

## **WILDLIFE PROGRAM - GAME SUBPROGRAM**

The purpose of the Game subprogram is to protect, restore, and manage game populations and their habitats, to maintain the natural diversity of Arizona, and to provide wildlife-oriented recreation opportunities for all present and future generations. "Game" includes big game, small game, fur-bearing animals, predatory animals, upland game birds and migratory game birds.

To fulfill its purpose, the Game subprogram uses the following activities: Game Survey, Hunter Questionnaire Program (Harvest Survey), the Hunt Recommendation Process, Translocations, Habitat Partnerships (through the Habitat Partnership Committee), the Special Big Game Tag Process, and Regional and National habitat management activities. Each of those activities is summarized below.

### **Game Survey**

The Department is required by statute to establish programs for the management of game species for both hunters and non-hunters. The demand for Arizona's game resources generally exceeds the supply. Careful regulation of take is imperative, particularly with respect to ungulates; although, capitalizing on opportunity to the extent possible is equally important. Regulation of the annual harvest requires an inventory of the game resource and an estimate of the harvest of each species. These data constitute basic information needed to formulate hunting harvest limits and season lengths. This information is also published to provide the public with a reasonable chance of success in either hunting or observing game commensurate with the available supply and biological welfare of the particular species. This information is also needed by wildlife managers and land administrators to make decisions to regulate the size of the wildlife resource in balance with available habitat, and to make decisions that affect management of forests and rangelands for multiple users.

The Department conducts routine surveys for different species of wildlife using a variety of survey techniques (including aerial line, transect, and block surveys). These surveys are conducted to document occurrence and estimate numbers of particular species of wildlife, relative ratios of animals based on sex and age, and recruitment success for a given Game Management Unit.

The Department frequently uses helicopters and fixed-wing aircraft to survey deer, pronghorn, elk, bighorn sheep, javelina, buffalo, and waterfowl on a statewide basis. Where feasible, aerial line transect and block surveys are used to estimate populations. Surveys conducted from fixed wing aircraft are flown at approximately 70 miles-per-hour, and at least 200 feet above ground level, while observers in the aircraft record the number, age, and sex of the animals surveyed. Surveys conducted from helicopters are flown at approximately 40 miles-per-hour, at a minimum of 200 feet above ground level. Low-level operations are conducted only on the portions of flights occurring over habitat in which the species being surveyed is likely to occur. These habitats include most vegetation associations occurring in Arizona.

The Department estimates abundance of deer, elk, and pronghorn using models that are based on simple life-table calculations and simultaneous double count survey calculations. The estimates assist in the determination of population size necessary for estimated annual removal of animals (harvest and non-hunt mortality) over a series of years to produce observed effects on male:female ratios. The principle is that hunts for male animals reduce male:female ratios below

those found in non-hunted populations. The extent of this reduction is dependent upon the size of the harvest, recruitment rates, natural mortality, and the population size.

### **Hunter Questionnaire Program**

The Department estimates harvest numbers and hunter activity levels through a series of hunter report questionnaires. During a typical year, 14-15 different questionnaires are mailed to hunters and an additional 3 are used from mandatory checkouts. Each questionnaire is designed to provide information necessary to evaluate seasonal hunter activities and to judge programs designed to manage game animal populations.

### **Hunt Recommendation Process**

All game species are managed according to Species Management Guidelines and Hunt Guidelines. These are dynamic documents that provide specific targets used to manage species and assign hunt recommendations. The purpose of these guideline documents is to provide a simplified, consistent framework to determine seasons and permit numbers each year. All are developed to provide maximum hunting opportunity, increase hunter recruitment and retention, and eliminate barriers to hunting recreation, while assuring that game populations remain sustainable over the long-term.

Species Management Guidelines are revised periodically to ensure that appropriate and current guidance is available to steer management activities such as surveys, forage monitoring, translocations, and population trend assessments.

Hunt Guidelines are revised every 2 years and approved by the Commission. Hunt Guidelines entail the biological and sociological sideboards for developing hunt structures, season dates, and permit levels. Hunt Guidelines are developed using a public process whereby public opinion is sought and incorporated into a final guidance document.

Hunt Recommendations are developed by following the Species Management Guidelines and the Hunt Guidelines using the barometers they provide (e.g., for deer this includes buck:doe ratios, fawn:doe ratios, hunt success, and population trend). Hunt Recommendations are developed by Wildlife Managers, reviewed by Regional Game Subprogram Staff, assimilated and reviewed by Game Staff, reviewed with Executive Staff, and approved by the Commission. Elk, pronghorn, and population management seasons are approved at the December Commission meeting; deer, fall turkey, fall javelina, bighorn sheep, fall buffalo, fall bear, and mountain lion seasons are approved at the April Commission meeting; webless migratory birds and special big game seasons are approved at the June Commission meeting; and spring turkey, spring javelina, spring buffalo, and spring bear are approved at the August Commission meeting. Trapping and small game seasons are approved during even years at the April Commission meeting.

Hunt recommendations for migratory birds are coordinated with the United States Fish and Wildlife Service (USFWS). This coordination is done through the Flyway system, where states send representatives who consult with the USFWS and manage migratory birds cooperatively; Arizona is within the Pacific Flyway. Surveys and other biological parameters determine reasonable and sustainable harvests of birds within each of the four geographic flyways.

### **Translocations**

Translocation is an important management tool and is used to establish, reintroduce, or augment existing populations following habitat assessments of the suitability of the release site and population assessments of the source site for availability of surplus wildlife. The translocation process is described in Department Policy, as found in the Department Policy, Department Operating Manual, section I1.2 (DOMI1.10).

The activities undertaken in this process should be shared with the public through outreach. Improvements to the process should be based on research and innovation. Results should be published in appropriate outlets.

### **Habitat Partnerships**

Habitat Partnerships play an important role in developing proposals that benefit wildlife habitat and reduce conflicts with other public land uses. Originating as a means to deal with elk-livestock conflicts, the process developed into one to benefit all big game species. The sale of Special Big Game License Tags has provided a funding source that can be used to match funds from outside partners, including land management agencies, nongovernmental organizations, and federal fund sources, to create landscape habitat plans and bring them to completion. Habitat Partnership Committees also provide a forum for furthering discussion and collaboration about wildlife management decisions. Projects are solicited annually on September 1 and evaluated by an internal Department team for wildlife priority ranking. Funding of projects is then sought through a variety of sources, although primarily through Special Big Game Tag Funds. Projects funded through this source are discussed and coordinated with the nongovernmental organizations that raised the funds, through the sales, by auction or raffle, of the Special Big Game License tags. Other fund sources (e.g., Landowner Incentive Program grants) are incorporated into the process. An Arizona Game and Fish Commissioner is the chair of the Committee that approves final projects.

### **Special Big Game Tag Fund Process**

Under the authority of ARS 17-346 and Commission Rule R12-4-120, the Arizona Game and Fish Commission awards 3 Big Game License Tags for 9 big game species each, per year to qualifying conservation organizations who sell the tags by auction or raffle at their annual fundraising events. The proceeds of these sales are returned to the Department and used to fund habitat and management projects for the benefit of the game species for which the funds are raised. Management and research projects are eligible for funding, although most projects are submitted through the Habitat Partnership Committee Process. Projects are evaluated by the Department, and priority project funding is coordinated with the qualifying conservation organizations that raised the funds.

