

Navajo Nation Mule Deer Management Plan



A Cooperative Project between High Desert Adventures and
Navajo Nation Department of Fish & Wildlife

Introduction

- Lack of Management Plan for the most important game species on the Navajo Nation



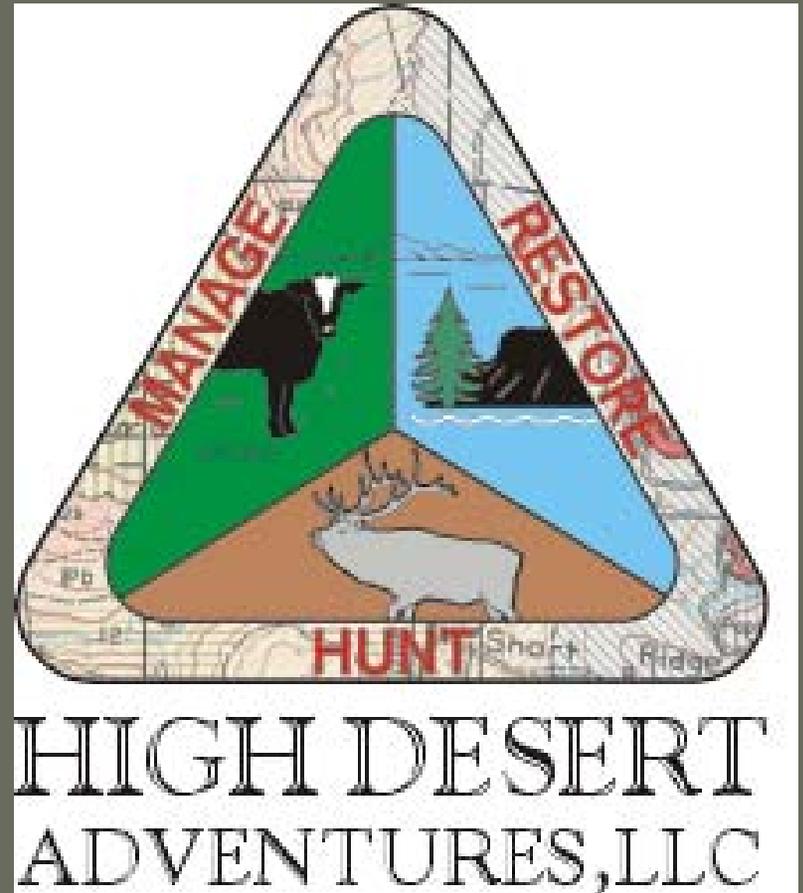
Purpose of Plan

Wildlife Resources are a fundamental part of the Navajo Culture. In order to conserve and manage Mule Deer into perpetuity for the benefit of the Navajo people for cultural, recreational and economic purposes a Management Plan is needed.



High Desert Adventures LLC

- Incorporated in 2008, HDA has 51 years of combined experience in the wildlife profession. We embrace Holistic Management concepts and are knowledgeable and experienced in management programs for Big Game, development of hunting enterprises, habitat improvements, ranch management, business plan development and hunting operations.
- Contracted to Evaluate Mule Deer Management; analyze existing data, recommend Improvement in data collection techniques in coordination with the Navajo Fish and Wildlife Department produce a Big Game Management Plan with Mule Deer as the priority.



Problem Statement

- Biological
 - Lack of a Management Plan for big game resources
 - Healthy Populations with skewed sex ratios
 - Aerial surveys results highly variable
 - Trophy vs. General hunt objectives not defined
 - Population Movements Unknown
 - Lack of Data Analysis
 - Habitat Improvements Needed
- Administrative
 - Budget Expenditures
 - Standardized Proclamation
 - Volatility in Big-Game Revenues
 - Donation Policy and Marketing
- Economic
 - Guiding Opportunities
 - Business Plan Development
 - Tribal Ranches Program
 - Long–Term Sustainability

Timeline

- In order to evaluate all necessary aspects for a new Mule Deer Management Plan we need to collect and analyze data over a 3-5 year period.
- Once data has been analyzed a final plan with clear and attainable goals and objectives will be presented to the Tribe.

