

ARIZONA GAME AND FISH DEPARTMENT

GUIDELINES FOR THE 2010–2011 AND 2011–2012 HUNTING SEASONS

**As approved by the Arizona Game and Fish Commission
September 12, 2009**

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SCHEDULE FOR FORMULATING 2010–2011 AND 2011–2012 HUNT RECOMMENDATIONS

<u>DEADLINE</u>	<u>ASSIGNMENT</u>	<u>RESPONSIBILITY</u>
Mar 25, 2009	Hunt Guidelines distributed to Department for internal review	Game Branch
Apr 1, 2009	Hunt Guidelines distributed to public for external review	Game Branch
May 20, 2009	All recommended changes to guidelines are due to Game Branch	All Regions
May 21, 2009	Joint meeting to review Hunt Guideline recommended changes	Game Branch and Regional Personnel
Jun 2, 2009	Draft Hunt Guidelines to Executive Staff for initial review	Game Branch
Jun 10–25, 2009	Hold public meetings	Game Branch and Regional Personnel
Jul 15, 2009	Public comment period ends	Game Branch
Aug 18, 2009	Draft Hunt Guidelines to Executive Staff for review and approval	Game Branch
Aug 29, 2009	Commission memos distributed to Regions and Commission. Available to public at Regional offices	Game Branch-Director's Office
Sep 12, 2009	Draft Hunt Guidelines for fall 2010–spring 2012 seasons presented to Commission for approval	Game Branch
Oct 15, 2009	Pronghorn , elk, and population management hunt and permit recommendations submitted in writing to Game Branch	Regional Supervisors
Oct 26–29, 2009	Hold meetings with individual Regions to finalize recommendations and analyze public input	Game Branch and Regional Personnel
Nov 20, 2009	Commission memos distributed to Regions and Commission. Available to public at Regional offices and during Regional open houses	Game Branch and Regional Personnel
Dec 5, 2009	Present hunt recommendations to Commission to set seasons and bag limits for pronghorn, elk, and population management seasons	Game Branch
Mar 1, 2010	Deer, fall turkey, fall javelina, bighorn sheep, fall buffalo, fall bear, mountain lion, small game (2-year), trapping (2-year), predator-furbearer (2-year), and other birds and mammals (2-year) hunt and permit recommendations submitted in writing to Game Branch	Regional Supervisors
Mar 8–16, 2010	Hold meetings with individual Regions to finalize recommendations and analyze public input	Game Branch and Regional Personnel
Mar 2010	Commission memos distributed to Regions and Commission. Available to public at Regional offices and during Regional open houses	Game Branch and Regional Personnel
Apr 2010	Present hunt recommendations to Commission to set seasons and bag limits for deer, fall turkey, fall javelina, bighorn sheep, fall buffalo, fall bear, mountain lion, small game (2-year), trapping (2-year), predator-furbearer (2-year), and other birds and mammals (2-year) seasons	Game Branch

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 Hunt Guidelines for Fall 2010 through Spring 2012*

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<u>DEADLINE</u>	<u>ASSIGNMENT</u>	<u>RESPONSIBILITY</u>
Jun 2010	Commission memos distributed to Regions and Commission. Available to public at Regional offices	Game Branch and Regional Personnel
Jun 2010	Present webless migratory hunt recommendations to Commission to set permit number and bag limits	Game Branch
Jul 1, 2010	Spring turkey, javelina, buffalo, and bear hunt and permit recommendations submitted in writing to Game Branch	Regional Supervisors
Jul 2010	Commission memos distributed to Regions and Commission. Available to public at Regional offices and during Regional open houses	Game Branch and Regional Personnel
Aug 2010	Present spring turkey, javelina, buffalo, and bear and webbed migratory hunt recommendations to Commission to set permit numbers and bag limits	Game Branch
Oct 15, 2010	Pronghorn , elk , and population management hunt and permit recommendations submitted in writing to Game Branch	Regional Supervisors
Oct 2010	Hold meetings with individual Regions to finalize recommendations and analyze public input	Game Branch and Regional Personnel
Nov 2010	Commission memos distributed to Regions and Commission. Available to public at Regional offices and during Regional open houses	Game Branch and Regional Personnel
Dec 2010	Present hunt recommendations to Commission to set seasons and bag limits for pronghorn, elk, and population management seasons	Game Branch
Mar 1, 2011	Deer, fall turkey, fall javelina, bighorn sheep, fall buffalo, fall bear, mountain lion hunt and permit recommendations submitted in writing to Game Branch	Regional Supervisors
Mar 2011	Hold meetings with individual Regions to finalize recommendations and analyze public input	Game Branch and Regional Personnel
Mar 2011	Hunt Guidelines distributed to Department for internal review	Game Branch
Apr 1, 2011	Hunt Guidelines distributed to public for external review	Game Branch
Apr 2011	Commission memos distributed to Regions and Commission. Available to public at Regional offices and during Regional open houses	Game Branch and Regional Personnel
Apr 2011	Present hunt recommendations to Commission to set seasons and bag limits for deer, fall turkey, fall javelina, bighorn sheep, fall buffalo, fall bear, mountain lion seasons	Game Branch
May 2011	All recommended changes to guidelines are due to Game Branch	All Regions
May 2011	Joint meeting to review Hunt Guideline recommended changes	Game Branch and Regional Personnel