### **Regional and National Habitat Management**

Because habitat largely determines wildlife distribution and abundance, the Department manages habitat to benefit wildlife wherever there is an opportunity to do so. There are a number of grant opportunities for small regional projects to benefit wildlife. The Department aggressively pursues grant monies to benefit wildlife in Arizona. Working with local landowners through the Landowner Incentive Program to enhance wildlife habitat has been effective in many areas of the State. In the case of migratory birds, effective habitat management may even extend beyond the borders of Arizona to benefit birds that migrate through Arizona and provide hunting opportunity

to Arizona hunters. In Arizona, the duck stamp program provides funds to support wetland habitat projects to benefit Arizona waterfowl.

### **Operational Approaches**

Below are Objectives and Species-Specific approaches for guiding the management of Arizona Game Species. In all the objectives and species specific approaches listed below, annual harvest objectives were derived from past harvest estimates and recent habitat conditions. In all cases, these harvest objectives are well within the range of sustainable harvest.

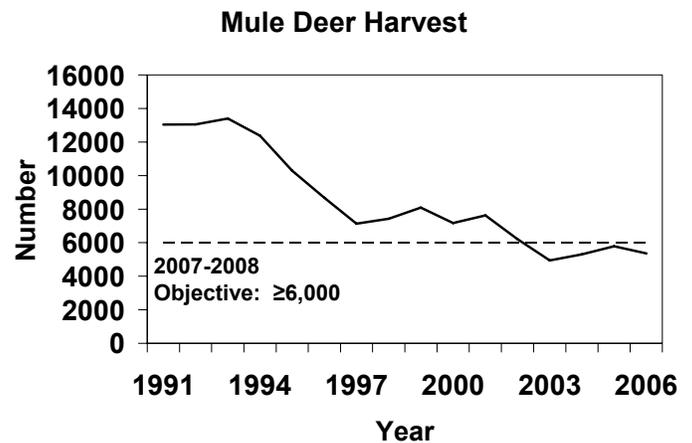
### **Big Game Species**

#### **Mule Deer**

##### **Approaches**

1. Increase post-hunt population trends statewide (1.A.1-1.A.6).
2. Maintain annual harvest of at least 6,000 (1.B.1-1.B.3, 1.B.6, 1.B.7).
3. Provide recreational opportunity for at least 35,000 (1.B.1-1.B.3).
4. Provide 200,000 hunter days or greater each year (1.B.1-1.B.3).
5. Maintain buck:doe ratios statewide according to hunt guidelines (1.A.1-1.A.6)<sup>a</sup>.
6. Manage hunt success statewide according to hunt guidelines (1.A.1-1.A.6, 1.B.1-1.B.3)<sup>a</sup>.
7. Increase permit numbers over 2006 levels by 10% by 2009 (1.A.1-6, 1.B.1-3).

<sup>a</sup> Except where modified within specific units by the Alternative Deer Management Plans.



##### **Species Specific Approaches**

1. Use standardized surveys and population and hunt modeling to assist in permit recommendations. Base harvest objectives on population trends and habitat objectives.
2. Issue permits considering hunter access and demand rates for various weapon types.
3. In Game Management Units described within the Alternative Deer Management Plan, offer buck hunting opportunities that emphasize harvest of older age class animals, reduced hunter densities, and higher hunter success.
4. Improve the condition of declining or low-density herds through habitat improvement, research, conservative hunt management, or predator management.
5. Coordinate with the Arizona Department of Transportation (ADOT) to maintain or enhance habitat connectivity among deer herds. Also work with ADOT to determine the extent of vehicle-deer collisions and to identify possible mechanisms by which to reduce the incidence or severity of such collisions.
6. Local Habitat Partnership Committees will identify ways to manage and enhance habitat through partnerships with public agencies, property owners and lessees, and wildlife

conservation organizations, and help maintain communication among individuals interested in deer management.

7. Manage from a landscape perspective.
8. Coordinate with land management agencies, property owners, and lessees to mitigate land uses that are detrimental to mule deer.
9. Manage and enhance habitats through partnerships with public agencies, property owners and lessees, and wildlife conservation organizations
10. Continue habitat enhancement projects in Unit 12A to benefit mule deer
11. Continue habitat enhancements in Unit 27 to benefit mule deer

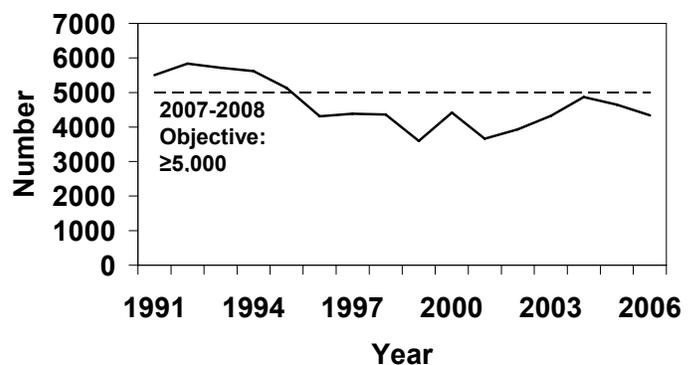
### White-tailed Deer

#### Approaches

1. Increase post-hunt population trends statewide (1.A.1-6).
2. Maintain annual harvest at 5,000 or greater (1.B.1-3, 1.B.6-7).
3. Provide recreational opportunity for 22,000 or more hunters per year (1.B.1-3).
4. Provide 100,000 hunter days or greater each year (1.B.1-3).
5. Maintain buck:doe ratios statewide according to hunt guidelines (1.A.1-1.A.6)<sup>a</sup>.
6. Manage hunt success statewide according to hunt guidelines (1.A.1-1.A.6, 1.B.1-1.B.3)<sup>a</sup>.
7. Increase permit numbers over 2006 levels by 10% by 2009 (1.A.1-6, 1.B.1-3).

<sup>a</sup>Except where modified within specific units by the Alternative Deer Management Plans.

**White-tailed Deer Harvest**



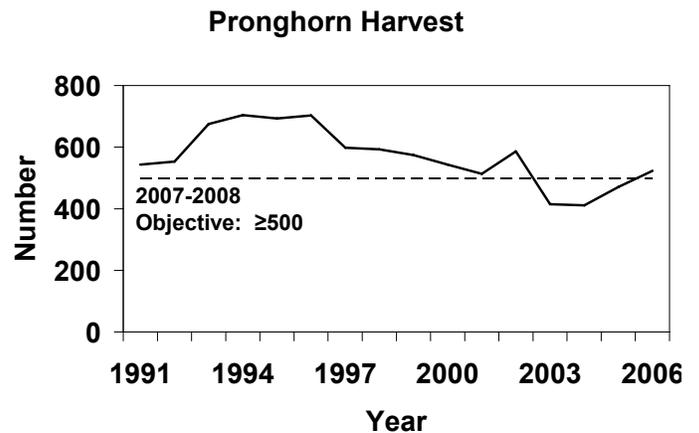
#### Species-Specific Approaches

1. Use standardized surveys and population and hunt modeling to assist in permit recommendations.
2. Manage white-tailed deer independently of mule deer, to the extent practicable, and from a landscape perspective.
3. Coordinate with the Arizona Department of Transportation (ADOT) to maintain or enhance habitat connectivity among deer herds. Also work with ADOT to determine the extent of vehicle-deer collisions and to identify possible mechanisms by which to reduce the incidence or severity of such collisions.
4. Issue permits in consideration of hunter access, season structures, and demand rates for various weapon types.
5. Coordinate with land management agencies, property owners, and lessees to mitigate land uses that are detrimental to white-tailed deer.
6. Manage and enhance habitats through partnerships with public agencies, property owners and lessees, and wildlife conservation organizations.