Goals of the Program

- Develop a flexible/dynamic Big Game Management program with Mule Deer as the priority.
 - Improve and strengthen the data collection and analysis
 - Define and Implement Harvest Strategies
 - Habitat Improvements (water development, burns, PJ removal, sagebrush control)
 - Predator program (Coyote, Mt. lion)
- Create a stable revenue source which would aid in long term forecast
- New standardized/user friendly Proclamation
- Equitable distribution of hunting permits for Tribal Member, Non-member and Trophy programs.
- Stakeholder participation – meetings, surveys
- Evaluate the Big game Donation Policy
- Review Guide Policy
- Development of Business Enterprise
- Partnerships – BIA, Government agencies, Private i.e. RMEF, SCI
- Evaluation and phasing-in of the alternatives

Year 1

- Evaluate Deer Check Station Data – make recommendations for improvement
- Participate in Annual Aerial Deer Survey
- Review past Deer Aging Reports, Aerial Survey Reports, Harvest Reports, Proclamations, Gather Hunter Feedback
- Review Regulations, Codes and Policies related to Deer Management



2000-2010 Data

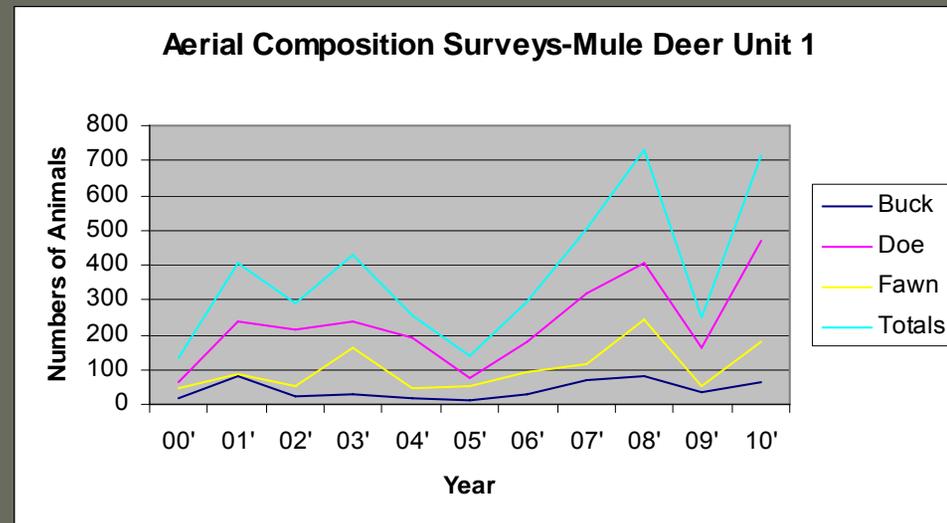
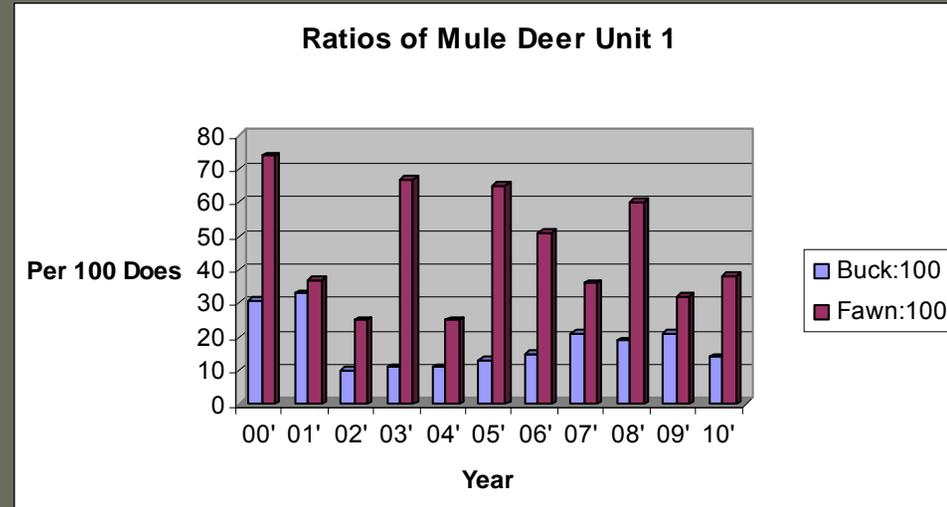
Analysis of the:

- Aerial Flight Trend Data
- Harvest Data



Post Hunt Aerial Flights

- Develop Flight Protocol
- Establish Transects
- Timing of flights (Post and Pre Hunt)
- Better Coverage of Units (i.e. Trophy Units Every Year, other units flown at least every 2 years)
- Minimize Error
- Establish Target Sex Ratios



% Herd Composition - Mule Deer 2010

- Target Herd Composition = 24 (♂):50(♀):26(Y)
*Near target

Unit 1	9: 66: 25
Unit 3	12: 66: 22
Unit 4	12: 71: 17
Unit 5A	13: 61: 26
Unit 5B	18: 58: 24
Unit 12*	21: 55: 24
Unit 16	24: 62: 14

Mule Deer Aerial Classification 2010



Unit	Bucks	Doe	Fawns	Totals
1	64	471	180	715
2	no survey			0
3	112	619	205	936
4	15	86	20	121
5A	98	470	199	767
5B	21	68	28	117
7	no survey			0
12	183	478	207	868
16	5	13	3	21
Totals	498	2,205	842	3,545

Elk Aerial Classification 2010

Unit	Bulls	Cow	Calves	Totals
4	3	6	4	13
3	0	1	1	2
16	49	2	1	52
Totals	52	9	6	67



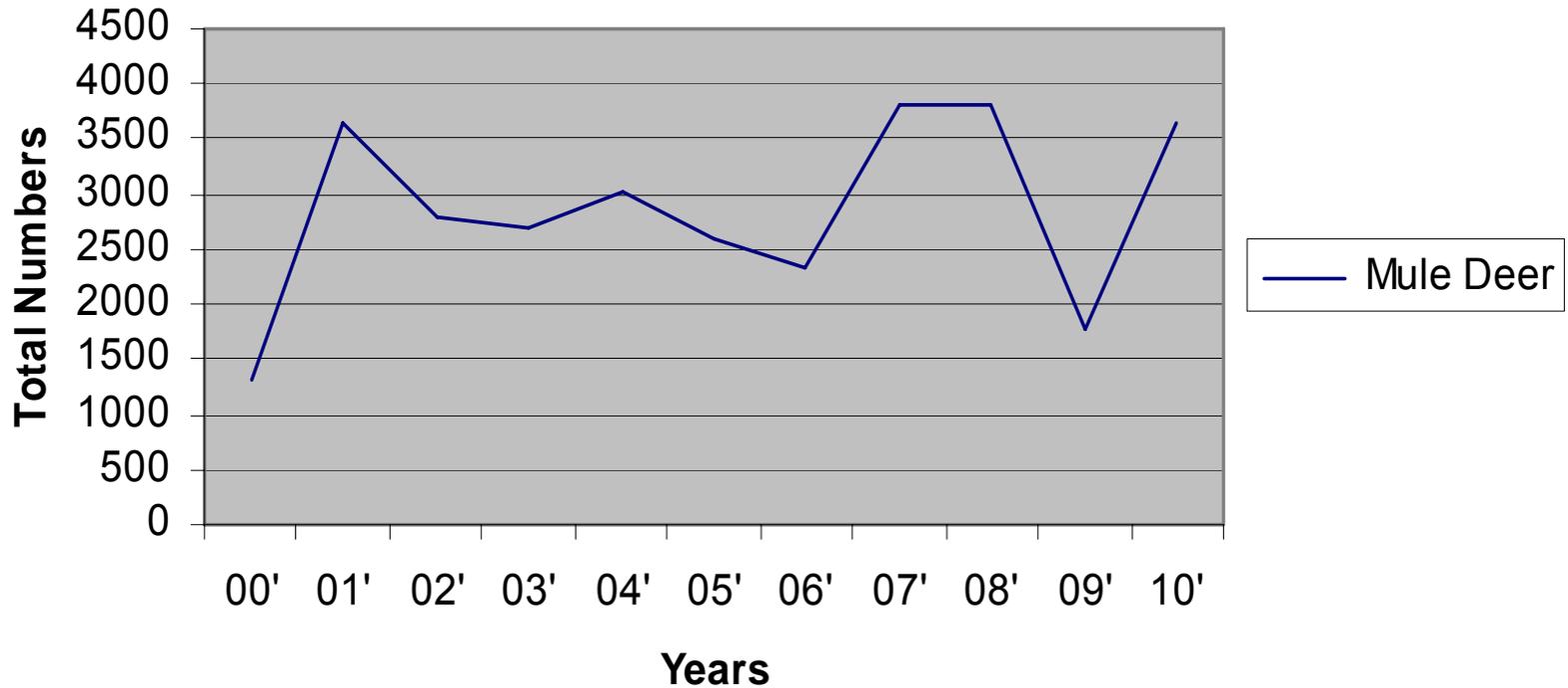
Pronghorn Aerial Classification 2010

Unit	Bucks	Doe	Fawns	Totals
16	5	13	3	21
Totals	5	13	3	21



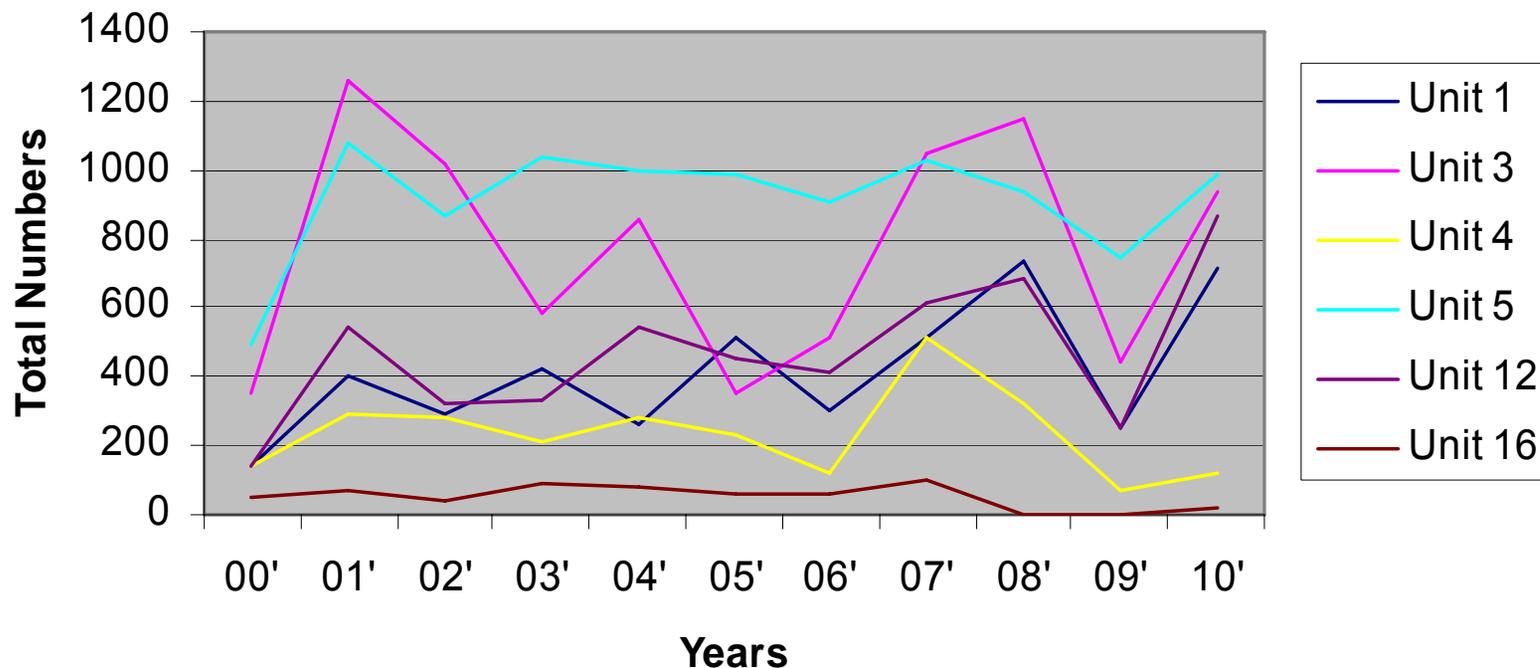
Total Mule Deer Classified from 2000 - 2010

