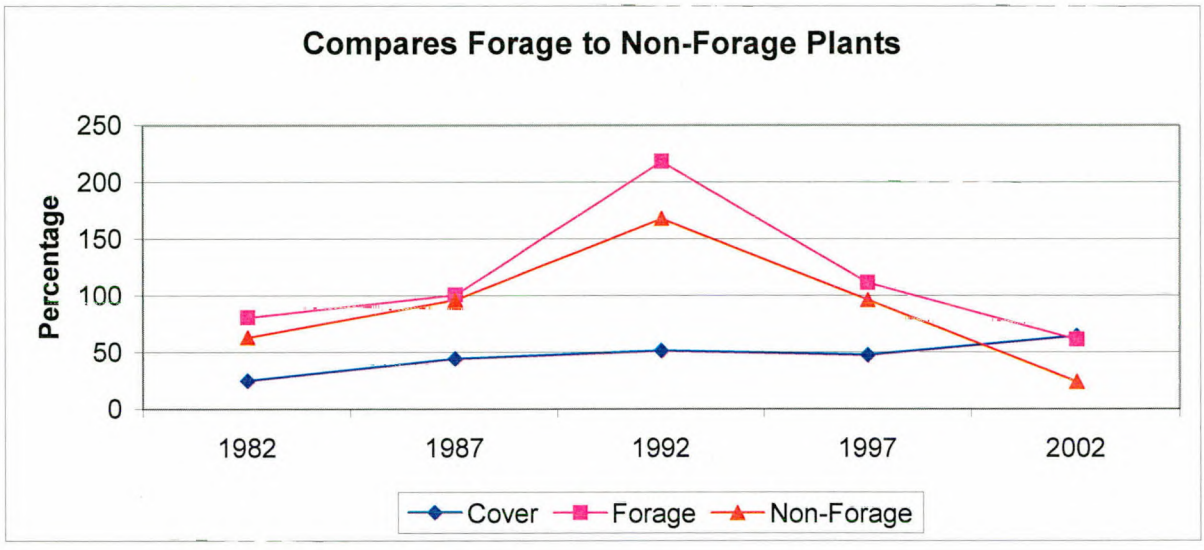
COVER CATEGORIES	YEARS PLOT WERE READ											TREND INDEX: COMPARES DATA FROM THE YEAR READ BACK TO BASE YEAR TO DETERMINE INDEX (a significant change is more than 10%) BASE YEAR = 1982									
	1982	1987	1992	1997	2002	2005	2008	2011	2014	2017	2020	1987	1992	1997	2002	2005	2008	2011	2014	2017	2020
Bare Ground	76	56	49	53	36							-26	-35	-30	-52						
Pers Litter	2	12	14	15	17							700	833	900	1033						
Litter	13	27	29	23	14							112	132	84	12						
Rock	7	3	5	5	26							-57	-29	-29	271						
Live Vegetation	4	3	3	4	7							-29	-14	14	100						
% Ground Cover	25	44	51	47	64							80	108	92	161						
BROWSE																					
OTHER BROWS																					
TOTALS																					
DESIRABLE GRASSES																					
Cool Season																					
ORHY	11	9	24	13	3							-18	118	18	-73						
SIHY	47	59	121	62	16							26	160	33	-66						
STIPA	1	4	10	3	1							700	1900	500	100						
Other Cool Season Grass																					
TOTALS	58	72	155	78	20							23	167	34	-66						
Warm Season																					
HIJA	12	15	31	14	16							26	170	22	39						
SPCR	4	4	12	6	21								200	50	425						
BOGR	7	11	20	13	4							50	186	86	-43						
Other Warm Season Grass																					
TOTALS	23	29	63	33	41							29	180	47	82						

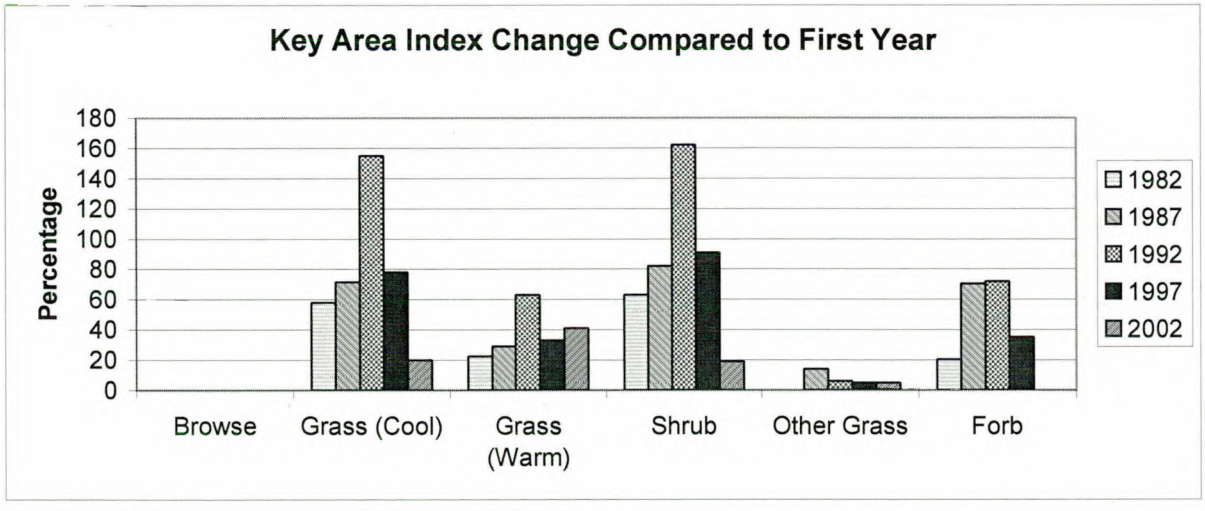
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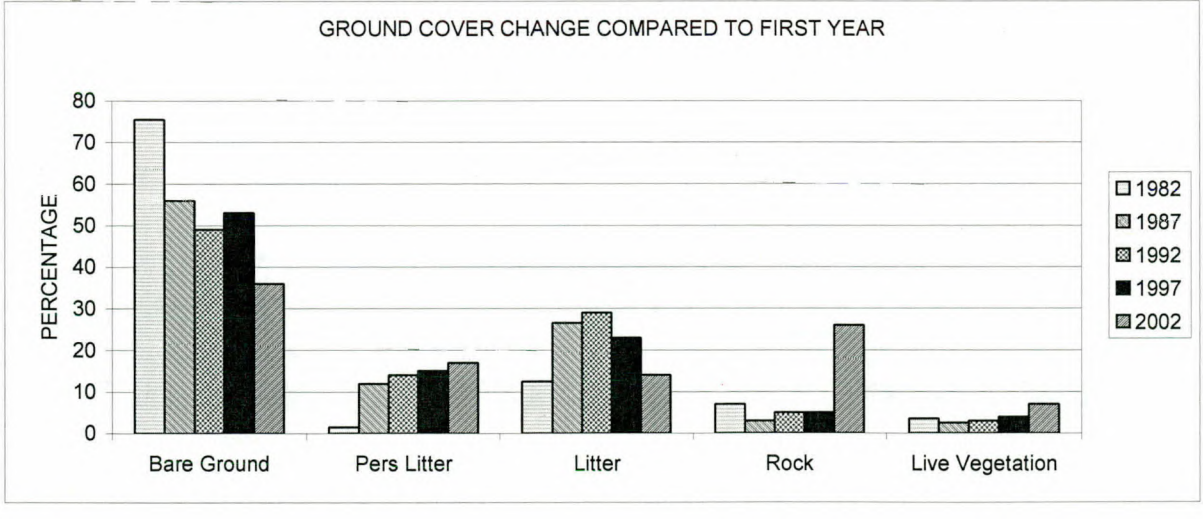
7/10/03 | ALLOTMENT MAINSTREET | PASTURE DUTCHMAN | KEY AREA 2

COVER CATEGORIES	YEARS PLOT WERE READ											TREND INDEX: COMPARES DATA FROM THE YEAR READ BACK TO BASE YEAR TO DETERMINE INDEX (a significant change is more than 10%) BASE YEAR = 1982									
	1982	1987	1992	1997	2002	2005	2008	2011	2014	2017	2020	1987	1992	1997	2002	2005	2008	2011	2014	2017	2020
OTHER SHRUBS																					
GUSA2	33	28	50	26	1							-17	52	-21	-97						
CHVI8	9	16										72									
CHRYSO			21	11	9								4200	2200	1800						
ARTR2	14	38	79	47	8							171	464	236	-43						
OPUNT			2	1									400	200							
LYAN	3	1	4	3	1							-67	33		-67						
HAPP_ACAMP	4		6	3									50	-25							
OTHERSHRUB																					
TOTALS	63	82	162	91	19							30	157	44	-70						
OTHER GRASSES																					
ARIST																					
ARLO		1	6	5	5							100	1200	1000	1000						
PPGG		14										2700									
TOTALS		14	6	5	5							2800	1200	1000	1000						
FORBS																					
ASTRA		5	9	5								1000	1800	1000							
SPHAE		8	10	7								1600	2000	1400							
AAFF		9										1700									
AAGG																					
ERIOG	1		2	3									300	500							
MUSTARD		13										2600									
PPFF																					
ASTER	20	36	51	20								80	155								
TOTALS	21	71	72	35								244	251	71							

Allotment: MAINSTREET **Pasture: DUTCHMAN** **Key Area: 2**







PACE FREQUENCY TREND ANALYSIS

7/10/03 | ALLOTMENT: MAINSTREET | PASTURE: CHILDERS | KEY AREA 22 | PAGE NUMBER 1

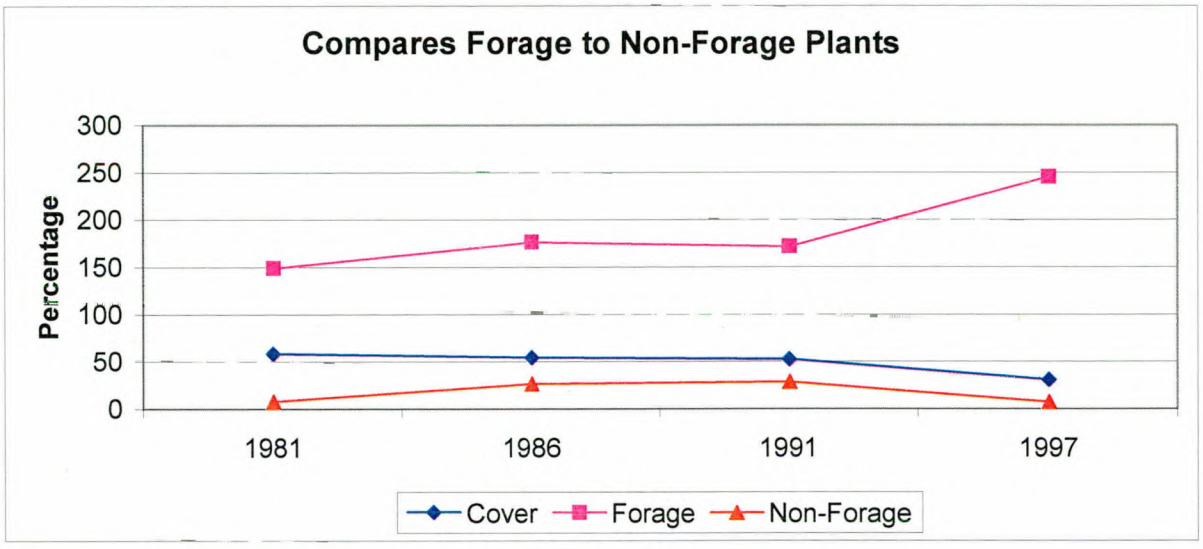
COVER CATEGORIES	YEARS PLOT WERE READ											TREND INDEX COMPARES DATA FROM THE YEAR READ BACK TO BASE YEAR TO DETERMINE INDEX (a significant change is more than 10%) BASE YEAR = 1982									
	1981	1986	1991	1997	2000	2003	2006	2009	2012	2015	2018	1986	1991	1997	2000	2003	2006	2009	2012	2015	2018
Bare Ground	42	46	48	70								10	14	66							
Pers Litter	2		1	3									-60	12							
Litter	14	27	35	4								99	156	-70							
Rock	33	16	8	14								-51	-75	-59							
Live Vegetation	8	10	7	10								19	-11	15							
% Ground Cover	58	54	52	30								-7	-10	-48							
BROWSE																					
CELA	1	1	1	3								1	1	179							
ATCA2	1	0	1	1								-49	1	1							
EPNE	6	5	6	10								-7	1	63							
OTHER BROWS																					
TOTALS	8	7	8	13								-11	1	70							
DESIRABLE GRASSES																					
Cool Season																					
SIHY		1	2	3								299	396	548							
Other Cool Season Grass																					
TOTALS		1	2	3								299	396	548							
Warm Season																					
HIJA	84	88	87	122								4	3	45							
SPCR	13	32	36	51								154	184	298							
BOGR	1		1	1									-33	-7							
BOER	42	47	38	55								12	-10	30							
Other Warm Season Grass																					
TOTALS	141	168	162	229								19	15	63							