### Pronghorn

#### Approaches

1. Increase post-hunt population trends statewide (1.A.1-6).
2. Maintain annual harvest at 500 or greater (1.B.1-3, 1.B.6-7).
3. Provide recreational opportunity for 1,000 or more hunters per year (1.B.1-3).
4. Provide 4,500 hunter days or greater each year (1.B.1-3).
5. Maintain buck:doe ratios statewide according to hunt guidelines (1.A.1-1.A.6).
6. Maintain existing occupied habitat, with emphasis on retention of medium and high quality habitat (1.A.1-6).
7. Continue habitat improvement efforts on Anderson Mesa in Units 5A, 5B, and 21 for pronghorn (1.A.1-6).
8. Restore the historical range in Arizona by repopulating through translocations (1.A.1-6).
9. Evaluate and initiate where appropriate translocations into Units 7, 13A, 13B, 21, and 27. Source animals will either come from central Arizona or from out of state (1.A.1-6).



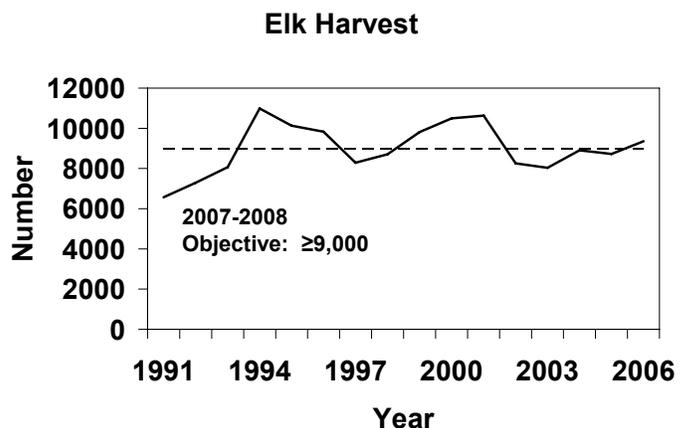
#### Species-Specific Approaches

1. Manage and enhance habitat through partnerships with public agencies, property owners, lessees, and conservation organizations.
2. Improve conditions of declining or low-density herds through research, conservative hunt management, supplemental translocations, habitat improvement, and predator management.
3. Establish self-sustaining pronghorn populations at all translocation sites.
4. Use Regional Pronghorn Antelope Management Plans, which will be reviewed every 2 years by the Commission, to direct pronghorn management goals and objectives from a landscape perspective.
5. Identify important habitats for populations and determine where protection and improvement are possible, in cooperation with land management agencies, property owners, and lessees.
6. Use population abundance and basic hunt modeling to assist in permit recommendations.
7. Provide hunter recreation that stresses the quality of the hunting experience.

### Elk

#### Approaches

1. Increase post-hunt population trends statewide when consistent with Regional Elk Management Plans (1.A.1-6). Address local issues in Regional Elk Management Plans that may impact



- localized populations, despite current statewide population levels (1.B.6-9).
2. Maintain annual harvest at 9,000 or greater (1.B.1-3, 1.B.6-7).
3. Provide recreational opportunity for 20,000 or more hunters per year (1.B.1-3).
4. Provide 100,000 hunter days or greater each year (1.B.1-3).
5. Maintain bull:cow ratios statewide according to hunt management guidelines (1.A.1-6).
6. Maintain existing occupied habitat, with emphasis on retention of medium and high quality habitat (1.A.1-6).
7. Increase permit numbers over 2006 levels by 10% by 2009 (1.A.1-6, 1.B.1-3).
8. Manage for low elk abundance in areas managed primarily for mule deer (1.A.1-6).

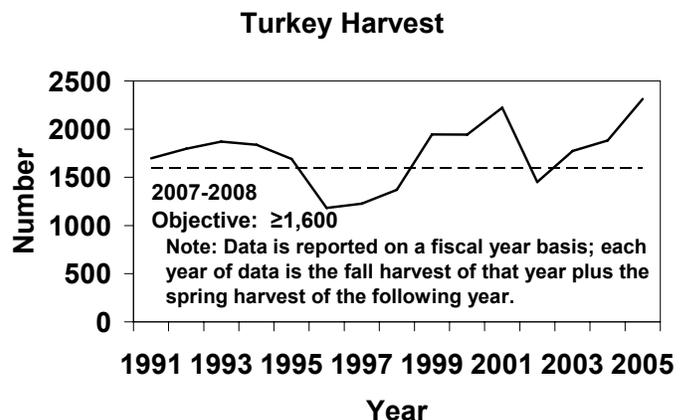
#### Species-Specific Approaches

1. Design hunt recommendations that address population management objectives and substantiated depredation complaints.
2. Use standardized surveys and population and hunt modeling to assist in permit recommendations. Base management on population targets, herd units, and habitat objectives.
3. Develop cooperative action plans, including monitoring, with property owners, lessees, and land management agencies to minimize elk-livestock interactions.
4. Coordinate with tribal authorities for elk management.
5. Issue permits in consideration of demand rates for various weapon types.
6. Local Habitat Partnership Committees will identify ways to manage and enhance habitat through partnerships with public agencies, property owners and lessees, and wildlife conservation organizations, and help maintain communication among individuals interested in elk management.
7. Use Regional Elk Management Plans, which will be reviewed every 2 years by the Commission, to direct elk management goals and objectives.
8. Develop a standardized survey protocol that produces survey-generated population estimates.
9. Coordinate with the Arizona Department of Transportation to determine the extent of vehicle-elk collisions and to identify possible mechanisms by which to reduce the incidence or severity of such collisions.

#### Turkey

##### Approaches

1. Provide hunter recreation opportunity based on turkey population status and habitat quality (1.A.1, 1.B.1-3).
2. Maintain annual harvest of 1,600 or greater (1.B.1-3, 1.B.6-7).
3. Provide recreational opportunity for 10,000 or more hunters per year (1.B.1-3).
4. Provide 35,000 hunter days or greater each year (1.B.1-3).
5. Maintain existing occupied habitat, with an emphasis on contiguous medium and high quality habitat (1.A.1-6).



6. Maintain the range of all subspecies in Arizona by repopulating historical range through translocations; emphasize reintroduction of Gould's turkey, specifically within the Catalina, Santa Rita, Pinaleno, Chiricahua, and Galiuro mountain ranges. Sources for these reintroductions would be either Mexico or the Huachuca Mountains. Evaluate the Hualapai and Black Rock Mountains for suitability and translocate appropriate turkey subspecies. Continue Merriam's turkey translocations into Mingus Mountain, the Verde River, and Pine Mountain areas. Sources for these translocations would be Regions I, II, and VI. (1.A.1-6).

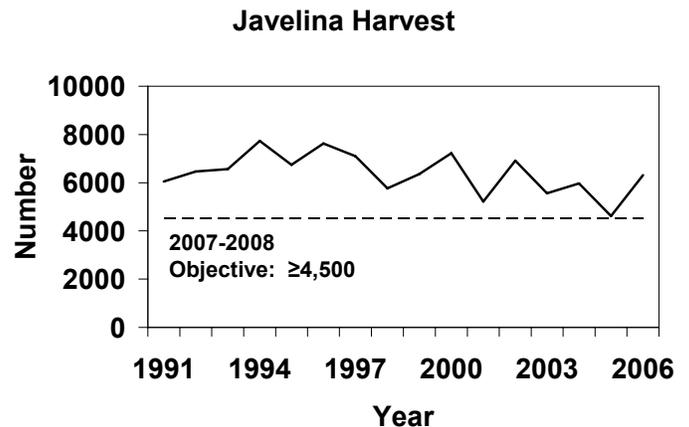
#### Species-Specific Approaches

1. Use the turkey habitat scorecard to identify and priority rank where efforts are needed to improve habitat quality in cooperation with land management agencies, property owners, and lessees; manage from a landscape perspective. Implement habitat improvement where appropriate.
2. Establish self-sustaining populations at all new translocation sites.
3. Provide hunter recreation that stresses the hunting experience and junior's hunt opportunity.
4. Use population status evaluations to determine hunt structure and permit numbers.