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<u>DEADLINE</u>	<u>ASSIGNMENT</u>	<u>RESPONSIBILITY</u>
Jun 2011	Commission memos distributed to Regions and Commission. Available to public at Regional offices	Game Branch and Regional Personnel
Jun 2011	Present webless migratory hunt recommendations to Commission to set permit number and bag limits	Game Branch
Jun 2011	Draft Hunt Guidelines to Executive Staff for initial review	Game Branch
Jun 1–25, 2011	Hold public meetings regarding Hunt Guidelines	Game Branch and Regional Personnel
Jun 30, 2011	Public comment period ends for Hunt Guidelines	Game Branch
Jul 1, 2011	Spring turkey, javelina, buffalo, and bear hunt and permit recommendations submitted in writing to Game Branch	Regional Supervisors
Jul 2011	Commission memos distributed to Regions and Commission. Available to public at Regional offices and during Regional open houses	Game Branch and Regional Personnel
Aug 2011	Present spring turkey, javelina, buffalo, and bear and webbed migratory hunt recommendations to Commission to set permit numbers and bag limits	Game Branch
Aug 2011	Draft Hunt Guidelines to Executive Staff for review and approval	Game Branch
Aug 21, 2011	Commission memos distributed to Regions and Commission. Available to public at Regional offices	Game Branch- Director's Office
Sep 2011	Draft Hunt Guidelines for fall 2012–spring 2014 seasons presented to Commission for approval	Game Branch

September 12, 2009

OBJECTIVE

The hunt guidelines are designed to be used by Arizona Game and Fish Department (Department) wildlife managers when formulating hunt recommendations. The hunt guidelines are intended to provide general guidance on the parameters for which hunted or trapped species are managed. Like hunt recommendations, the hunt guidelines are shared with the Arizona Game and Fish Commission (Commission) and approved in public session following a regular review cycle described in the preceding pages.

The hunt guidelines themselves are one piece of an overall planning approach used by the Commission and Department in managing wildlife. While hunt guidelines describe what the Department manages toward, species management guidelines are protocols that describe how that data is collected, and management plans (e.g., elk management plan) describe specific herd management objectives (e.g., increase population) and management challenges (e.g., persistent low fawn recruitment for pronghorn) each herd may face. Management plans for elk and pronghorn also identify opportunities for habitat enhancement.

The Department also operates under a Commission-approved strategic plan that provides agency vision, an operational plan that is shared with the Commission and developed by the Department that identifies specific objectives that the agency plans to complete within the time period covered by the operational plan, and an annual implementation plan that ties budgets, specific tasks, and work units for the upcoming year.

The Department manages Arizona's wildlife within the biological limits of each species. Management strategies are developed to meet social acceptability, which is routinely much more conservative than the limits at which wildlife may be biologically managed.

Ultimately, the Department manages wildlife in the public trust for all of Arizona. All game animals, from predators to big game, are managed as part of an important ecosystem to be sustained for future generations of Arizonans to enjoy. These hunt guidelines have been developed to meet a variety of hunting desires and strive to provide adequate opportunity for all. The guidelines are based on the best available biological and social science. Arizona has a diverse wildlife resource, yet many of these resources are limited in supply. The following guidelines attempt to provide the diversity of experiences desired by the hunters of Arizona, while providing the necessary management so that all Arizonan's will benefit from diverse wildlife populations in the future.

HUNT GUIDELINE APPROACHES

Maintain 2-year hunt guideline framework aligned with the following approaches whereby the Department and Commission revisit the guideline package with the public every 2 years in the summer. Use all necessary public outreach and information gathering avenues to ensure inclusion of all affected and interested customers in guideline and recommendation development.

Maintain consistent wildlife survey protocol and interpretation to develop hunt recommendations across the state in accordance with the Species Management Guidelines and other pertinent plans (e.g., Elk and Pronghorn Management Plans). Population management objectives for specific units may be described within these pertinent species management plans.