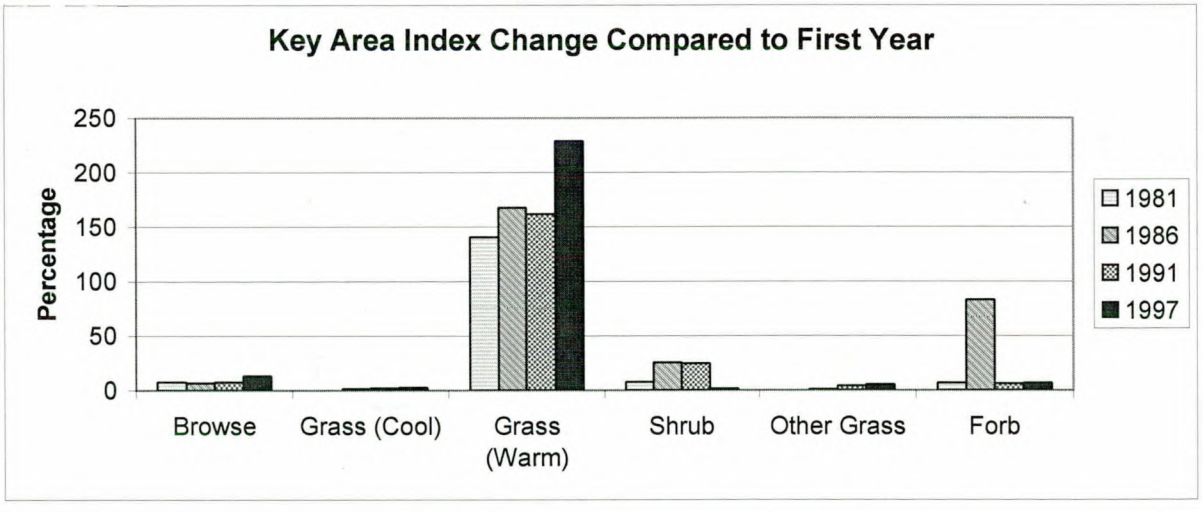
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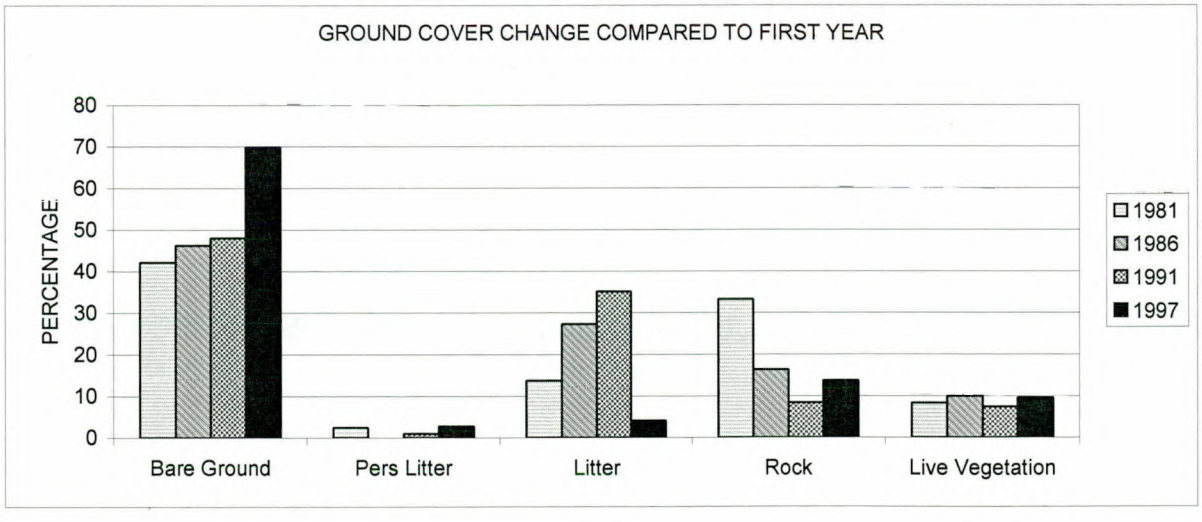
7/10/03 | ALLOTMENT MAINSTREET | PASTURE CHILDERS | KEY AREA 22

COVER CATEGORIES	YEARS PLOT WERE READ											TREND INDEX COMPARES DATA FROM THE YEAR READ BACK TO BASE YEAR TO DETERMINE INDEX (a significant change is more than 10%) BASE YEAR = 1981									
	1981	1986	1991	1997	2000	2003	2006	2009	2012	2015	2018	1986	1991	1997	2000	2003	2006	2009	2012	2015	2018
OTHER SHRUBS																					
GUSA2	8	20	24									154	209								
LYAN			0	1									99	274							
HAPP_ACAMP		5										995									
OTHERSHRUB		0										100									
TOTALS	8	25	25	1								224	216	-83							
OTHER GRASSES																					
ARLO		1	2	5								199	495	1096							
SCBR			1										297								
PPGG																					
TOTALS		1	4	5								199	792	1096							
FORBS																					
SAKA			1										297								
AAFF	7	71		4								929		-40							
AAGG																					
ERIOG			2	3									396	548							
PLANTAGO		11										2289									
MUSTARD		1										199									
PPFF			3										594								
TOTALS	7	83	6	7								1111	-6	0							

Allotment: MAINSTREET **Pasture: CHILDERS** **Key Area: 22**







PACE FREQUENCY TREND ANALYSIS

7/10/03	ALLOTMENT: MAINSTREET	PASTURE: CHRISTMAN	KEY AREA 23	PAGE NUMBER 1

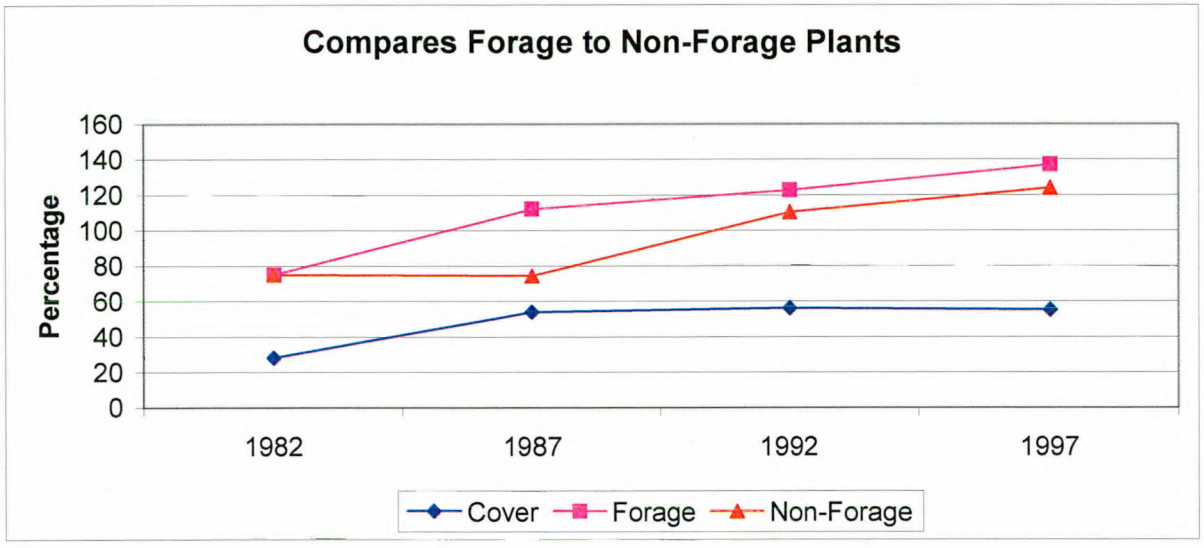
COVER	YEARS PLOT WERE READ											TREND INDEX COMPARES DATA FROM THE YEAR READ BACK TO BASE YEAR TO DETERMINE INDEX (a significant change is more than 10%) BASE YEAR = 1982									
CATEGORIES	1982	1987	1992	1997	2000	2003	2006	2009	2012	2015	2018	1987	1992	1997	2000	2003	2006	2009	2012	2015	2018
Bare Ground	72	46	44	45								-36	-39	-38							
Pers Litter	4	1	2	5								-78	-56	13							
Litter	17	39	43	44								136	159	164							
Rock	1	1	1									0									
Live Vegetation	6	12	10	6								109	67	2							
% Ground Cover	28	54	56	55								92	100	97							
BROWSE																					
OTHER BROWS																					
TOTALS																					
DESIRABLE GRASSES																					
Cool Season																					
ORHY		1	1	2								197	294	400							
SIHY	0	17	23	27								3417	4500	5408							
STIPA		0										99									
Other Cool Season Grass																					
TOTALS	0	19	24	29								3719	4800	5816							
Warm Season																					
HIJA	24	33	34	40								39	43	67							
SPCR	4	2	4	8								-37		104							
BOGR	45	51	54	51								15	22	14							
BOER	2	6	6	9								201	200	359							
Other Warm Season Grass																					
TOTALS	75	93	99	108								25	32	45							