#### Javelina

##### Approaches

1. Maintain annual harvest of 4,500 or greater (1.B.1-3, 1.B.6-7).
2. Provide recreational opportunity for 27,500 or more hunters per year (1.B.1-3).
3. Provide 80,000 hunter days or greater each year (1.B.1-3).
4. Maintain existing occupied habitat, with emphasis on retention of medium and high quality habitat (1.A.1-6).
5. Manage for herd size specified within the hunt guidelines (1.A.1-4).
6. Human-wildlife conflicts will be managed according to Department Policy (DOM II.10) (2.A.1-6).



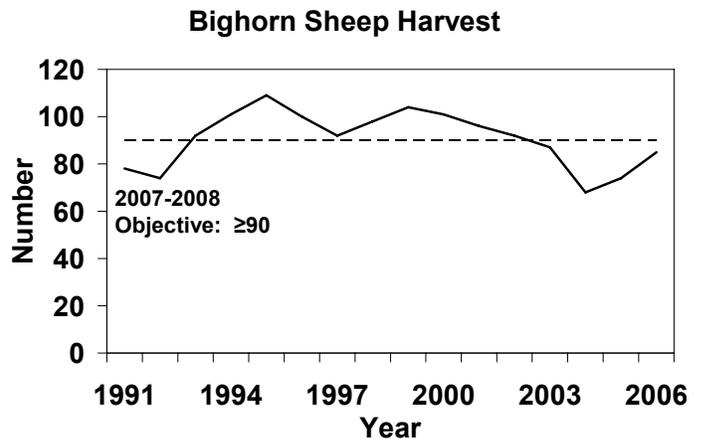
#### Species-Specific Approaches

1. Issue permits in consideration of demand rates for various weapon types.
2. Manage and enhance habitats through partnerships with public agencies, property owners and lessees, and wildlife conservation organizations; manage from a landscape perspective.
3. Provide hunt structure that emphasizes junior's hunt opportunity.

#### Bighorn Sheep

### Approaches

1. Increase the bighorn sheep population to 7,000 (1.A.1-6).
2. Maintain annual harvest of 90 or greater (1.B.1-3, 1.B.6-7).
3. Provide recreational opportunity for 105 or more hunters per year (1.B.1-3).
4. Provide 650 hunter days or greater each year (1.B.1-3).
5. Maintain existing occupied habitat, with emphasis on retention of medium and high quality habitat (1.A.1-6).
6. Maintain the existing range of all subspecies in Arizona, and repopulate historical range through translocations. Translocations will continue into Hell's Half Acre, Mineral Mountains, Big Horn Mountains, and West Clear Creek. Sources for these translocations would be the Virgin Mountains, Eagle Creek, and Region IV. (1.A.1-6).
7. Improve the condition of declining or low-density herds through habitat improvement, research, conservative hunt management, or predator management.



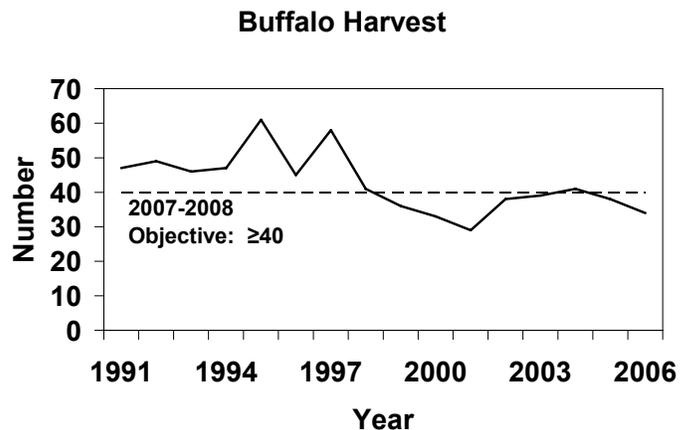
### Species-Specific Approaches

1. Use population modeling to assist in permit recommendations. Base management on population characteristics, herd units, and habitat potential.
2. Establish self-sustaining populations at all new translocation sites.
3. Improve the condition of declining or low-density herds through habitat improvement, research, conservative hunt management, or predator management.
4. Evaluate translocation sites for Rocky Mountain bighorn sheep and implement further translocations as appropriate. Current assessments will continue for the Chevelon Canyon and Mazatzal Mountain areas.
5. Provide hunter recreation that stresses the quality of the hunting experience and harvest of older age class rams.
6. Coordinate with the Arizona Department of Transportation (ADOT) to maintain or enhance habitat connectivity among deer herds. Also work with ADOT to determine the extent of vehicle-sheep collisions and to identify possible mechanisms by which to reduce the incidence or severity of such collisions.
7. Cooperate with land management agencies, property owners, and lessees to reduce adverse interactions between bighorn sheep, feral animals, and domestic livestock; manage from a landscape perspective.
8. Address Off Highway Vehicle conflicts and rights of way issues to sheep waters.
9. Manage and enhance habitats, specifically including development of new and maintenance of existing water catchments, through partnerships with public agencies, property owners and lessees, and wildlife conservation organizations.
10. Identify disease outbreaks whenever they occur; implement prompt action to mitigate disease transmission.

## Buffalo

### Approaches

1. Maintain a statewide population of 200 buffalo (1.A.1-6).
2. Maintain annual harvest of 40 or greater (1.B.1-3, 1.B.6-7).
3. Provide recreational opportunity for 60 or more hunters per year (1.B.1-3).
4. Provide 650 hunter days or greater each year (1.B.1-3).



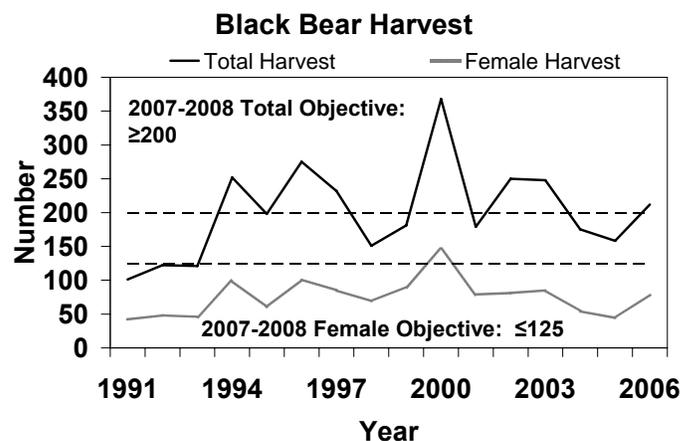
### Species-Specific Approaches

1. Maintain herds at levels consistent with good range management practices.
2. Provide a variety of quality hunt and recreational viewing opportunities.
3. Increase wildlife watching opportunities.
4. Manage and enhance habitats through partnerships with public agencies, property owners and lessees, and wildlife conservation organizations.
5. Continue to pursue management opportunities to resolve bison issues associated with Grand Canyon National Park.