Provide standardized and consistent hunt structures across the state; minimize and simplify hunt regulations and restrictions related to the hunt structure. Standardized and simplified hunt structures should not obstruct diversity of opportunity.

Provide for a diversity of hunter opportunity while maintaining wildlife population health, structure, and integrity. Guidelines for this approach are:

- Minimize hunt opportunity when the legal animals are most vulnerable (e.g., breeding period) in standard management areas.
- Optimize hunt opportunity with respect to weapon type demand.
- Maximize big game opportunity where practicable through the use of over-the-counter nonpermit-tags.

- Use population management hunts to address specific management objectives that are not being achieved through standard hunt structures.
- Use stratified hunt structure to minimize user conflicts and reduce hunter densities.
- Provide dispersed and limited alternative management (i.e., objectives are high hunt success and/or harvest of older age class animals) across the state without exceeding demand.
- Use targeted and liberalized big game harvest by hunters to address human-wildlife conflicts.

Strive to distribute limited big game harvest opportunity commensurate with demand by weapon type and success rates where practical.

Emphasize youth and new big game hunter opportunities. In doing so, provide diverse and dispersed hunt opportunities to allow equitable availability and minimal conflict with other users.

Emphasize small game, predator-furbearer, and other wildlife hunter opportunities. Guidelines for this approach are:

- Liberalize bag and possession limits as well as season lengths within sustainable biological means to encourage hunter participation.
- Maintain consistent season opener and structure to reduce hunter confusion among years.

COMMISSION ORDER 2: DEER

The Department's Deer Management Goal is to maintain deer populations at levels that provide maximum and diverse recreational opportunities, while avoiding adverse impacts to the species and its habitat. Guidelines for both species are grouped into "Standard" or "Alternative" hunt management.

Season prescriptions:

1. Hunts will be for "antlered mule deer," "antlered whitetail deer," or "any antlered deer." "Antlerless deer" or "any deer" permits may be recommended for units where the deer population requires reduction or stabilization, or when conflicts with other land management uses exist.
2. Separate hunts for mule deer and white-tailed deer will occur in units having substantial populations of both species of deer.
3. General and muzzleloader deer hunts will occur on standard opening dates. When stratified, a series of 7-day hunts may occur throughout October and November with all hunts opening on a specific Friday and closing the following Thursday. A December white-tailed deer hunt will open the Friday of week 50 and continue to the end of the year. The following seasons will be available:

Juniors-only on Friday of week 41 (October 8, 2010 and October 7, 2011)
White-tailed or Mule Deer on Friday of week 43 (October 22, 2010 and October 21, 2011)
White-tailed or Mule Deer on Friday of week 44 (October 29, 2010 and October 28, 2011)
White-tailed or Mule Deer on Friday of week 45 (November 5, 2010 and November 4, 2011)
Juniors-only on Friday of week 45 (November 5, 2010 and November 4, 2011)
Mule Deer on Friday of week 46 (November 12, 2010 and November 11, 2011)
Juniors-only on Friday of week 47 (November 19, 2010 and November 18, 2011)
White-tailed on Friday of week 48 (November 26, 2010 and November 25, 2011)
White-tailed on Friday of week 50 (December 10, 2010 and December 9, 2011)
Juniors-only Muzzleloader on Friday of week 51 (December 17, 2010 and December 16, 2011)

If only a single early deer season is selected in October or November, the season will run for 10 days. Antlerless elk seasons will not overlap with a general or muzzleloader deer season in units with hunts for both species. Season dates will be selected to avoid such overlaps. If the unit is managed under Alternative Hunt Management, 10-day seasons may also be used.

4. Archery deer seasons may begin on Friday of week 34 (August 20, 2010 and August 19, 2011) and run for 22 days. Archery deer seasons may also begin on Friday of week 50 (December 10, 2010 and December 9, 2011) and run through end of December or January 31 of the following year. An archery deer season may begin on January 1 and run for about 2 weeks or through January 31.
5. "Alternative Hunt Management" will provide opportunities to harvest older age class animals, for lower hunter densities, and for higher hunt success. Alternative hunt management for mule deer will occur in Units 12A, 12B, 13A, 13B, 45A, 45B, and 45C; hunts will be managed in accordance with the parameters below. Alternative hunt management for white-tailed deer will occur in Units 6A, 23, 30B, 31, and 36C; hunts will be managed in accordance with the parameters below. A limited amount of December white-tailed deer harvest opportunity will be offered in most white-tailed deer units, but up to 30% of the harvest will be allocated with December permits in those units managed under Alternative Hunt Management. A total of up to 5% of all white-tailed deer permits statewide will be offered in December.
6. At least 5% of all general deer permits will be allocated to juniors-only hunts. There will be at least 2 general juniors-only deer hunts offered in each Region structured to provide a season encompassing a school holiday, such as Columbus Day, and may overlap with a juniors-only elk season. One muzzleloader juniors-only seasons will start on Friday of week 51 (December 17, 2010 and December 16, 2011) and run through December 31.