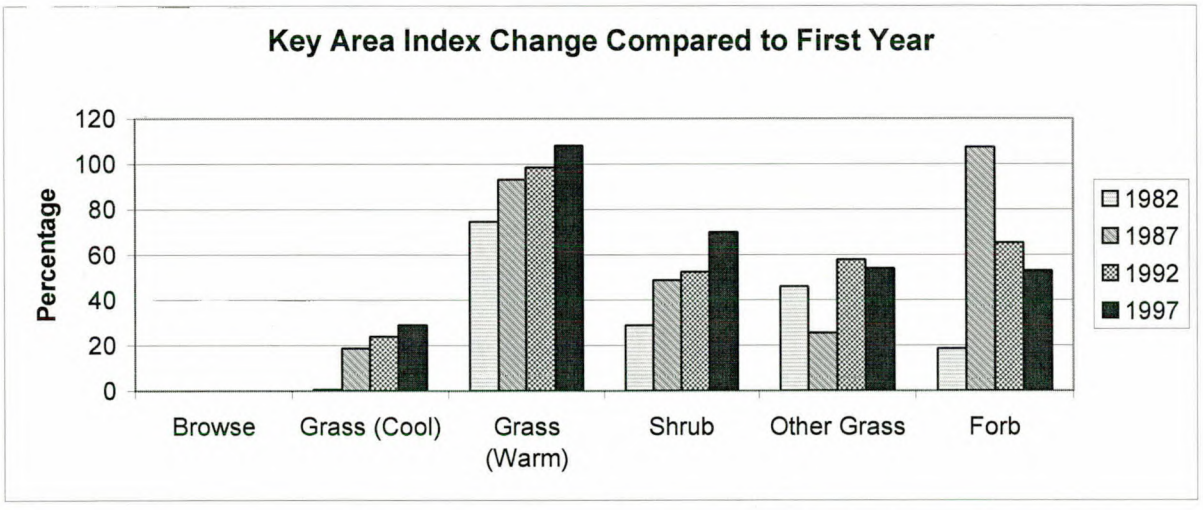
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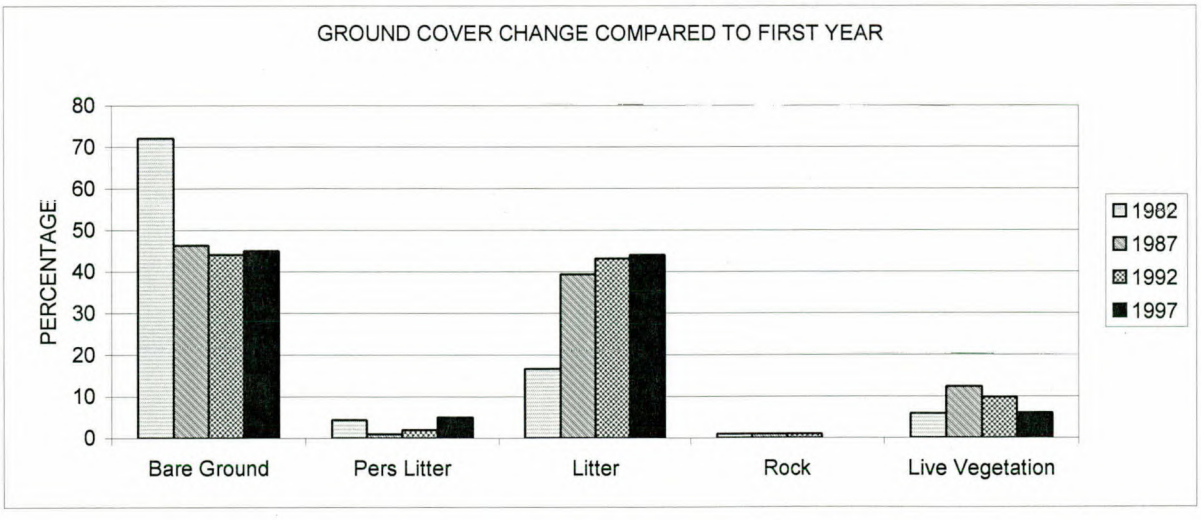
7/10/03	ALLOTMENT MAINSTREET	PASTURE CHRISTMAN	KEY AREA 23

COVER	YEARS PLOT WERE READ											TREND INDEX COMPARES DATA FROM THE YEAR READ BACK TO BASE YEAR TO DETERMINE INDEX (a significant change is more than 10%) BASE YEAR = 1982									
CATEGORIES	1982	1987	1992	1997	2000	2003	2006	2009	2012	2015	2018	1987	1992	1997	2000	2003	2006	2009	2012	2015	2018
OTHER SHRUBS																					
GUSA2	4	25	21	15								528	438	283							
CHVI8	0	1	1									201	100								
CHRYSO				2										400							
ARTR2	9	7	11	9								-22	28	2							
LYAN		3	3	3								690	686	600							
LYCIU	4																				
HYSA				25										5000							
PSCO2				16										3200							
OTHERSHRUB	12	12	15									5	29								
TOTALS	29	49	52	70								69	81	142							
OTHER GRASSES																					
ARIST	46																				
ARLO		18	58	54								3645	11569	10800							
PPGG		7										1478									
TOTALS	46	26	58	54								-44	26	17							
FORBS																					
ASTRA	3	1	2	3								-50	-17	2							
SPHAE	9	4	5	8								-55	-39	-9							
AAFF	2	17	11									583	340								
AAGG		5										985									
ERIOG		14	13	11								2857	2549	2200							
PLANTAGO		3										591									
MUSTARD		30										6010									
PPFF		16	20	8								3153	4020	1600							
ASTER	4	11	14	16								146	211	263							
DAISY		6										1281									
PHACE				7										1400							
TOTALS	19	107	65	53								477	250	185							

Allotment: MAINSTREET **Pasture: CHRISTMAN** **Key Area: 23**







PACE FREQUENCY TREND ANALYSIS

7/10/03	ALLOTMENT: MAINSTREET	PASTURE: POVERTY MT	KEY AREA 26	PAGE NUMBER 1

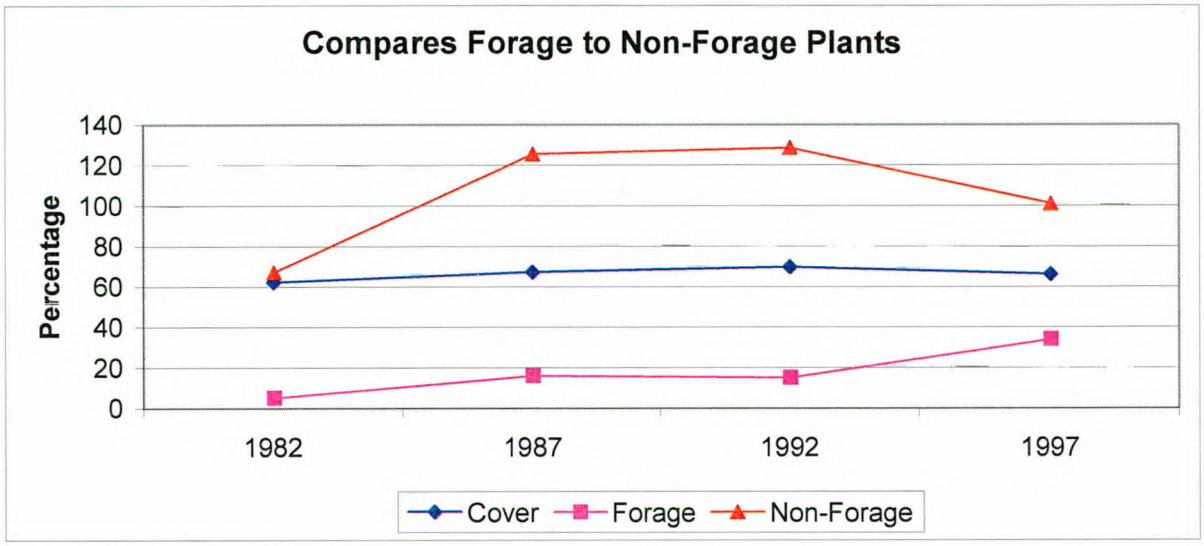
COVER	YEARS PLOT WERE READ											TREND INDEX COMPARES DATA FROM THE YEAR READ BACK TO BASE YEAR TO DETERMINE INDEX (a significant change is more than 10%) BASE YEAR = 1982									
CATEGORIES	1982	1987	1992	1997	2000	2003	2006	2009	2012	2015	2018	1987	1992	1997	2000	2003	2006	2009	2012	2015	2018
Bare Ground	38	33	31	34								-13	-20	-11							
Pers Litter	25	11	20	16								-55	-20	-35							
Litter	26	39	34	38								50	29	46							
Rock	12	16	13	8								35	13	-30							
Live Vegetation		2	4	4								300	700	800							
% Ground Cover	62	67	70	66								8	12	6							
BROWSE																					
EPNE			3										600								
COME				17										3400							
OTHER BROWS																					
TOTALS			3	17									600	3400							
DESIRABLE GRASSES																					
Cool Season																					
SIHY	3	7	6	8								133	83	167							
STIPA				1										200							
Other Cool Season Grass																					
TOTALS	3	7	6	9								133	83	200							
Warm Season																					
BOGR	2	9	7	8								350	225	300							
Other Warm Season Grass																					
TOTALS	2	9	7	8								350	225	300							

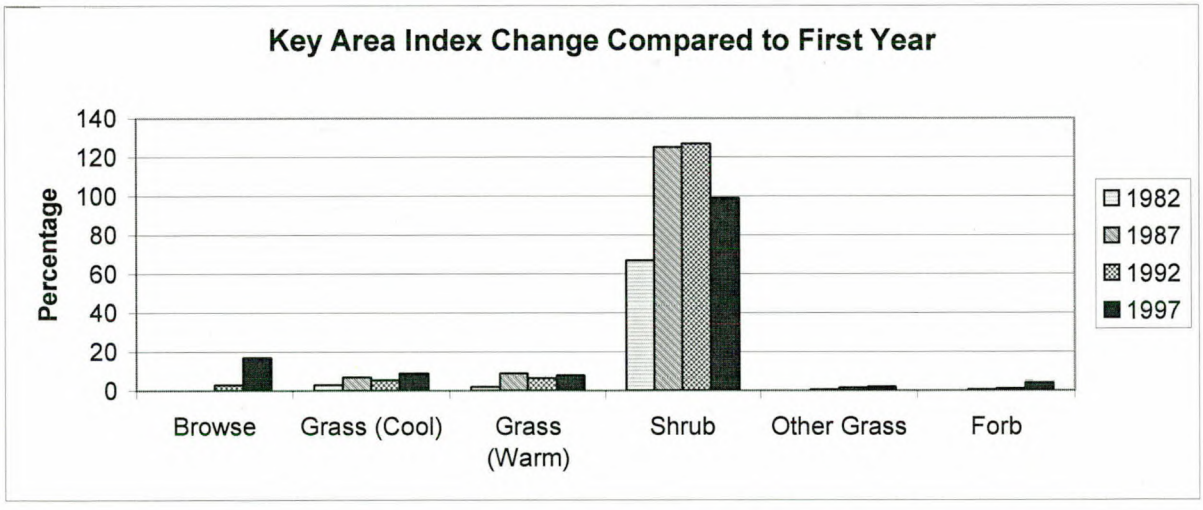
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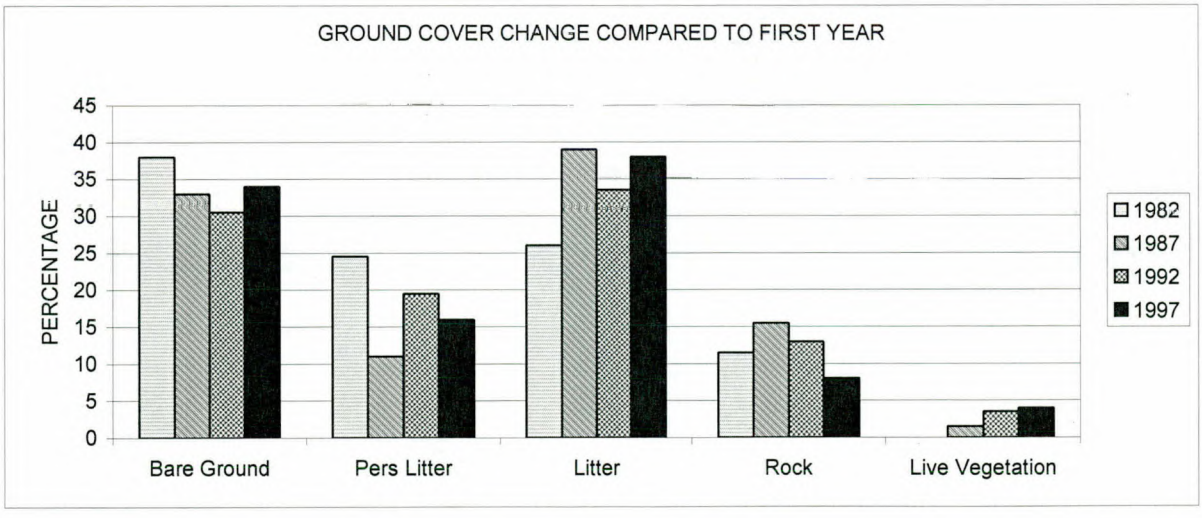
7/10/03	ALLOTMENT MAINSTREET	PASTURE POVERTY MT	KEY AREA 26