## Black Bear

### Approaches

1. Maintain an annual harvest of no more than 125 female bears (including depredation take), with a total harvest of 200 or more bears (including males) (1.A.1-6, 1.B.1-3).
2. Provide recreational opportunity for 4,000 or more hunters per year (1.B.1-3).
3. Maintain existing occupied habitat, with emphasis on retention of medium and high quality habitat. Maintain connectivity bear habitats (1.A.1-6).
4. Human-wildlife conflicts will be managed according to Department Policy (DOM II.10) (2.A.1-6).



### Species-Specific Approaches

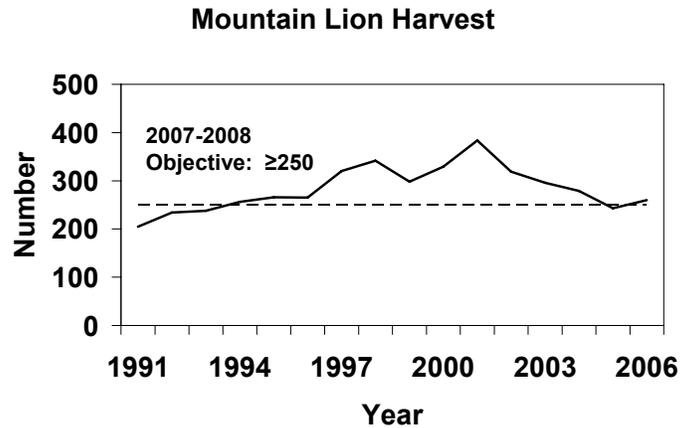
1. Maintain a complete database from all harvest sources through a mandatory check-out system, including age, sex, kill location, etc., to develop population trend information.
2. Identify important habitats for bear populations and ensure protection and improvement, where possible, through cooperation with land management agencies and landowners; manage from a landscape perspective.
3. Implement hunt structures to direct harvest emphasis toward the male segment of the bear population.

4. As bear hunt areas become defined, determine population numbers and characteristics on a hunt-area basis
5. Cooperate with land management agencies to reduce conflicts between bears and humans, and increase public awareness of bears and their habitat, to reduce nuisance problems.
6. Implement hunt structures to direct harvest emphasis towards areas with high bear populations and where depredation and nuisance complaints are substantiated.

### Mountain Lion

#### Approaches

1. Maintain annual harvest of 250 or greater (including depredation take). Use age and gender harvest data to assure that populations remain at sustainable levels (1.A.1-6, 1.B.1-3, 1.B.6-7).
2. Provide recreational opportunity for 6,000 or more hunters per year (1.B.1-3).
3. Maintain existing occupied habitat, with emphasis on retention of medium and high quality habitat (1.A.1-6).



#### Species-Specific Approaches

1. Maintain a complete database from all harvest sources, through a mandatory checkout system, including age, sex, and harvest location to index population trends.
2. Conduct a hunter and houndsmen questionnaire every two years.
3. Identify important habitats and travel corridors for lion populations. Ensure protection, and improvement where possible, through cooperation with land management agencies and other landowners; manage from a landscape perspective.
4. Determine population characteristics on a lion management area (LMA) basis. Some areas may need to be managed at lower population levels prior to initiating translocations of other game species or following prey population declines or disease outbreaks.
5. Implement hunt structures to increase and direct harvest emphasis toward areas with high lion populations, and where depredation complaints are substantiated, and evaluate the effectiveness of these efforts
6. Continue to increase public awareness of mountain lions and their habits, to reduce conflicts with humans in accordance with Department policy
7. Manage in alignment with the Department's Predation Management Policy.

## Small Game Species

### Tree Squirrels

#### Approaches

1. Maintain hunter success rate at 1.5 squirrels per day or more (1.B.1-3).
2. Provide 25,000 hunter days or greater per year (1.B.1-3).
3. Maintain existing occupied habitat, with emphasis on retention of medium and high quality habitat (1.A.1-6).
4. Maintain the range of all species and subspecies in Arizona (1.A.1-6).

#### Species-Specific Approaches

1. Coordinate with land management agencies to mitigate other land uses that are detrimental to tree squirrels; manage from a landscape perspective.
2. Provide annual information to the public regarding tree squirrel population status and trend by Game Management Unit and encourage hunting opportunities where appropriate.

### Cottontail Rabbits

#### Approaches

1. Maintain hunter success rate at 0.8 cottontails per day or more (1.B.1-3).
2. Provide 100,000 hunter days or greater per year (1.B.1-3).

#### Species-Specific Approaches

1. Enhance hunter opportunities in proximity to metropolitan areas.
2. Promote cottontail hunting as an under-used resource and an excellent hunter recruitment opportunity.

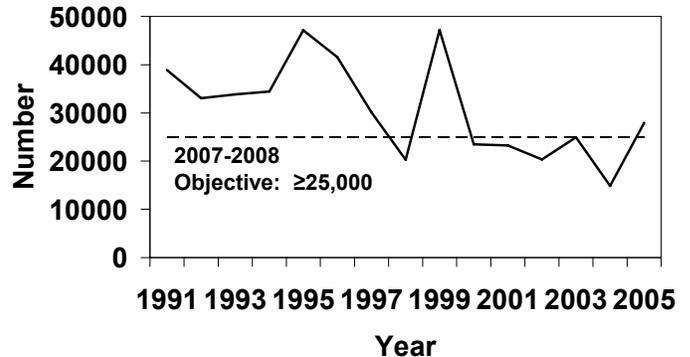
### Gambel's Quail and Scaled Quail

#### Approaches

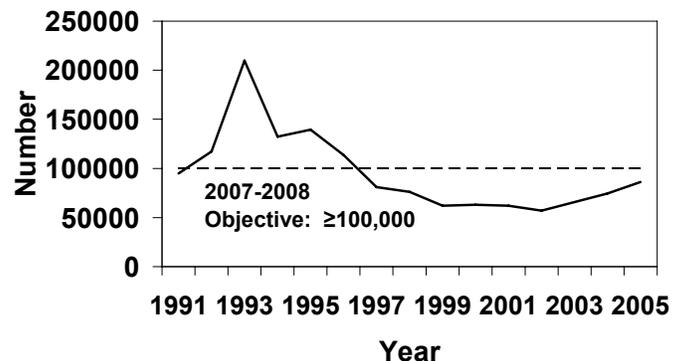
1. Maintain hunter success rate at 2.5 birds per day or more (1.B.1-3).
2. Provide 225,000 hunter days or greater per year (1.B.1-3).

#### Species-Specific Approaches

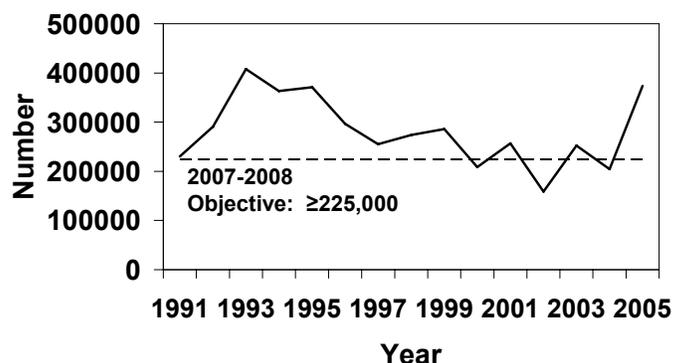
**Tree Squirrel Hunter Days**



**Cottontail Rabbit Hunter Days**



**Gambel's and Scaled Hunter Days**



Gambel's Quail

1. Coordinate with land management agencies to ensure that livestock grazing of quail habitat is within allowable use guidelines that provide quail with adequate food and cover; manage from a landscape perspective.
2. Provide annual information to the public regarding Gambel's quail population status and trend by Game Management Unit and encourage hunting opportunities where appropriate.
3. Collect data to estimate demand and harvest.