Mule Deer Classified Units 1,3,4,5,12,16



Mule Deer Numbers Classified for the following Hunt Units from 2000 - 2010

Aerial Mule Deer Composition Surveys



2009 Harvest Data

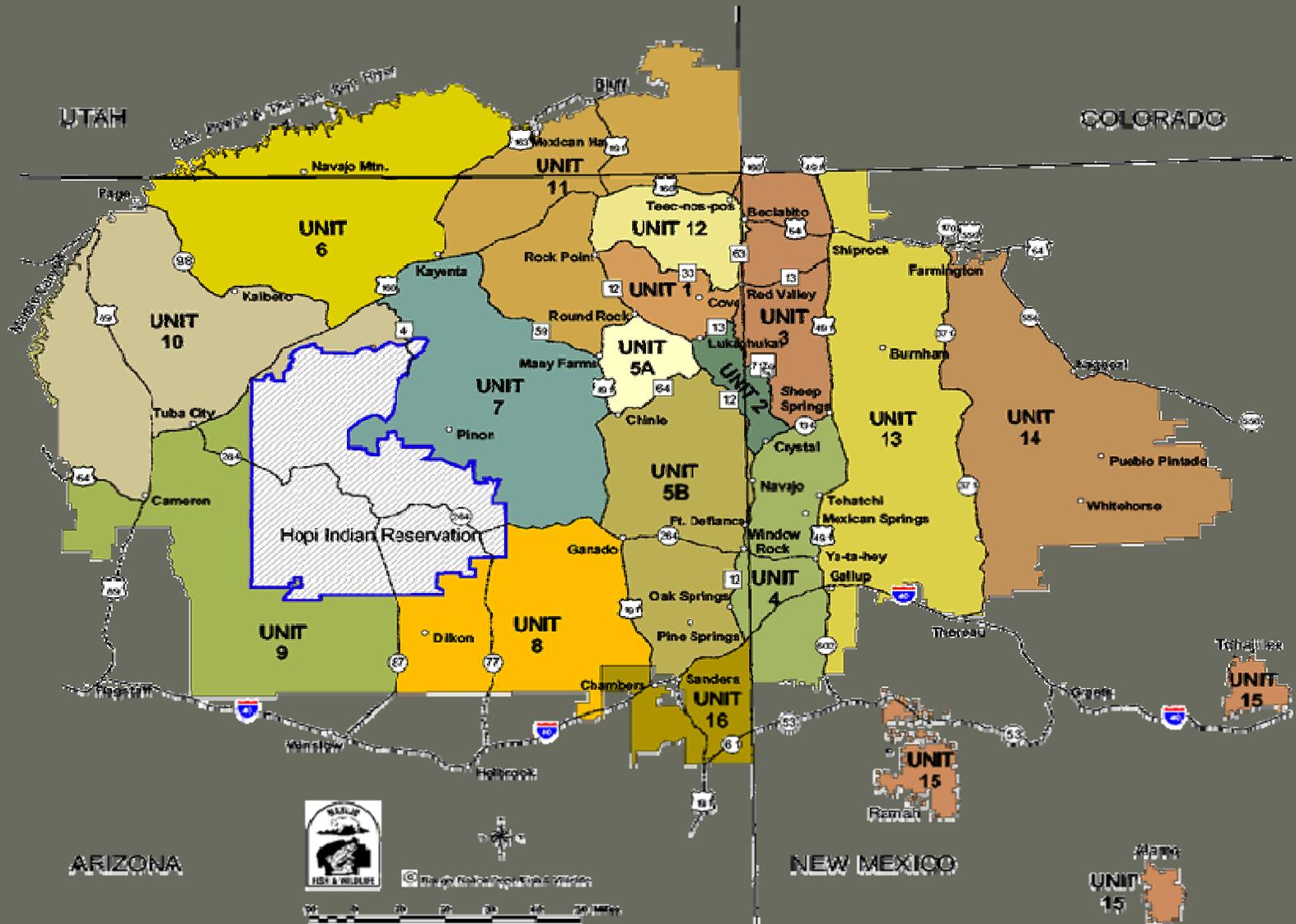
- 830 Bucks Harvested in 2009
 - 56% Overall Success Rate