COVER	YEARS PLOT WERE READ											TREND INDEX COMPARES DATA FROM THE YEAR READ BACK TO BASE YEAR TO DETERMINE INDEX (a significant change is more than 10%) BASE YEAR = 1982									
CATEGORIES	1982	1987	1992	1997	2000	2003	2006	2009	2012	2015	2018	1987	1992	1997	2000	2003	2006	2009	2012	2015	2018
OTHER SHRUBS																					
GUSA2	18	52	42	28								186	131	56							
CHVI8	2	2	5	2								33	200	33							
ARTR2	34	51	58	59								50	69	74							
JUOS	2	5	4	4								200	167	167							
PIED		1	2	1								100	300	200							
EPVI	3	3		3																	
BERBERIS		1	1	2								100	200	400							
OTHERSHRUB	9	12	17									33	89								
TOTALS	67	125	127	99								67	90	45							
OTHER GRASSES																					
ARLO		1	2	2								100	300	400							
PPGG																					
TOTALS		1	2	2								100	300	400							
FORBS																					
AAFF				2										400							
AAGG																					
ERIOG		1	1	2								100	200	400							
PPFF																					
TOTALS		1	1	4								100	200	800							

Allotment: MAINSTREET **Pasture: POVERTY MT** **Key Area: 26**







PACE FREQUENCY TREND ANALYSIS

7/10/03	ALLOTMENT: MAINSTREET	PASTURE: HIDDEN PUMP	KEY AREA 27	PAGE NUMBER 1

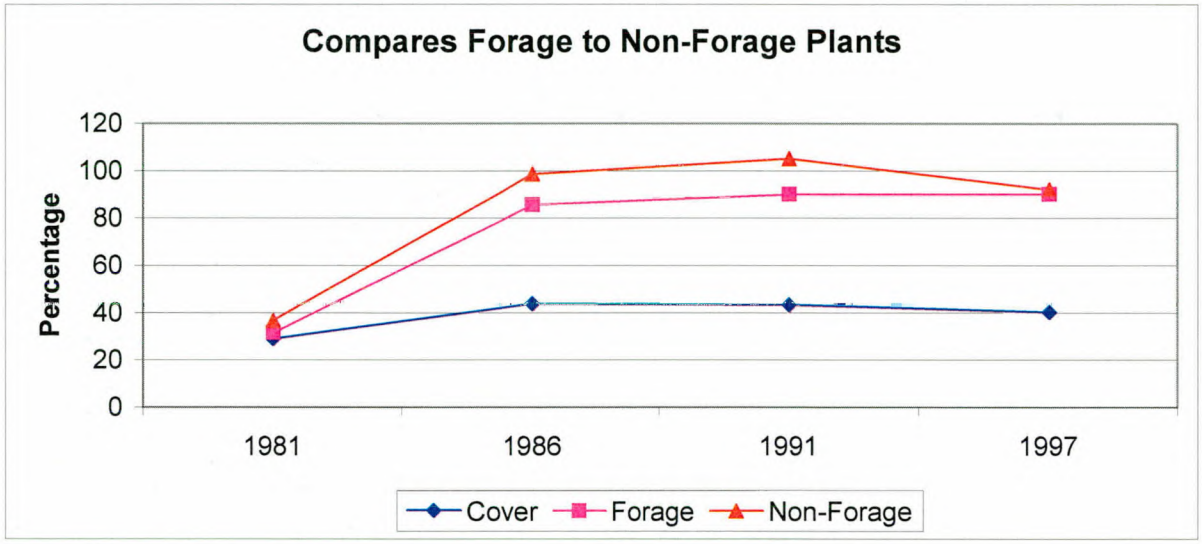
COVER	YEARS PLOT WERE READ											TREND INDEX COMPARES DATA FROM THE YEAR READ BACK TO BASE YEAR TO DETERMINE INDEX (a significant change is more than 10%) BASE YEAR = 1982									
CATEGORIES	1981	1986	1991	1997	2000	2003	2006	2009	2012	2015	2018	1986	1991	1997	2000	2003	2006	2009	2012	2015	2018
Bare Ground	71	57	57	60								-21	-20	-16							
Pers Litter	11	8	8	5								-33	-33	-55							
Litter	13	31	29	29								140	129	129							
Rock	2	1	1	2								-80	-59	-18							
Live Vegetation	2	5	6	4								105	126	64							
% Ground Cover	29	44	43	40								51	49	39							
BROWSE																					
OTHER BROWS																					
TOTALS																					
DESIRABLE GRASSES																					
Cool Season																					
SIHY	3	34	35	32								1062	1096	993							
Other Cool Season Grass																					
TOTALS	3	34	35	32								1062	1096	993							
Warm Season																					
BOGR	28	52	55	58								82	94	105							
Other Warm Season Grass																					
TOTALS	28	52	55	58								82	94	105							

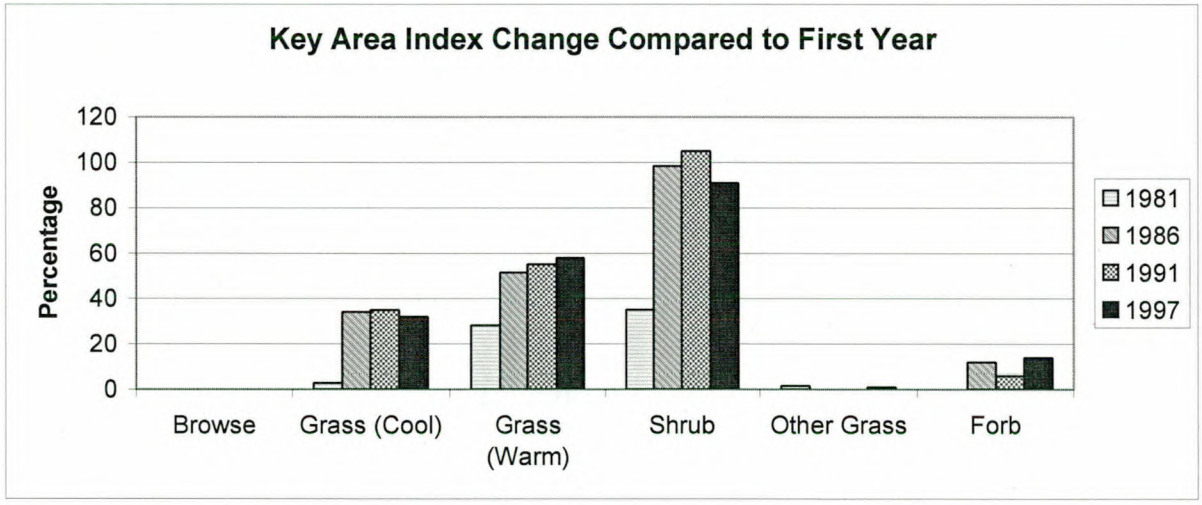
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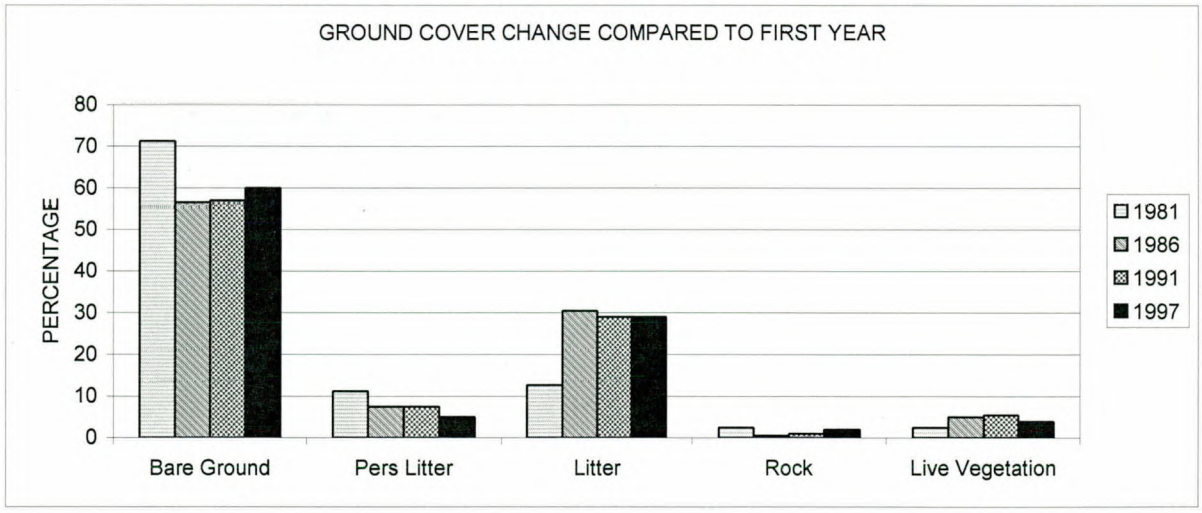
7/10/03	ALLOTMENT MAINSTREET	PASTURE HIDDEN PUMP	KEY AREA 27

COVER	YEARS PLOT WERE READ											TREND INDEX COMPARES DATA FROM THE YEAR READ BACK TO BASE YEAR TO DETERMINE INDEX (a significant change is more than 10%) BASE YEAR = 1981									
CATEGORIES	1981	1986	1991	1997	2000	2003	2006	2009	2012	2015	2018	1986	1991	1997	2000	2003	2006	2009	2012	2015	2018
OTHER SHRUBS																					
GUSA2	2	32	29	9								1212	1069	269							
ARTR2	33	65	73	79								97	122	142							
JUOS		2	4	3								400	800	600							
OTHERSHRUB																					
TOTALS	35	99	105	91								180	199	159							
OTHER GRASSES																					
ARLO	1			1										-32							
TOTALS	1			1										-32							
FORBS																					
ASTRA				2										400							
SPHAE		1	3	6								200	600	1200							
AAFF		1		3								100		600							
AAGG																					
ERIOG		1	2									200	300								
ERIGERON				3										600							
PPFF		10	2									1900	300								
TOTALS		12	6	14								2400	1200	2800							