Scaled Quail

1. Coordinate with land management agencies to ensure that scaled quail habitat is within allowable use guidelines that provide quail with adequate food and cover.
2. Pursue opportunities to restore scaled quail habitat. Assess habitat restoration efforts through research; manage from a landscape perspective.
3. Provide annual information to the public regarding scaled quail population status and trend by Game Management Unit and encourage hunting opportunities where appropriate.
4. Collect data to estimate demand and harvest.

Mearns' Quail

Approaches

1. Maintain hunter success rate at 1.3 Mearns' quail per day or more (1.B.1-3).
2. Provide 26,000 hunter days or greater per year (1.B.1-3).
3. Maintain existing occupied habitat, with emphasis on retention of medium and high quality habitat (1.A.1-6).

Species-Specific Approaches

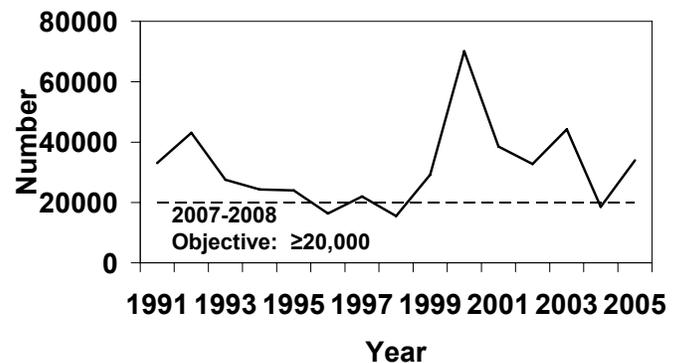
1. Coordinate with the Coronado National Forest to ensure that Mearns' quail population potential is achieved through use of the current Department Mearns' Quail Habitat Guidelines; manage from a landscape perspective.
2. Support research of population dynamics of Mearns' quail using radio-telemetry.
3. Provide annual information to the public regarding Mearns' quail population status and trend by Game Management Unit and encourage hunting opportunities where appropriate.

Dusky (formerly Blue) Grouse

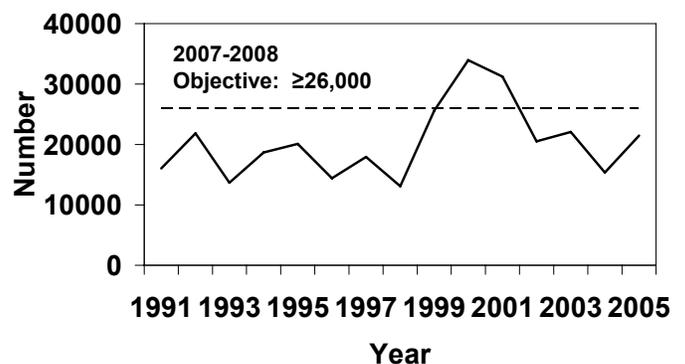
Approaches

1. Maintain hunter effort at 0.2 birds per day or more (1.B.1-3).

**Mearns' Quail Harvest**



**Mearns' Quail Hunter Days**



2. Provide 1,500 hunter days or greater per year (1.B.1-3).
3. Maintain existing occupied habitat, with emphasis on retention of medium and high quality habitat (1.A.1-6).

**Species-Specific Approaches**

1. Coordinate with land management to ensure that livestock grazing in blue grouse habitat is within allowable use guidelines that provide adequate food and cover.
2. Coordinate with land management agencies to encourage timber cuts to create small openings and stimulate herbaceous growth and soft-mast production.
3. Work with the Coconino and Apache-Sitgreaves National Forests, and the White Mountain Apache Tribe to translocate Dusky Grouse to select areas of the Coconino and Apache-Sitgreaves National Forests.
4. Provide annual information to the public regarding blue grouse population status and trend by Game Management Unit and encourage hunting opportunities where appropriate.

White-winged Dove and Mourning Dove

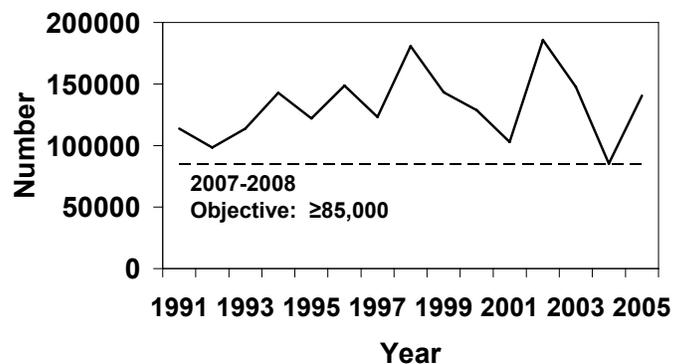
**Approaches**

1. Maintain daily hunter success rates at 1 white-winged dove and 4.5 mourning doves per day or more (1.B.1-3).
2. Provide 85,000 white-winged dove hunter days or greater per year, and 200,000 mourning dove hunter days or greater per year (1.B.1-3).
3. Within federal season frameworks, maximize hunting opportunities for all white-winged and mourning dove hunters, with special emphasis on youth and female hunters (1.B.2,3,1.B.5, 2.A.4, 2.C.2).

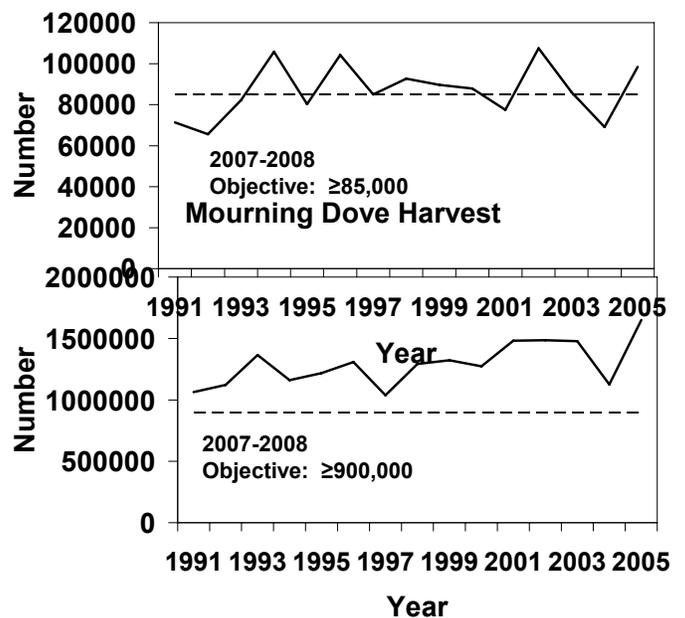
**Species-Specific Approaches**

1. Implement hunt structures that maintain and enhance dove populations. When populations have recovered to allow for additional harvest, bag limits and seasons should be liberalized. The framework recommendations should be specified in the Pacific Flyway Management Plan for the Western White-winged Dove.
2. As part of the interim harvest strategy for the Pacific Flyway, continue to band doves during July 1 – August 20 in all six Regions. The statewide, overall target will be 2,000 mourning doves per year.
3. Conduct call counts during early May each year.