Opportunity prescriptions:

- A. Wildlife Managers will manage mule deer for the center of guideline ranges, while keeping confidence intervals in mind. Emphasis will be placed on the current year's fawn:doe ratio, considering its effect on next year's hunt success. When a clear trend exists, emphasize last year's data. When no clear trend exists, emphasize the most recent 3-year mean data. Hunting opportunities should be maximized, providing an equitable allocation of harvest among weapon types.

Standard Mule Deer Hunt Guidelines

Parameters	Decrease	No change	Increase
Fawns:100 Does	<40	40 to 50	>50
Bucks:100 Does	<10	10 to 20	>20
Hunt Success	<15%	15 to 20%	>20%
Population Trend	Decreasing	Stable	Increasing

Alternative Mule Deer Hunt Objectives

Parameters	12A/12B (late general hunts)	13A/13B (general hunts)	45A/45B/45C (general hunts)
Fawns:100 Does	>60 (12A)	—	—
Bucks:100 Does	>20	>20	>20
Hunt Success	50–70%	50–70%	20–30%
% of Buck harvest \geq 3 yrs	55–75%	65–80%	45–65%
% of Buck harvest \geq 5 yrs	20–30%	45–55%	—
Hunter Density	<0.5/mi ²	<0.5/mi ²	<0.5/mi ²

Alternative mule deer hunt objectives are considered in combination to determine management recommendations.

For Unit 12A, low fawn:doe ratios may indicate poor maternal nutritional status or fawn survival, which will be considered for reducing or eliminating antlerless harvests if population projections indicate population growth will be insufficient to meet the targeted level. Mean yearling buck weights \leq 90 lbs may suggest a decline in range quality, particularly on the summer range. Hunt success and age structure of harvest during late season hunts will be used to adjust permits for alternative structure hunts. Permits during early season hunts in Units 12A and 12B will be adjusted to meet desired buck:doe ratios. Hunter density guidelines are provided to maintain low hunter density during alternative management hunts. Early season dates in Units 12A and 12B will begin on Friday of week 43 (October 22, 2010 and October 21, 2011). Juniors-only hunts in these units will encompass a school holiday, such as Columbus Day. Should permit numbers for a single juniors-only season in Unit 12A West exceed 400, a stratified season structure will be recommended.

Unit 12A West will be managed to achieve a 5–7% annual population growth based on spreadsheet population models calibrated by periodic (4-year) population estimation surveys. Vegetation in Unit 12A West will be monitored annually and more intensively the fourth year to determine range quality and deer use trends on the winter range. Yearling buck weights will be measured during the fall in Unit 12A from hunter-killed animals. Deer body condition from live deer will be monitored annually during spring as well. No changes to management will occur in response to these monitoring efforts without amendment to these guidelines. Amendment of the guidelines will only be recommended under the clear likelihood of significant long-term damage to the habitat or immediate jeopardy to the deer herd,

- B. Wildlife Managers will manage white-tailed deer for the center of guideline ranges, while keeping confidence intervals in mind. Emphasis will be placed on the current year's fawn:doe ratio, considering its effect on next year's hunt success. When a clear trend exists, emphasize last year's data. When no clear

trend exists, emphasize the most recent 3-year mean data. Hunting opportunities should be maximized, providing an equitable allocation of harvest among weapon types.

Standard White-tailed Deer Hunt Guidelines

Parameters	Decrease	No change	Increase
Fawns:100 Does	<30	30 to 40	>40
Bucks:100 Does	<15	15 to 25	>25
Hunt Success	<15%	15 to 20%	>20%
Population Trend	Decreasing	Stable	Increasing

Alternative White-tailed Deer Hunt Objectives

Parameters	Guidelines
Fawns:100 Does	35 to 45
Bucks:100 Does	25 to 35
Hunt Success	20 to 30%
Population Trend	Stable

Alternative white-tailed deer hunt objectives are designed to be considered in specific units to provide more abundant, older-age class deer. These guidelines result in a more conservative harvest and provides for a population that will provide greater opportunity to harvest an older age class buck.