Allotment: MAINSTREET **Pasture: HIDDEN PUMP** **Key Area: 27**





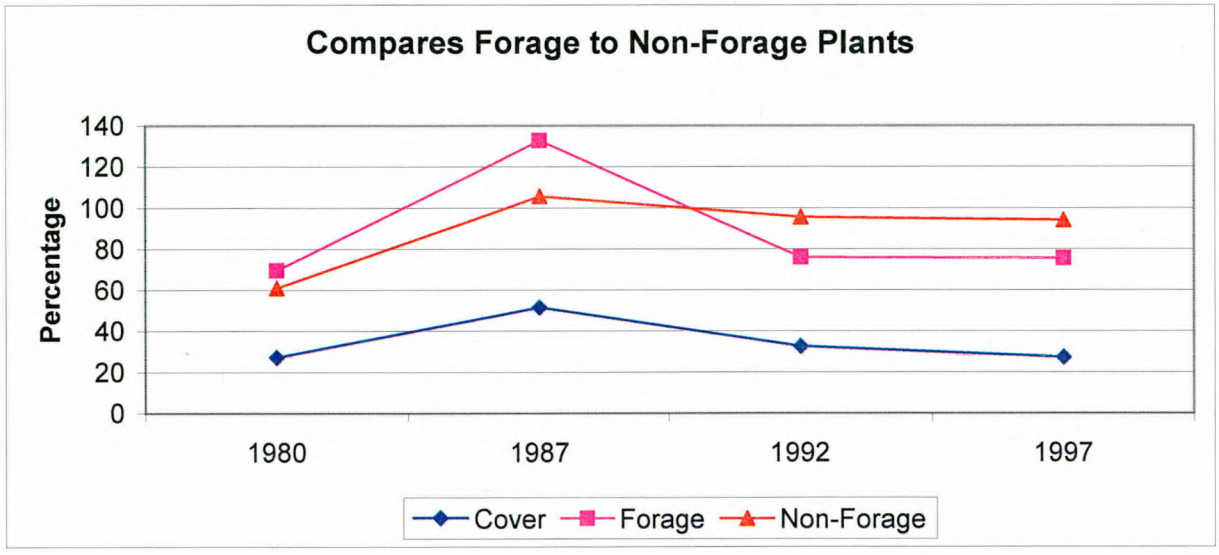


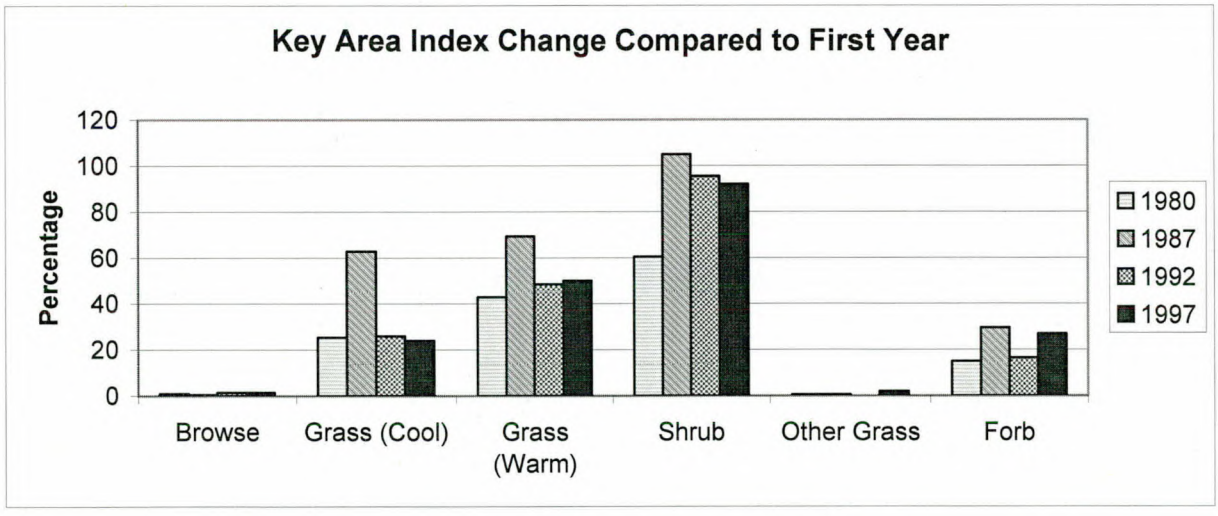
PACE FREQUENCY TREND ANALYSIS

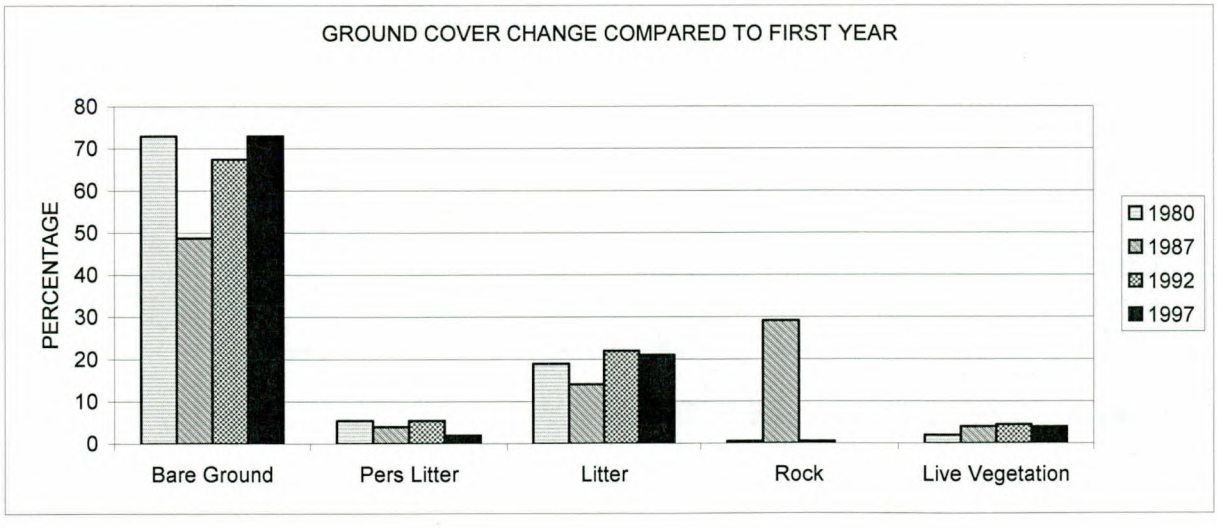
7/10/03		ALLOTMENT: MAINSTREET			PASTURE: NEW SPRING				KEY AREA 29			PAGE NUMBER 1								
												TREND INDEX								
COVER	YEARS PLOT WERE READ											COMPARES DATA FROM THE YEAR READ BACK TO BASE YEAR TO DETERMINE INDEX (a significant change is more than 10%) BASE YEAR = 1982								
CATEGORIES	1980	1987	1992	1997	2000	2003	2006	2009	2012	2015	2018	1987	1992	1997	2000	2003	2006	2009	2012	2015	2018
Bare Ground	73	49	68	73								-33	-8								
Pers Litter	6	4	6	2								-27		-64							
Litter	19	14	22	21								-26	16	11							
Rock	1	29	1									5729									
Live Vegetation	2	4	5	4								101	125	100							
% Ground Cover	27	51	33	27								90	20								
BROWSE																					
ATCA2	1	1	2	2								-50	50	50							
OTHER BROWS																					
TOTALS	1	1	2	2								-50	50	50							
DESIRABLE GRASSES																					
Cool Season																					
ORHY	5	14	7	7								171	30	40							
SIHY	21	47	20	17								130	-5	-17							
SEEDED		2										402									
Other Cool Season Grass																					
TOTALS	26	63	26	24								146	2	-6							
Warm Season																					
HIJA	35	45	38	38								29	9	9							
SPCR	1	2	2	2								302	200	300							
BOGR	8	22	9	10								195	20	33							
Other Warm Season Grass																					
TOTALS	43	69	49	50								61	13	16							

7/10/03		ALLOTMENT MAINSTREET			PASTURE NEW SPRING					KEY AREA 29										
												TREND INDEX								
												COMPARES DATA FROM THE YEAR READ BACK TO BASE YEAR TO DETERMINE INDEX								
COVER	YEARS PLOT WERE READ											(a significant change is more than 10%) BASE YEAR = 1980								
CATEGORIES	1980	1987	1992	1997	2000	2003	2006	2009	2012	2015	2018	1987	1992	1997	2000	2003	2006	2009	2012	2015	2018
OTHER SHRUBS																					
GUSA2	13	55	25	20								325	92	54							
CHVI8		2	3									402	600								
CHRYSO				3										600							
ARTR2	47	47	65	67								2	40	44							
LYAN	1		2	2									200	300							
JUOS	1	1	1									1	100								
OTHERSHRUB																					
TOTALS	61	105	96	92								74	58	52							
OTHER GRASSES																					
ARLO		1		2								101		400							
PPGG	1																				
TOTALS	1	1		2								1		300							
FORBS																					
ASTRA	3	1	4	4								-60	40	60							
SPHAE	13	8	13	15								-40	4	20							
AAFF		13										2613									
AAGG																					
ERIOG		3										603									
MUSTARD		2										402									
PPFF		1										101									
SENEC		1		2								101		400							
SPURGE																					
ASTER		2		3								402		600							
PHACE				3										600							
TOTALS	15	30	17	27								98	10	80							

Allotment: MAINSTREET **Pasture: NEW SPRING** **Key Area: 29**







PACE FREQUENCY TREND ANALYSIS

7/10/03	ALLOTMENT: MAINSTREET	PASTURE: MUDHOLE	KEY AREA 3	PAGE NUMBER 1

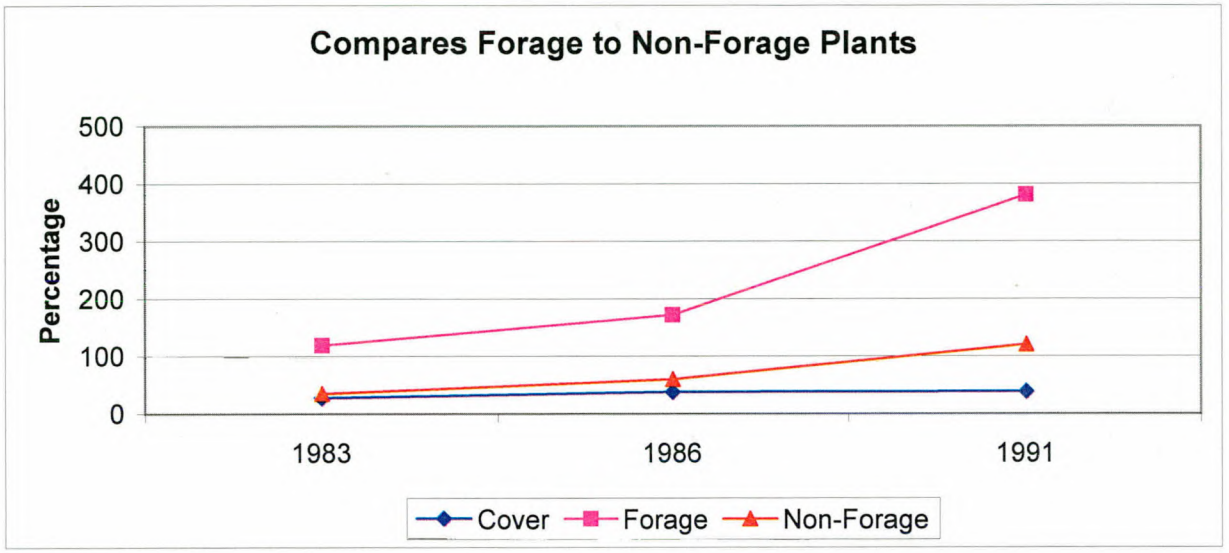
COVER CATEGORIES	YEARS PLOT WERE READ 1983	1986	1991	1994	1997	2000	2003	2006	2009	2012	2015	TREND INDEX (COMPARES DATA FROM THE YEAR READ BACK TO BASE YEAR TO DETERMINE INDEX; a significant change is more than 10%) BASE YEAR = 1982: 1986	1991	1994	1997	2000	2003	2006	2009	2012	2015
Bare Ground	73	64	62									-13	-15								
Pers Litter		3	5									500	1000								
Litter	21	27	24									24	12								
Rock			1										200								
Live Vegetation	5	8	8									37	46								
% Ground Cover	27	37	38									36	41								
BROWSE																					
CELA	18	32	72									79	302								
ATCA2		3	6	6								500	1200	1200							
EPNE	5	12	20									110	265								
OTHER BROWS																					
TOTALS	23	46	98	6								97	319	-74							
DESIRABLE GRASSES																					
Cool Season																					
ORHY	10	9	22									-15	121								
SIHY	2	4	10									101	403								
STIPA	2	1	3									-80	21								
Other Cool Season Grass																					
TOTALS	14	13	35									-10	143								
Warm Season																					
HIJA	49	62	135									25	174								
SPCR	2	9	19									262	664								
BOGR	23	32	74									35	216								
BOER	6	11	20									62	209								
Other Warm Season Grass																					
TOTALS	82	113	248									38	204								