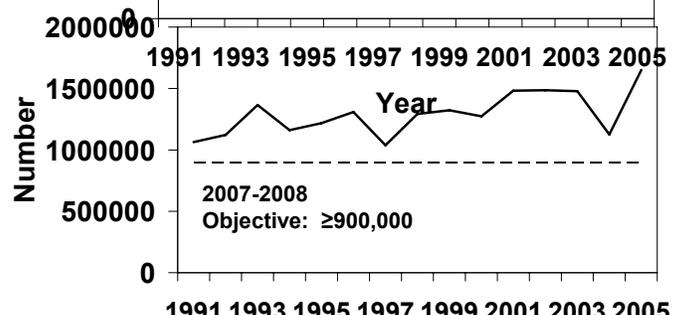
**White-winged Dove Harvest**



**White-winged Dove Hunter Days**



**Mourning Dove Harvest**



Band-tailed pigeon

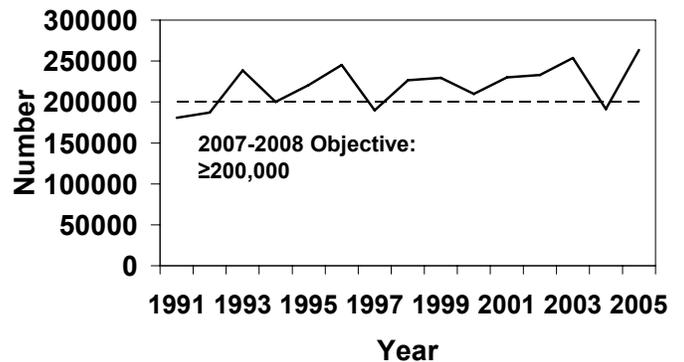
Approaches

1. Maintain annual harvest at 500 or greater (1.B.1-3, 1.B.6-7).
2. Maintain hunter success rate at 0.5 birds per day or more (1.B.1-3).
3. Provide 1,000 hunter days or greater per year (1.B.1-3).
4. Maintain existing occupied band-tailed pigeon habitat, with emphasis on medium and high quality habitat (1.A.1-6).

Species-Specific Approaches

1. Coordinate with land management agencies to mitigate land uses detrimental to band-tailed pigeons.
2. Coordinate with land management agencies to encourage timber cuts to stimulate soft-mast production and offer nesting habitat required by band-tailed pigeons.

**Mourning Dove Hunter Days**



Waterfowl

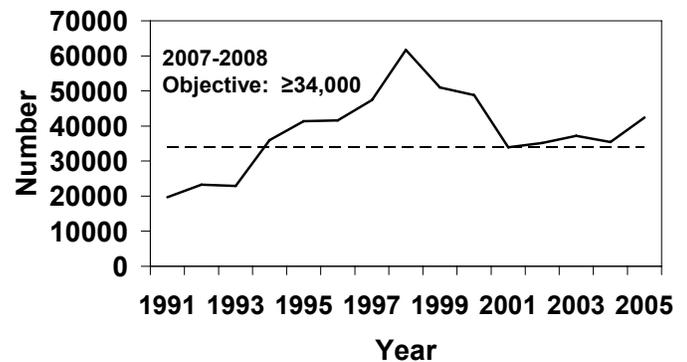
Approaches

1. Maintain annual harvest at 34,000 ducks and 3,000 geese or more (1.B.1-3, 1.B.6-7).
2. Maintain hunter success rate at 1 waterfowl per day or greater (1.B.1-3).
3. Provide 37,000 hunter days per year or more (1.B.1-3).

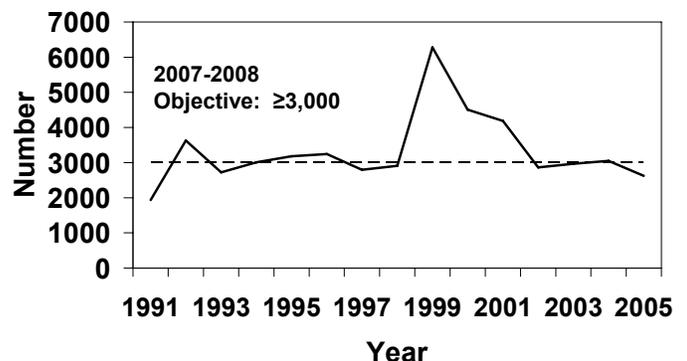
Species-Specific Approaches

1. Estimate population sizes and/or trends, species and subspecies composition, sex and age composition, and geographic distribution, through aerial surveys and mailed questionnaires.
2. Participate in development of migratory game bird hunt frameworks through the Pacific Flyway Study Committee, Council, and subcommittees; thereof, provide equitable hunting opportunity for residents of all areas of the State within those frameworks.
3. Continue to partner with organizations to develop funding for wetland habitat projects; manage from a landscape

**Duck Harvest**



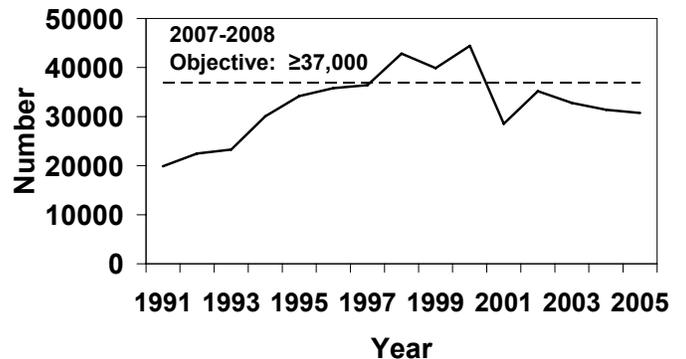
**Goose Harvest**



perspective.

4. Pursue opportunities to enhance, protect, or acquire wetland habitat in Arizona.
5. Sample approximately 250 hunter-collected waterfowl for Avian Influenza sampling during fall waterfowl hunts. Locations for hunter check stations will be determined following consultation with Regions.

**Waterfowl Hunter Days**



Snipe, Coot, and Common Moorhen

Approaches

1. Provide public information about coot, common moorhen, and snipe (1.B.1-9).

Species-Specific Approaches

1. Maintain existing hunting opportunities.
2. Participate in development of migratory game bird hunt frameworks through the Pacific Flyway Study Committee, Council, and subcommittees; thereof, provide equitable hunting opportunity for residents of all areas of the State within those frameworks.
3. Develop and implement projects to enhance viewing opportunities.
4. Continue to partner with organizations to develop funding for wetland habitat projects.
5. Pursue opportunities to enhance, protect, or acquire wetland habitat in Arizona; manage from a landscape perspective.

Sandhill Crane

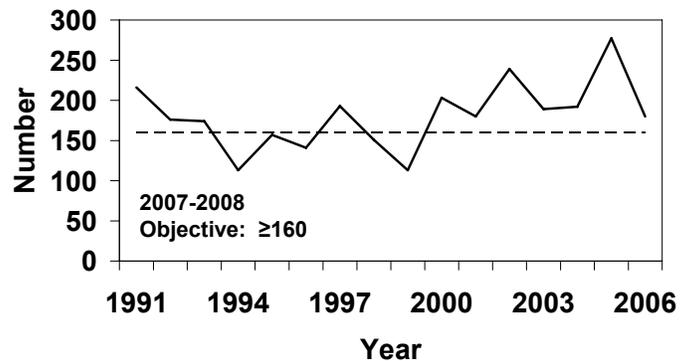
Approaches

1. Maintain hunter success rate at 0.4 per day or greater (1.B.1-3).
2. Provide 400 hunter days per year or more (1.B.1-3).