Archery Deer Hunt Guidelines

Archery deer opportunity for units located north of the Colorado River (Units 12A, 12B, 13A, and 13B) will be offered through archery-only permit tags during the August-September season. Archery-only deer permit tags will be set to achieve an archery deer harvest of 10-20% of the overall harvest in each of these units.

Archery hunt opportunity for units located south of the Colorado River will be offered according to the table below. Archery deer harvest will generally be managed not to exceed 20% of the overall harvest in a unit. When mean (3-year) archery deer harvest meets or exceeds 20% of overall harvest, the Wildlife Manager may recommend restrictions in archery hunt opportunity according to the following prescriptions unless the unit has only archery and muzzleloader seasons.

Current Archery Hunt Structure in Unit	Overall Harvest	Management Action
August–September and December–January	20% or greater	Eliminate December Opportunity
August–September and January	20% or greater	Eliminate last 2 weeks of January
August–September and first 2 weeks of January	20% or greater	Eliminate January Opportunity
August–September Only	20% or greater	August–September for which a harvest objective may be established
December–January Only	20% or greater	Eliminate December Opportunity
January Only	20% or greater	August–September or December for which a harvest objective may be established

If mean (3-year) archery deer harvest is less than 10% of the total harvest for a nonpermit-tag archery unit, a 2-week January archery season will be offered. Additional opportunity will be added incrementally until archery harvest is between 10–20% of the total take (i.e., reverse in above table). Alternative Management Units that do not currently have a January season will not be managed under this guideline. In addition, units that have only an archery and/or muzzleloader season will not be managed under this guideline.

COMMISSION ORDER 3: PRONGHORN ANTELOPE

The Department's Pronghorn Antelope Management Goal is to maintain pronghorn antelope populations at levels that provide diverse recreational opportunities.

Season prescriptions:

1. All pronghorn antelope permits will be for "buck only."
2. Pronghorn antelope hunts may be stratified. Fourteen-day archery seasons will begin on Friday of week 34 (August 20, 2010 and August 19, 2011). If an archery season must be stratified, the first 14-day season will begin on Friday of week 32 (August 6, 2010 and August 5, 2011), and the second 14-day season will begin on Friday of week 34 (August 20, 2010 and August 19, 2011). If firearm seasons are stratified, there will be a 7-day muzzleloader or general season beginning on Friday of week 36 (September 3, 2010 and September 2, 2011) and a 7-day muzzleloader or general season beginning on Friday of week 37 (September 10, 2010 and September 9, 2011). If the firearm season is not stratified, a 10-day season will begin on Friday of week 36 (September 3, 2010 and September 2, 2011). To the extent possible, harvest will be allocated to meet first-choice applicant demand among weapon types. Regions may select the units in which archery-only seasons may be provided annually.

Opportunity prescriptions:

- A. Wildlife Managers will manage pronghorn for the center of guideline ranges, while keeping confidence intervals in mind. The most recent 3-year means and trends for all population indices should be used along with current Pronghorn Management Plan objectives when determining permit adjustments. The most recent 3-year mean or trend in buck:doe ratios should receive greater emphasis than fawn:doe ratios when determining permit levels. When a clear trend exists, emphasize last year's data. When no clear trend exists, emphasize 3-year mean data.
- B. If the population is within guidelines, permit numbers should reflect a desired harvest of 15 to 25% of the estimated number of available bucks in the population.

Guideline	Decrease	Stay the Same	Increase
Fawns:100 Does	<30	30 to 40	>40
Bucks:100 Does	<20	20 to 30	>30
Population Trend	Decreasing	Stable	Increasing

COMMISSION ORDER 4: ELK

The Department's Elk Management Goal is to maintain elk populations at levels that provide maximum and diverse recreational opportunities, while avoiding adverse impacts to the species and its habitat while minimizing land use conflicts. Guidelines are grouped into "Standard" or "Alternative" hunt management.

Season prescriptions:

1. At least 5% of the total elk permits will be allocated to juniors-only antlerless seasons. Juniors-only elk seasons will be structured to encompass a school holiday, such as Columbus Day, and should not overlap with a juniors-only deer season. Juniors-only elk seasons will begin on Friday of week 41 (October 8, 2010 and October 7, 2011) or Friday of week 45 (November 5, 2010 and November 4, 2011) and run for 7 days.
2. Habitat-based management guidance will be included in Elk Management Plan objectives, using forage monitoring results per Department protocol, for individual elk herd units where this data is available. This information may include opportunities for herd growth.