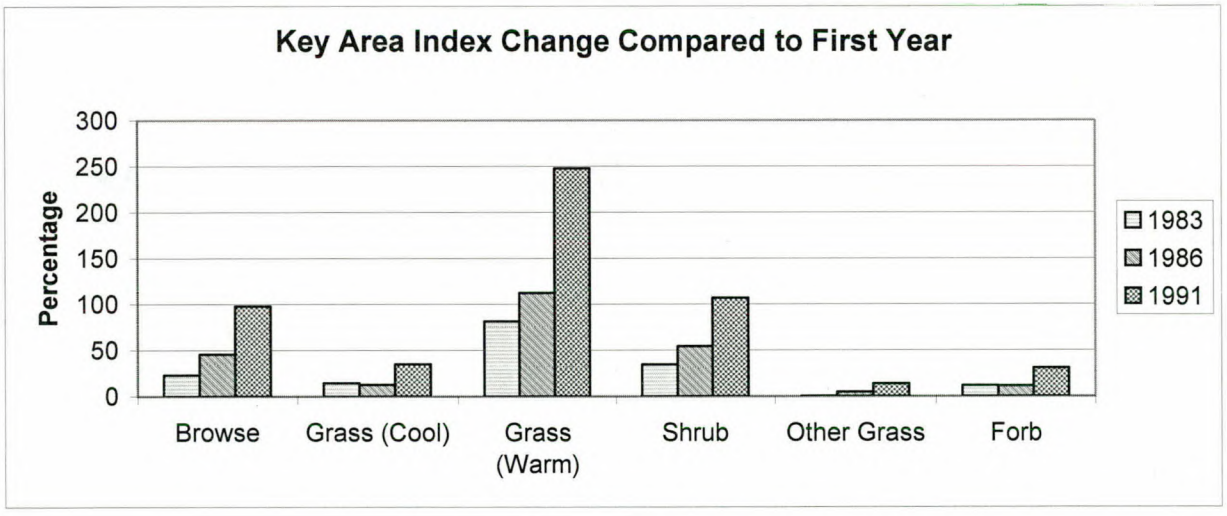
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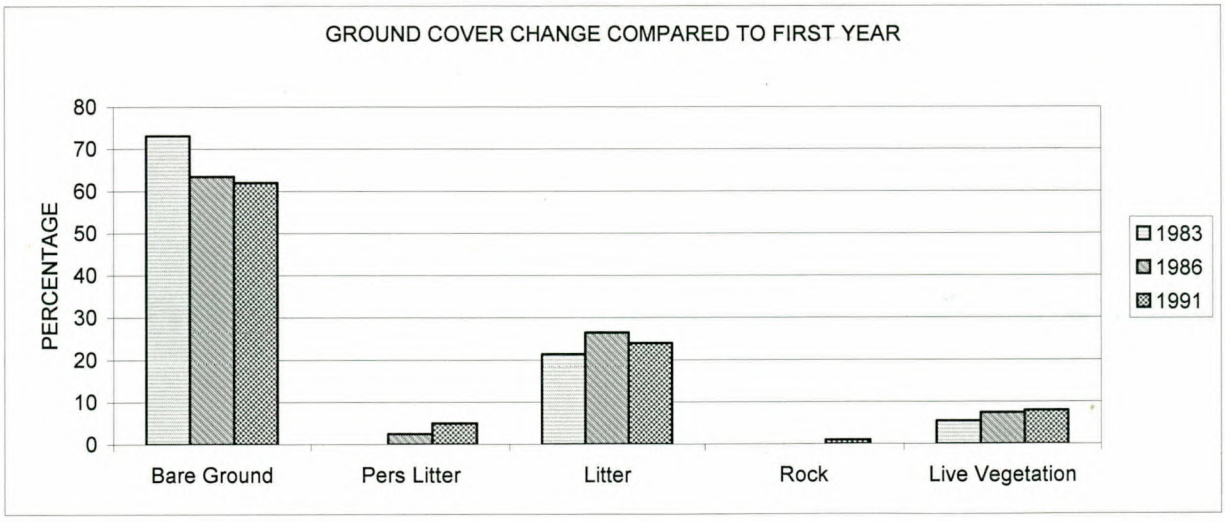
7/10/03	ALLOTMENT MAINSTREET	PASTURE MUDHOLE	KEY AREA 3

COVER CATEGORIES	YEARS PLOT WERE READ 1983	1986	1991	1994	1997	2000	2003	2006	2009	2012	2015	TREND INDEX (COMPARES DATA FROM THE YEAR READ BACK TO BASE YEAR TO DETERMINE INDEX; a significant change is more than 10%) BASE YEAR = 1983: 1986	1991	1994	1997	2000	2003	2006	2009	2012	2015
OTHER SHRUBS																					
GUSA2	25	46	90									83	262								
CHVI8	5																				
CHRYSO		9	15									1700	3000								
LYAN	4	1	2									-89	-55								
OTHERSHRUB																					
TOTALS	35	55	107									56	207								
OTHER GRASSES																					
ARLO	0	5	14									905	2714								
PPGG																					
TOTALS	0	5	14									905	2714								
FORBS																					
SAKA		1	5									100	1000								
SPHAE	12	4	21									-67	76								
AAFF																					
AAGG																					
PPFF		7	5									1400	1000								
TOTALS	12	12	31									-4	160								

Allotment: MAINSTREET **Pasture: MUDHOLE** **Key Area: 3**







PACE FREQUENCY TREND ANALYSIS

7/10/03	ALLOTMENT: MAINSTREET	PASTURE: HY POND	KEY AREA 4	PAGE NUMBER 1

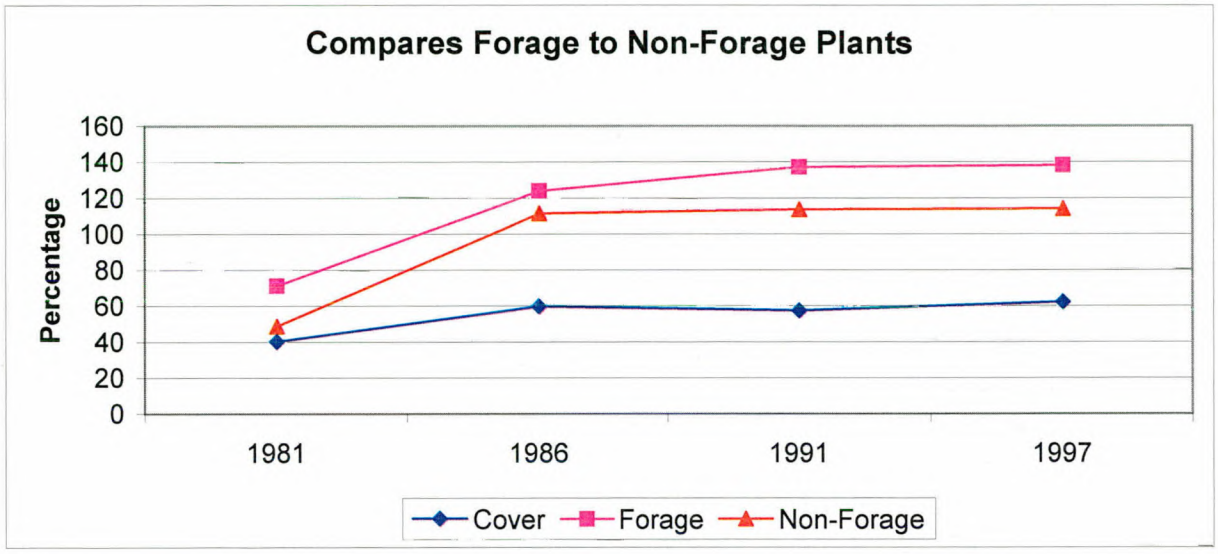
COVER	YEARS PLOT WERE READ											TREND INDEX: COMPARES DATA FROM THE YEAR READ BACK TO BASE YEAR TO DETERMINE INDEX (a significant change is more than 10%) BASE YEAR = 1982									
CATEGORIES	1981	1986	1991	1997	2000	2003	2006	2009	2012	2015	2018	1986	1991	1997	2000	2003	2006	2009	2012	2015	2018
Bare Ground	60	41	43	38								-33	-28	-37							
Pers Litter	12	11	13	15								-13	4	25							
Litter	17	41	36	34								144	111	102							
Rock	8	2	2	4								-82	-76	-51							
Live Vegetation	3	7	7	9								125	143	212							
% Ground Cover	40	60	57	62								49	43	55							
BROWSE																					
COME			1	1									200	200							
OTHER BROWS																					
TOTALS			1	1									200	200							
DESIRABLE GRASSES																					
Cool Season																					
ORHY		2	3	2								300	500	400							
SIHY	10	34	33	31								237	222	207							
STIPA	1	2	3	5								108	160	420							
Other Cool Season Grass																					
TOTALS	11	38	38	38								239	239	244							
Warm Season																					
SPCR	3	15	18	19								420	524	559							
BOGR	56	72	79	77								27	40	37							
MUPU2				3										600							
MUTO2			2										400								
MUPO2	1																				
Other Warm Season Grass																					
TOTALS	60	87	99	99								44	64	65							

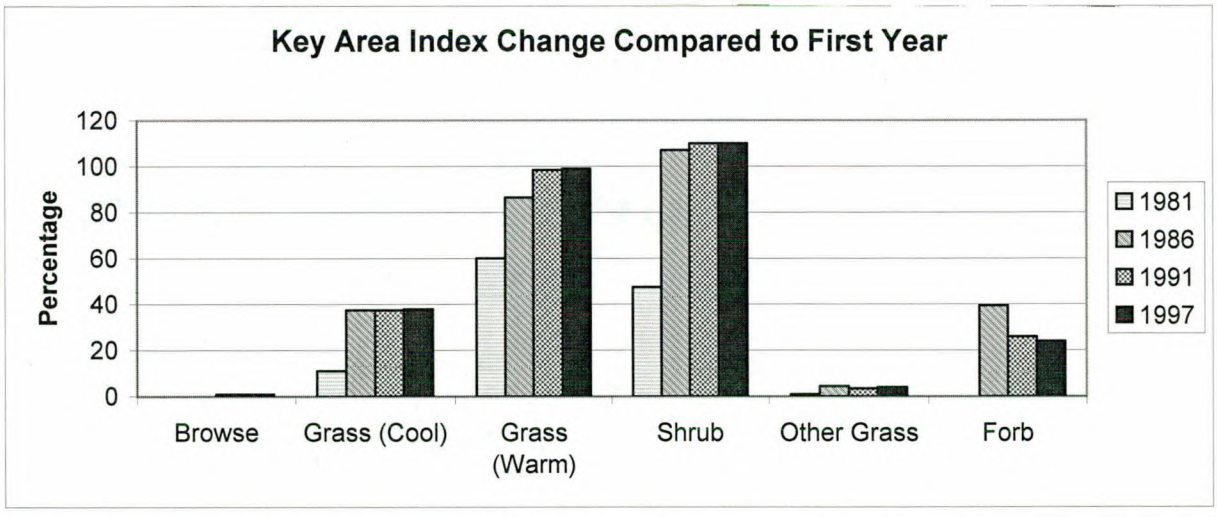
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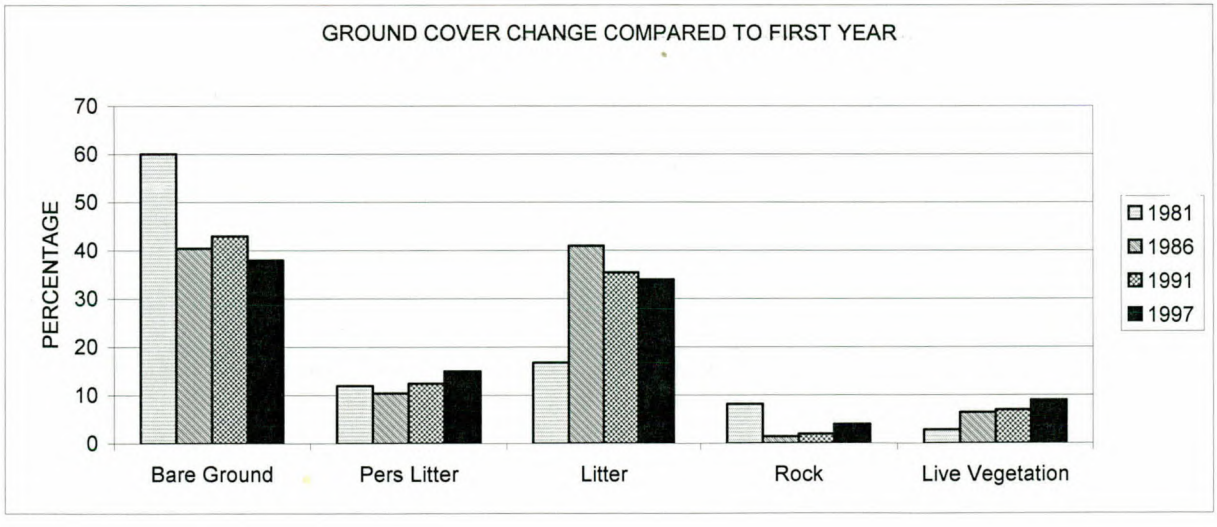
7/10/03	ALLOTMENT MAINSTREET	PASTURE HY POND	KEY AREA 4