Species-Specific Approaches

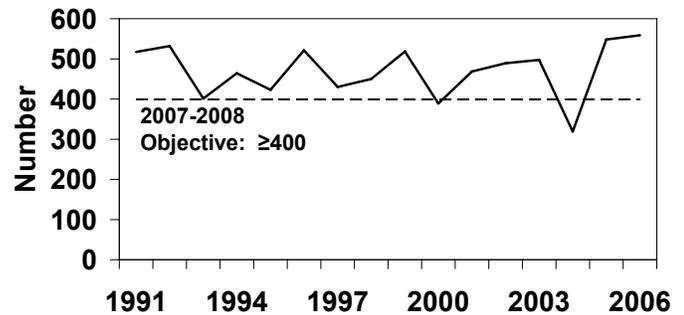
1. Conduct annual surveys to determine wintering numbers.
2. Conduct mandatory hunter check stations every three years.
3. Manage the Willcox Playa Wildlife Area and the Whitewater Draw Wildlife Area primarily for waterfowl and sandhill cranes.
4. Use annual survey information to determine the potential for expansion of hunting opportunities.

**Sandhill Crane Harvest**



5. Manage Crane harvest in accordance with Pacific Flyway plans and harvest allocation structure.
6. Continue to pursue additional crane harvest opportunities around the Lower Colorado River.

**Sandhile Crane Hunter Days**



Non-native Game Birds: Valley Quail, Chukar, and Pheasant

Approaches

1. Develop and provide public information about non-native game birds (1.B.1-9).
2. Explore range expansion of Valley Quail and Chukar into suitable habitat. Possible Valley Quail expansion will be in northwest Arizona and possible Chukar expansion will be throughout northern Arizona (1.A.1-6, 1.B.1-9).

Species-Specific Approaches

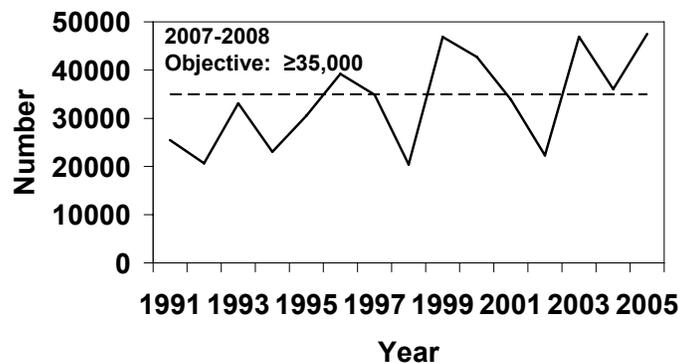
1. Maintain and enhance existing hunting opportunities.
2. Maintain current crow counts conducted for pheasant in Region IV each year.

Furbearing and Predatory Mammals

Approaches

1. Provide opportunity for 75,000 hunter days per year, across all species of predators and furbearers (1.B.1-3).
2. Maintain trapping as a recreational opportunity on private property, in accordance with A.R.S. 17-301d (1.A.3, 1.B.8).
3. Develop and provide public information about furbearing and predatory mammals and their management (1.A.6, 1.B.5, 1.B.8, 1.B.9).
4. Bobcat: maintain annual harvest at 1000 or greater (1.B.1-3, 1.B.6, 1.B.7).
5. Coyote: encourage annual harvest levels of 35,000 coyotes or greater (1.B.1-3, 1.B.6-7).
6. Foxes: maintain annual harvest at 4,000 foxes or greater (1.B.1-3, 1.B.6-7).
7. Human-wildlife conflicts will be managed according to DOM II.10 (2.A.1-6).

**Coyote Harvest**



Species-Specific Approaches

1. Encourage the public to respond to depredation situations, within the limits established by A.R.S. 17-239.
2. Continue to obtain estimates of hunter harvest of predators and furbearers.
3. Maintain adequate suitable habitat for predators and furbearers.
4. Through surveys and research, develop information regarding range, distribution, population levels, and harvest opportunities for predators and furbearers.

5. Manage all species in alignment with the Department's Predation Management Policy.
6. Protect beaver populations in areas along the San Pedro River, currently being restored by the Department.

### LINKAGES TO OTHER OPERATIONAL PLANS

#### **Business Administration Program:**

The Game subprogram works with the Business Administration program to assure that sound business practices are used in its operation and to comply with all legal hiring practices for Game subprogram personnel. The Game subprogram also has substantial responsibility for Commission Rules 1-26, and Articles 1-4, and 8.

#### **Sportfish Subprogram:**

- Cooperation on waterfowl habitat improvements and enhancements.
- Cooperation on access closures to benefit waterfowl habitat in select areas
- Coordinate education among the fishing and waterfowl hunting public to minimize the spread of aquatic invasive species
- Coordinate on landscape scale wildlife habitat enhancement/restoration projects that influence water quality and fish habitat.

#### **Nongame Subprogram:**

- Coordinate Pacific Flyway involvement on both game and nongame migratory birds
- Cooperate and Organize all-bird monitoring efforts to most effectively survey birds throughout Arizona
- Coordinate International efforts (Mexico and Canada) that benefit both game and nongame migratory species
- Coordinate migratory bird permit requirements
- Continue to cooperate on the Department's bird banding efforts
- Coordinate game management activities with the Watchable Wildlife effort throughout Arizona
- Coordinate on Commission Order 14, Other Birds and Mammals

#### **Habitat Project:**

- Provide input and review of project evaluations (i.e., EA checklists) that potentially affect game species
- Provide input and review of "Bluesheet Tasks" that potentially affect game species
- Coordinate with EA checklists prior to game capture and translocation activities
- Promote and coordinate habitat mitigation and restoration projects that benefit game species
- Provide technical input relative to landscape planning and management.

#### **Research Project:**

- Provide input for Research project priorities relative to game species and game management issues
- Coordinate and assist in planning and implementing research projects that affect game species and game management

- Coordinate and assist with disease investigations and projects (e.g., Chronic Wasting Disease and Avian Influenza)
- Coordinate administration of expenditures of special tag funds for research projects

**Information/ Education Projects:**

The Game subprogram works with the Information project almost daily to communicate with the hunting public. As part of the Department's hunter recruitment and retention effort, both the Game subprogram and Information project will have to work more closely than ever before.

- Promote hunting opportunity; particularly focus on activities that that recruit young hunters (e.g., game camps and other outdoor, hands-on activities )
- Provide Game subprogram-related or wildlife information for mass media inquiries
- Cooperate in disseminating updates to hunters regarding big and small game hunting opportunities
- Cooperate with Information and Education projects to publicize the Department's hunter retention and hunter recruitment efforts
- Coordinate publication of hunting regulation booklets and pamphlets throughout the year
- Coordinate public input in game management including hunt guidelines and Commission Rules
- Write articles for Wildlife Views regarding hunting opportunities, translocation efforts, and other game management issues of interest to the hunting public
- Assist with information and video opportunities for Arizona Wildlife Views television show episodes
- Provide Department presentations to educators, students, and special interest groups
- Assist in public outreach for the Department at the annual State Fair, outdoor expositions, and other promotional events

**Law Enforcement Project:**

The Game subprogram and Law Enforcement project work closely to assure that hunting regulations are formulated and enforced to enhance game management, regulation compliance and educate customers.

- Minimize unlawful take of all game species
- Review respective game species special license procedures, applications and proposals, and recommend specific process improvements and permit stipulations when applicable
- Provide input and review of statutory rules and regulations for wildlife
- Provide input and review for game-related Commission Orders
- Provide game management program training to Wildlife Manager trainees

**Development Project:**

The Game subprogram works with the Development project to ensure that game management issues are considered relative to all development projects as well as to facilitate public access. Specifically, the Game subprogram provides

- Provide input for development priorities relative to game species and game management needs
- Recommendations on locations of water developments to provide adequate distribution of game and hunters

Game Subprogram

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- Input to implementation plans for habitat restoration to benefit game; stress a landscape management perspective
- Input for needs to maintain hunter access to public lands
- Coordination of administration of expenditures of special tag funds for Development activities