3. Field ages from harvested elk may be used in the determination of elk population objectives and trends.
4. "Antlerless elk" hunts may be recommended in units or herds in accordance with the Elk Management Plan objectives. The number of permits may be adjusted annually to reduce, stabilize, or increase elk populations according to those objectives or annual forage monitoring results.
5. Limited opportunity elk hunts may be recommended to address population management concerns during times that best meet management objectives. Limited opportunity hunts may be offered as over-the-counter nonpermit-tags.
6. Population management hunts may be established in accordance with A.R.S. 17-239 and R12-4-115 to meet management objectives with goals, recommendations, or guidelines that were not met during regular seasons.
7. Harvest among general, muzzleloader, and archery seasons by sex will be allocated according to demand (5-year means), excluding limited opportunity hunts.
8. At least 6 general early bull elk hunts will be offered annually; 2 each in Regions 1 and 2 and 1 each in Regions 3 and 6. At least 6 muzzleloader bull elk seasons will be offered annually; 2 each in Regions 1 and 2 and 1 each in Regions 3 and 6.
9. Early archery elk seasons will begin on Friday of week 37 (September 10, 2010 and September 9, 2011), and run for 14 days. Late archery elk seasons will begin on Friday of week 46 (November 12, 2010 and November 11, 2011) and run for 14 days. All units contained within standard elk management zones (not including winter and limited population management zones) will have an early and late archery hunt structure. Twenty-five permits will be issued in addition to existing archery structure and will not be considered in the weapons allocation. In units that also have a late muzzleloader hunt, the late archery season will begin on Friday of week 47 (November 19, 2010 and November 18, 2011) and run for 7 days.
10. Early muzzleloader elk seasons will begin on Friday of week 39 (September 24, 2010 and September 23, 2011) and run for 7 days. Late muzzleloader elk seasons will begin on Friday of week 46 (November 12, 2010 and November 11, 2011) and run for 7 days. Additional muzzleloader elk seasons may be established as needed to address Elk Management Plan objectives.
11. Early general bull elk seasons will begin on Friday of week 39 (September 24, 2010 and September 23, 2011) and run for 7 days. Late general bull elk seasons will begin on Friday of week 48 (November 26, 2010 and November 25, 2011) and run for 7 days. Additional general bull elk seasons may be established as needed to address Elk Management Plan objectives.
12. Early general antlerless elk will begin on Friday of week 42 (October 15, 2010 and October 14, 2011) and run for 7 days. Additional general antlerless elk seasons may be established, as needed to address Elk Management Plan objectives and may run for either 7 or 10 days.

Opportunity prescriptions:

- A. Wildlife Managers will manage elk for the center of guideline ranges, while keeping confidence intervals in mind. The most recent 3-year mean and trend for all population indices should be used along with current forage monitoring data or Elk Management Plan objectives when determining permit adjustments. When a clear trend exists, emphasize last year's data. When no clear trend exists, emphasize 3-year mean data.
- B. The following table will be used when determining bull permits for units in standard management zones. Emphasis should be placed on 3-year bull:cow and cow:calf ratios over 3-year mean hunt success. Hunt opportunity should be maximized where possible.

Bull Permits should	Decrease	Stay the Same	Increase
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Calves:100 Cows	<30	30 to 40	>40
Bulls:100 Cows	<15	15 to 25	>25
Late Bull Hunt Success	<20	20 to 30	>30
Population Trend	Decreasing	Stable	Increasing

Alternative Elk Hunt Objectives

Units 1, 9, 10, and 23 will be managed under Alternate Elk Management Objectives according to the following hunt prescriptions:

- A. Bull:cow ratios will be managed for up to 40:100.
- B. At least 50% of bull elk harvested on early archery, early muzzleloader, and/or early general season should have 6 antler points or more on a side.
- C. Each unit will have an early archery bull hunt, with an early general or early muzzleloader bull hunt which may be offered during alternate years.

COMMISSION ORDER 5: TURKEY

The Department's Turkey Management Goal is to maintain turkey populations at levels that provide maximum and diverse recreational opportunities. Habitat quality, population status, hunter density, and hunt success will be used to determine hunting opportunities for both spring and fall seasons.

Season prescriptions:

1. Spring limited weapon shotgun shooting seasons will be stratified. The first stratified season will open on Friday of week 17 (April 22, 2011 and April 27, 2012) for 7 days, close for 7 days, and reopen for 14 days.
2. The second stratified limited weapon shotgun shooting spring season shall start on the Friday of week 18 (April 29, 2011 and May 4, 2012) for 21 consecutive days. Stratified seasons will result in the overlap of the last 14 days of the first and second seasons.
3. Archery-only turkey spring seasons will start on Friday of week 19 (May 6, 2011 and May 11, 2012) for 14 consecutive days. The entire archery season will overlap the last 14 days of the limited weapon shotgun shooting and juniors-only seasons.
4. Juniors-only limited weapon shotgun shooting spring seasons will start on Friday of week 16 (April 15, 2011 and April 20, 2012) for 7 days, close for 14 days, and then reopen for 14 days.
5. Limited weapon shotgun shooting fall season will begin on Friday of week 40 (October 1, 2011 and September 30, 2011) and run for 7 days.
6. Archery-only turkey fall seasons will open and close to coincide with early fall archery deer season.
7. Juniors-only shotgun shooting fall seasons will be recommended with season dates concurrent with limited weapon shotgun shooting fall seasons.