COVER	YEARS PLOT WERE READ											TREND INDEX: COMPARES DATA FROM THE YEAR READ BACK TO BASE YEAR TO DETERMINE INDEX (a significant change is more than 10%) BASE YEAR = 1981									
CATEGORIES	1981	1986	1991	1997	2000	2003	2006	2009	2012	2015	2018	1986	1991	1997	2000	2003	2006	2009	2012	2015	2018
OTHER SHRUBS																					
GUSA2	13	37	38	31								185	193	139							
ARTR2	35	68	70	76								96	102	120							
OPUNT		2	2	3								300	400	600							
HAPP_ACAMP		1										100									
OTHERSHRUB																					
TOTALS	48	107	110	110								125	131	131							
OTHER GRASSES																					
ARIST	1																				
ARLO		3	4	4								600	700	800							
TRPU		2										300									
PPGG																					
TOTALS	1	5	4	4								368	264	316							
FORBS																					
ASTRA		1										100									
SPHAE		9	13	15								1700	2500	3000							
AAFF		5		9								1000		1800							
AAGG																					
PLANTAGO		1										100									
PPFF		25	14									5000	2700								
TOTALS		40	26	24								7900	5200	4800							

Allotment: MAINSTREET **Pasture: HY POND** **Key Area: 4**







PACE FREQUENCY TREND ANALYSIS

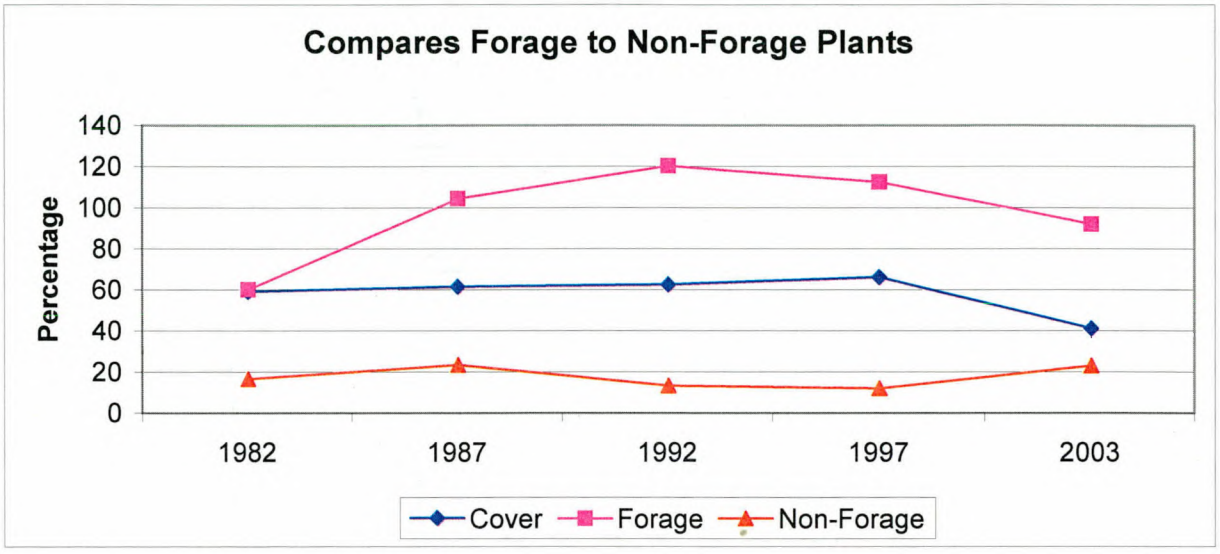
7/10/03	ALLOTMENT: MAINSTREET	PASTURE: BISHOP/BURR	KEY AREA 6	PAGE NUMBER 1

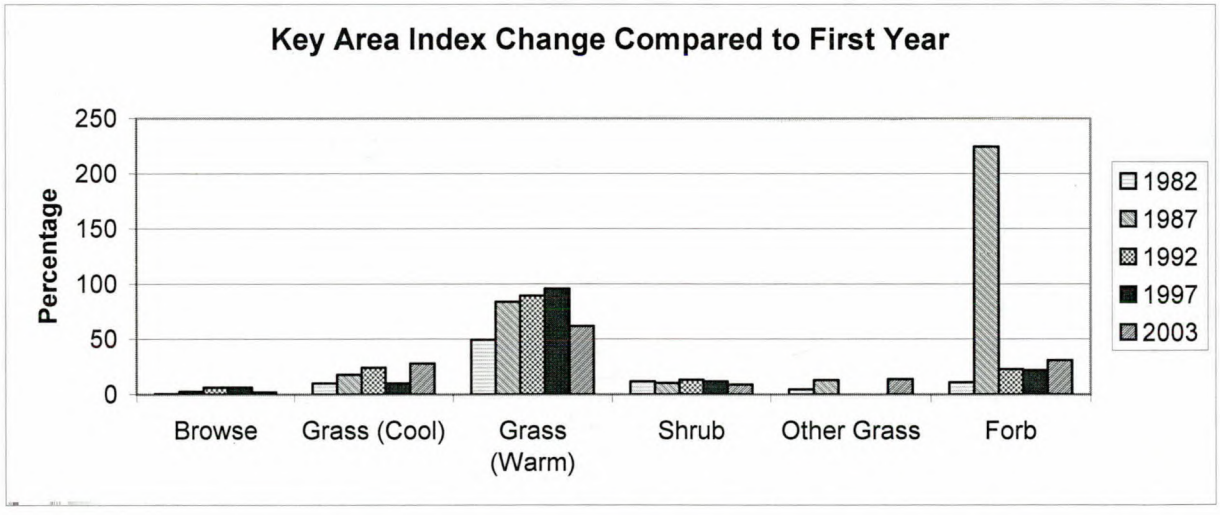
COVER	YEARS PLOT WERE READ											TREND INDEX COMPARES DATA FROM THE YEAR READ BACK TO BASE YEAR TO DETERMINE INDEX (a significant change is more than 10%) BASE YEAR = 1982									
CATEGORIES	1982	1987	1992	1997	2003	2006	2009	2012	2015	2018	2021	1987	1992	1997	2003	2006	2009	2012	2015	2018	2021
Bare Ground	41	39	38	34	59							-6	-8	-17	44						
Pers Litter		1	2	1	37							200	396	200	7400						
Litter	57	53	50	55								-8	-12	-4							
Rock	1	1	1	1	1							-50	49								
Live Vegetation	1	8	9	9	3							650	791	800	200						
% Ground Cover	59	62	62	66	41							4	6	12	-31						
BROWSE																					
ATCA2	1	3	3	3	2							400	593	593	300						
EPNE			1	2									297	400							
ARFI			1										198								
ARFR4				1										200							
OTHER BROWS																					
TOTALS	1	3	6	6	2							400	1187	1193	300						
DESIRABLE GRASSES																					
Cool Season																					
ORHY	1	1	1	3	2							-50	49	200	100						
SIHY	1	6	7	7	3							1000	1385	1300	500						
STIPA	9	12	15		23							41	81		171						
Other Cool Season Grass																					
TOTALS	10	18	24	10	28							80	143		180						
Warm Season																					
HIJA	10	17	15	16	10							79	62	68	5						
SPCR	16	36	38	39	44							122	138	144	175						
BOGR	23	32	35	39	8							37	53	70	-65						
BOER	1		1	2									-1	100							
Other Warm Season Grass																					
TOTALS	50	84	90	96	62							70	81	94	25						

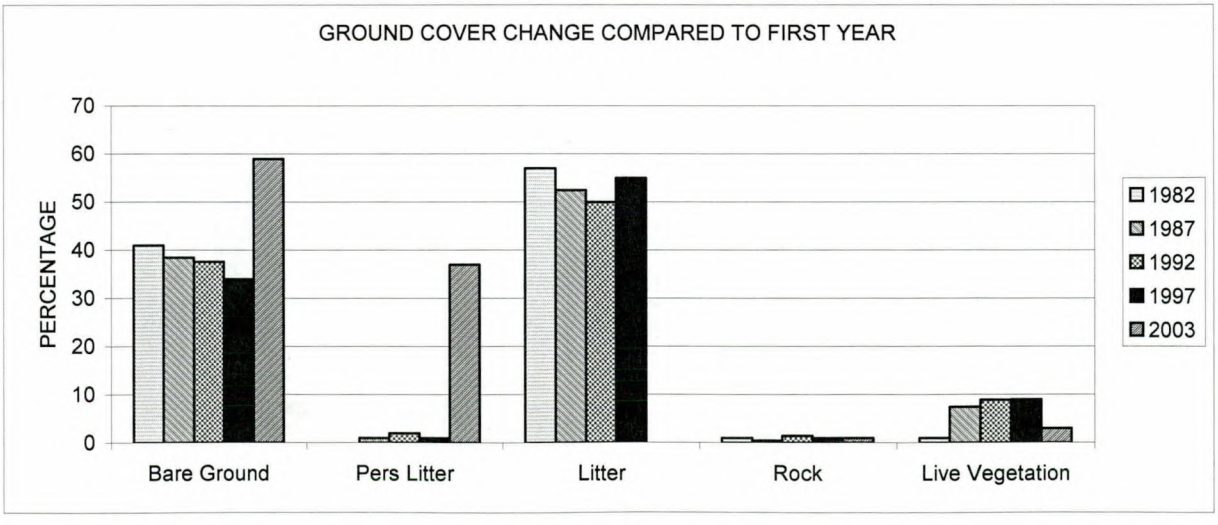
PACE FREQUENCY TREND ANALYSIS CONTINUED PAGE NUMBER 2

7/10/03	ALLOTMENT	MAINSTREET			PASTURE	BISHOP/BURR						KEY AREA	8							
												TREND INDEX								
												COMPARES DATA FROM THE YEAR READ BACK TO BASE YEAR TO DETERMINE INDEX								
COVER	YEARS PLOT WERE READ											(a significant change is more than 10%) BASE YEAR = 1982								
CATEGORIES	1982	1987	1992	1997	2003	2006	2009	2012	2015	2018	2021	1987	1992	1997	2003	2006	2009	2012	2015	2018	2021
OTHER SHRUBS																					
GUSA2	5	3	4	6	3							-33	-1	33	-33						
CHVI8					1										200						
CHRYSO	2	1	1	1								-50	-50	-50							
ARTR2	1		1										-1								
OPUNT			0	1									99	200							
LYAN	4	7	6	4								86	84	14							
LYCIU					5										1000						
EPVI	1																				
OTHERSHRUB																					
TOTALS	12	11	13	12	9							-13	11		-25						
OTHER GRASSES																					
ARIST	5																				
ARLO		12			14							2400			2800						
TRPU		1										200									
PPGG																					
TOTALS	5	13			14							189			211						
FORBS																					
ASTRA																					
SPHAE	10	9	11	19	16							-15	9	90	60						
AAFF		149	10		13							29800	1980		2600						
AAGG		59			2							11800			400						
ERIOG	1		1	2									98	300							
PLANTAGO		4										800									
PPFF		3										600									
ASTER	1		1	1									98	100							
TOTALS	11	225	23	22	31							1941	107	100	182						