- 98 Does Harvested in 2009
 - 74% Overall Success Rate

Proposed Changes / Management Considerations

- Potential Changes to Unit Boundaries
- Region/Unit Management Approaches
- Trophy, Quality & Traditional Management Approaches
- Setting Herd / Harvest Objectives for each Region / Unit
- Potential for Doe Hunts
- Separating Navajo / Non - Navajo Hunting Seasons / Proclamations
- Stakeholder Input

Current Navajo Nation Hunt Units



Development of New Hunt Units

- Based on Regional/Unit Management
- Big Game Population occupation on a year round basis.
- Habitat types are similar
- Adjust hunting season dates
- Identify Trophy Hunt Units
- Identify Quality Hunt Units
- Identify Traditional Hunt Units

Regional and Unit Management Approach

- A Region is defined as the total area that each deer herd uses throughout the course of a year
 - Within each Region are hunting Units that have specific harvest Goals and Objectives
 - Each Unit will fall under one of the following management approaches
 - Trophy, Quality, Traditional

Trophy Management

- Manage for Trophy Quality Bucks
 - Restricted Harvest Rates (<15% of Bucks)
 - Optimum Hunt Timing
 - High Hunt Success Rates (>90%)
 - Average Buck Age 6-8 years old
 - Average Score 200"+
 - Maintain >40:100 Buck:Doe Ratios
 - Of Post Hunt Bucks 50% should be 4x4+



Quality Management

- Manage for a Quality Hunt Experience
 - Restricted Harvest Rates (<25% of Bucks)
 - Good Hunt Timing
 - Average Buck Age 4-6 years old
 - Maintain Doe Population at optimum reproductive age (3-6) through harvest
 - Balanced Sex Ratios
 - More Mature Bucks in Population

Traditional Management

- Management approach used in units that meet certain criteria. Provides more hunting opportunity.
 - This management approach includes:
 - Hunt units with historically low deer numbers / hunter success rates



Habitat is Key

- 40/60 Cover/Forage Ratio
- Water Distribution every square mile
- Burn decadent stands of P/J
- Remove Feral Horses/Cattle
- Protection of critical summer/winter range

Predator Management

- Evaluate Mountain Lion and Coyote Populations
- Design Control Programs
- Implement Changes in Trophy Units first
- Expand Program as needed to all units



Overview



This is a Multi-Year Program

- 1st Year Objectives:
 - Gather all available data, Organize, evaluate and develop the baseline.
 - Identify Research Needs
 - Establish Harvest and Herd Objectives for the hunt units.
 - Population (aerial flight data, design flight protocol)
 - Harvest Data – Age structure, antler measurements, Body condition.
- 2nd Year Objectives
 - Establish Habitat Program
 - Predator Program
 - Aerial Flight consistency (flight transects, better coverage)
 - Harvest strategies Implemented (% herd comp, buck:doe ratios and harvest numbers of both buck & does)
 - Draft proclamation
 - Review Guide Program

Final Stages

- 3rd Year Objectives
- New Hunting Proclamation
- Implementation of Business Enterprise
 - Donation Policy and Marketing of hunts
 - Establish long term revenue projections
 - Evaluation of the NM Land owner permit program for Tribal Ranches in NM.
 - Guiding Program
- Continuation of data collection, analysis and refinement.
- Implementation of Research and Habitat Improvement projects.

- 4th Year Objectives
- A documented Management Program addressing the biological needs of the resources, identify Administrative roles & responsibilities, maximized revenues, business plan development, consistency and the ability to evaluate the effectiveness and make changes as needed.

Summary

For the past 20 years the Navajo Nation has “managed” its Mule Deer without a Management Plan. Because the community expressed a desire for the Department to make deer management a priority, the Fish & Wildlife Department is taking this initiative to develop a long term plan. The changes will be transitional and begin in 2010 and will use scientific/biological information as well as input from the stakeholders involved. This is an opportunity for the Sportsmen, Guides, and the general public to participate in the long term planning process.