Opportunity prescriptions:

Hunting opportunity will be determined through a Turkey Management Worksheet (located in the Species Management Guidelines), which involves a 4-step process of:

- A. Determining spring and fall hunt structures by unit.
- B. Determining permit changes by unit.
- C. Determining maximum spring hunter density by unit.
- D. If harvest by archery-only hunters on a spring nonpermit-tag hunt exceeds 5% of the total spring harvest in that unit, the archery-only hunt should be closed, or revert to a permitted archery hunt, with permit numbers set to manage for about 5% of the spring harvest. Any unit having a permitted juniors-only spring hunt will not have an archery-only spring season.
- E. If harvest by juniors-only hunters on a spring nonpermit-tag hunt exceeds 35% of the total spring harvest in that unit, the juniors-only hunt should revert to a permitted juniors hunt, with permit numbers set to manage for about 30–35% of the spring harvest.

Management guidelines are:

- F. Hunt structure will fall into one of the following categories as determined by a score generated from the Habitat Quality Scorecard (located in the Species Management Guidelines) and a decision of status within the unit. The Habitat Quality Scorecard for a particular unit should be reviewed at least once every 3 years and/or after any major landscape-level changes such as wildfires, prescribed burns, habitat treatments, or similar event.
 - i. If the score is A, the unit will have a permitted fall hunt and permitted spring hunts for non-juniors seasons. Archery-only nonpermit-tags will be offered for spring and fall hunts, except as specified in Opportunity Prescriptions (D). Juniors-only seasons will be offered over-the-counter nonpermit-tags for spring and fall hunts in these units, except as specified in Opportunity Prescriptions (E).
 - ii. If the score is B, the unit will have a permitted fall hunt and a permitted spring hunts for non-juniors seasons. Archery-only seasons will be offered for fall hunts. Juniors-only seasons will be offered over-the-counter nonpermit-tags for spring hunts in these units, except as specified in Opportunity Prescriptions (E).
 - iii. If the score is C, the unit may have a permitted fall hunts and permitted spring hunts for non-juniors seasons. Permits should be set to remove about 10% of the female segment (fall seasons) or 30% of the male segment (spring seasons). Archery-only seasons will be offered for fall hunts. Juniors-only hunts, if offered in these units, should be permitted.
 - iv. If the score is D, the unit may have a permitted fall hunt and/or permitted spring hunt for non-juniors seasons. Permits should be set to remove less than 10% of the female segment (fall seasons) or 30% of the male segment (spring seasons). Archery-only seasons may be offered for fall hunts in these units. Juniors-only hunts should not be offered in these units.
- G. Permit changes for each hunt and unit will be determined using hunt success. When a significant ($P < 0.2$) 3-year trend exists, emphasize the last year's data. If no trend exists, use the most recent 3-year mean in hunt success. Permit options are as follows.
 - i. Permit numbers will increase when:
 - a. Mean hunt success is greater than 10% and hunt success trend is increasing, or

- b. Mean hunt success is greater than 15% and hunt success is stable.
- ii. Permit numbers will remain unchanged when:
 - a. Mean hunt success is less than 10% and hunt success trend is increasing, or
 - b. Mean hunt success is 10–15% and hunt success trend is stable, or
 - c. Mean hunt success is greater than 15% and hunt success is declining.
- iii. Permit numbers will decrease when:
 - a. Mean hunt success is less than 10% and hunt success is stable or declining, or
 - b. Mean hunt success is 10–15% and hunt success trend is declining.

COMMISSION ORDER 6: JAVELINA

The Department's Javelina Management Goal is to maintain javelina populations at levels that provide diverse recreational opportunities, while avoiding adverse impacts to the habitat, and minimizing substantiated depredation and nuisance complaints.