Allotment: MAINSTREET **Pasture: BISHOP/BURR** **Key Area: 6**







PACE FREQUENCY TREND ANALYSIS

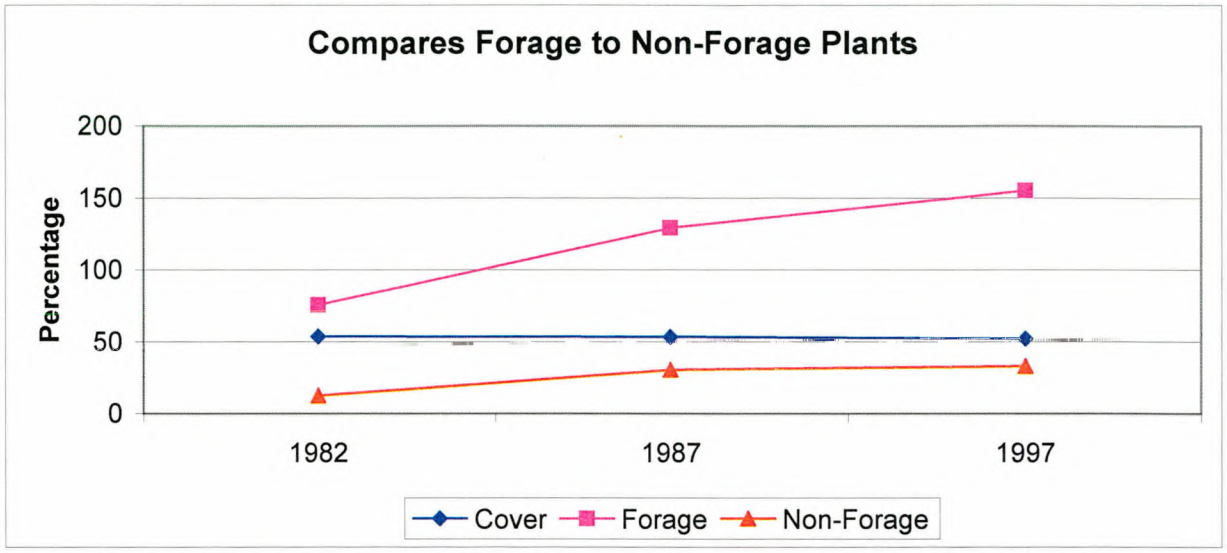
7/10/03	ALLOTMENT: MAINSTREET	PASTURE: DAVE POND	KEY AREA 7	PAGE NUMBER 1

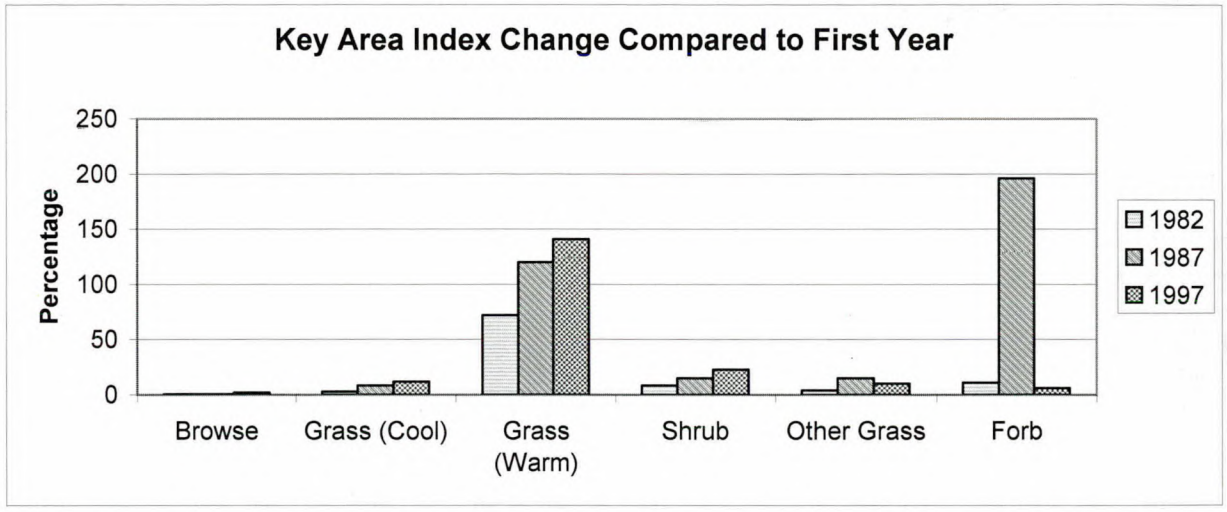
COVER CATEGORIES	YEARS PLOT WERE READ											TREND INDEX: COMPARES DATA FROM THE YEAR READ BACK TO BASE YEAR TO DETERMINE INDEX (a significant change is more than 10%) BASE YEAR = 1982									
	1982	1987	1997	2000	2003	2006	2009	2012	2015	2018	2021	1987	1997	2000	2003	2006	2009	2012	2015	2018	2021
Bare Ground	47	47	48									1	3								
Pers Litter			1										200								
Litter	50	44	40									-12	-19								
Rock			1										200								
Live Vegetation	4	9	10									133	150								
% Ground Cover	54	53	52									-1	-3								
BROWSE																					
CELA	1	0	2									-2	300								
OTHER BROWS																					
TOTALS	1	0	2									-2	300								
DESIRABLE GRASSES																					
Cool Season																					
ORHY	1		1										100								
SIHY	1	2	3									292	500								
STIPA	2	6	8									219	300								
Other Cool Season Grass																					
TOTALS	3	8	12									178	300								
Warm Season																					
HIJA	5	13	20									155	300								
SPCR	6	25	32									325	433								
BOGR	54	76	80									42	48								
BOER	7	5	9									-23	29								
Other Warm Season Grass																					
TOTALS	72	120	141									67	96								

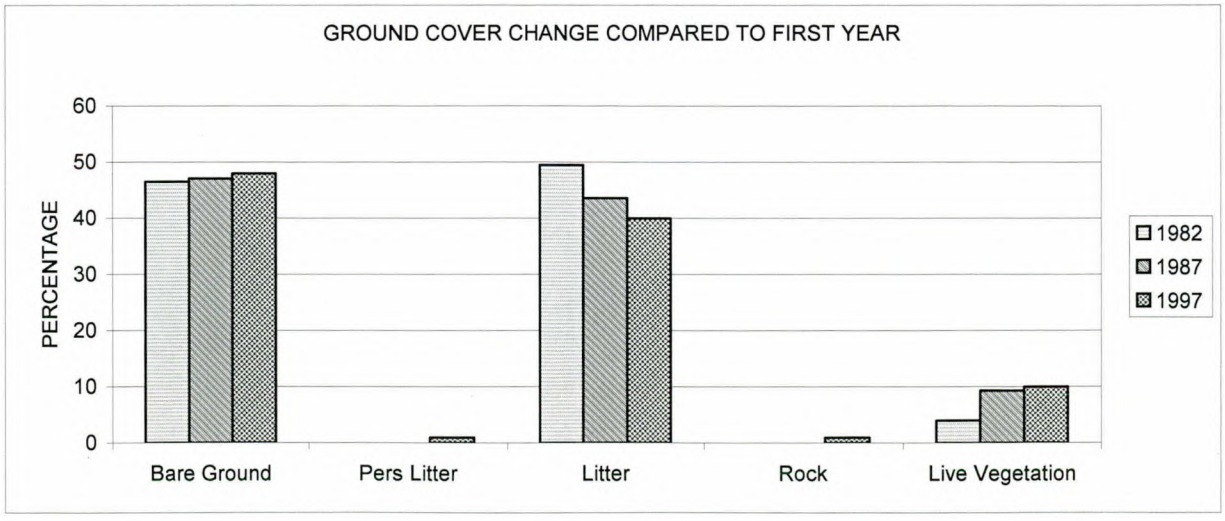
7/10/03	ALLOTMENT MAINSTREET	PASTURE DAVE POND	KEY AREA 7

COVER CATEGORIES	YEARS PLOT WERE READ											TREND INDEX: COMPARES DATA FROM THE YEAR READ BACK TO BASE YEAR TO DETERMINE INDEX (a significant change is more than 10%) BASE YEAR = 1982									
	1982	1987	1997	2000	2003	2006	2009	2012	2015	2018	2021	1987	1997	2000	2003	2006	2009	2012	2015	2018	2021
OTHER SHRUBS																					
GUSA2		3	5									588	1000								
ARTR2			1										200								
OPUNT		0	2									98	400								
LYAN		12	11									2353	2200								
LYCIU	9																				
ERIOG_SHRB			3										600								
OTHERSHRUB			1										200								
TOTALS	9	15	23									79	171								
OTHER GRASSES																					
ARIST	4																				
ARLO		14	10									2843	2000								
TRPU		1										196									
PPGG																					
TOTALS	4	15	10									280	150								
FORBS																					
ASTRA		23										4608									
SAKA		0										98									
SPHAE	10	24	2									148	-79								
AAFF		119	3									23824	600								
AAGG		11										2157									
PLANTAGO		13										2647									
PPFF		4										882									
ASTER	2	1	1									-2	-33								
TOTALS	11	196	6									1683	-45								

Allotment: MAINSTREET **Pasture: DAVE POND** **Key Area: 7**







Appendix E:

Wildlife Data

AGFD MULE DEER DATA FOR GMU 13B

YEAR	# SURVEYED	BUCKS/100DOES	FAWNS/100DOES	POPULATION ESTIMATE
1985	108	30	50	1000-1500
1986	41	29	18	1000-1500
1987	63	31	44	1163
1988	No data	No data	No data	No data
1989	112	71	31	900
1990	63	68	32	900
1991	85	27	37	900
1992	31	24	59	<1000
1993	117	126	52	800-1000
1994	143	69	52	No estimate
1995	88	183	79	No estimate
1996	154	87	33	No estimate
1997	64	77	29	No estimate
1998	156	43	45	No estimate
1999	145	51	35	No estimate
2000	155	49	36	No estimate
2001	275	34	67	No estimate
2002	118	46	20	No estimate
2003	Unknown	29	46	No estimate

AGFD RECENT MULE DEER HUNT DATA FOR GMU 13B

YEAR	# OF PERMITS	HUNT SUCCESS (%)
1998	70	68
1999	75	66
2000	75	78
2001	65	55
2002	65	68

AGFD PRONGHORN DATA FOR GMU 13B

YEAR	# SURVEYED	BUCKS/100DOES	FAWNS/100DOES	POPULATION ESTIMATE
1985	Not available	39	Not available	Not available
1986	Not available	35	Not available	156
1987	129	28	Not available	Not available
1988	192	54	Not available	172
1989	142	38	Not available	256
1990	131	34	Not available	166
1991	51	55	21	189
1992	77	69	26	192
1993	151	58	67	253
1994	84	58	17	210
1995	81	43	34	203
1996	119	27	13	295
1997	79	33	42	196
1998	76	100	45	190
1999	58	65	6	121
2000	23	229	0	58
2001	60	55	27	58
2002	60	53	14	121
2003	70	69	50	139
2004	104	32	51	**

** Not yet analyzed as of the date of this assessment.

AGFD RECENT PRONGHORN HUNT DATA FOR GMU 13B

For the last five years, the average number of permits was 5 with a hunter success of 82% and a total of 20 animals were harvested