1. Firearm hunt recommendations will include "handgun, archery, and muzzleloader" (HAM) hunts and general hunts. HAM seasons will begin the Friday of week 6 (February 4, 2011 and February 10, 2012) and run for 10 days. The general season will open on Friday of week 8 (February 18, 2011 and February 24, 2012) and run for 7 days. Juniors-only seasons will begin on Friday of week 4 (January 21, 2011 and January 27, 2012) and run for 10 days. Strive for the allocation of 10% of the total permits for juniors-only seasons, including fall permits.
2. Archery seasons will begin on January 1 and extend through Thursday of week 4 (January 20, 2011 and January 26, 2012).
3. Primary javelina hunt areas will offer general, HAM, and archery hunting opportunities.
4. Permits will be allocated among season type by first-choice application demand (5-year means).
5. Fall permits will be allocated to juniors-only general seasons and will run concurrent with juniors-only deer seasons. Unit 39 may have a juniors-only hunt structure in association with the Robbins Butte Wildlife Area. Juniors-only permits may be offered exclusively to juniors-only deer permit holders during fall hunts.
6. Metro units and Units 1–5 and 7–9 may have over-the-counter nonpermit-tags for archery during January 1 and extend through Thursday of week 4 (January 20, 2011 and January 26, 2012).

Opportunity prescriptions:

- A. Manage for a mean herd size of 6–9 adults per herd or 7–10 total javelina per herd. A decrease in permits is indicated when the mean herd size is below 6 adults or 7 total javelina. An increase in permits is indicated when the mean herd size exceeds 9 adults or 10 total javelina.
- B. Permit recommendations should consider current recruitment. A juvenile javelina will be considered to be any javelina that is less than one-half grown. A decrease in permits is indicated when recruitment is less than 20 juveniles:100 adults. An increase in permits is indicated when recruitment exceeds 30 juveniles:100 adults.

Permits should	Decrease	Stay the Same	Increase
Herd size	<6 adult or 7 total	6 to 9 adult or 7 to 10 total	>9 adult or 10 total
Juv:100 adults	<20	20 to 30	>30
Hunt Success	<20%	20 to 25%	>25%
Population Trend	Declining	Stable	Increasing

- C. Survey data, hunt success, mean hunter days/kill, and total harvest should be evaluated on at least a 3-year trend basis. A decrease in permits is indicated when the above data demonstrate a declining trend in the javelina population. An increase in permits is indicated when the above data demonstrate an increasing trend.
- D. Population management hunts may be established to meet management objectives with goals, recommendations, or guidelines that were not met during regular seasons.

COMMISSION ORDER 7: BIGHORN SHEEP

The Department's Bighorn Sheep Management Goals are to increase bighorn sheep populations and to provide diverse recreational opportunities, while avoiding adverse impacts to the habitat.

Season prescriptions:

- Units may be subdivided into smaller hunt units to prevent hunters concentrating in specific areas within mountain ranges or to encourage hunting within areas with available rams that may be avoided because of access difficulty.
- All hunts will be general seasons.
- Hunts may be stratified when hunter densities warrant.
- Most seasons will occur during the month of December. Hunt areas may be open earlier or later depending on hunter access and historical success.

Opportunity prescriptions:

- A. Hunt recommendations should be developed using estimated populations based on survey protocols and sighting rates described in species management guidelines, those developed from simultaneous double count surveys, or according to Hervert et al. (1998, Sighting rates of bighorn sheep during helicopter surveys on the Kofa National Wildlife Refuge, Arizona, Desert Bighorn Council Transaction 42:11–26). When a clear trend in population parameters exists, emphasize the most recent year's data. When no clear trend exists, emphasize 3-year mean data.
- B. Harvest will be managed to allow for the take of 15 to 25% of the estimated Class III and Class IV rams. Wildlife Managers will manage bighorn sheep within the guideline range, while keeping confidence intervals in mind.

COMMISSION ORDER 8: BUFFALO

The Department's Buffalo Management Goal is to maintain buffalo populations at levels, which provide maximum and diverse recreational opportunities, while avoiding adverse impacts to the habitat. The Department will manage to meet objectives within management plans for buffalo herds. The Department will encourage hunters to remain flexible in scheduling their hunt to enhance the effectiveness of this wildlife management effort.

Season prescriptions:

1. Seasons dates and structures will be designed to meet population management objectives.
2. Yearlong season may be offered for House Rock Wildlife Area for buffalo through the spring draw.
3. The number and age class of buffalo to be harvested will be determined from annual herd inventory data.

Opportunity prescriptions:

- A. All general hunts will be limited by permits to meet herd management objectives. Permits will be for "adult bull only," "cow only," "yearling only," "cow or yearling only," or "any buffalo."
- B. Population management hunts may be established to meet management objectives with goals, recommendations, or guidelines that were not met during regular seasons.
- C. Population management hunts may be offered on House Rock Wildlife Area for cow or yearling buffalo after successful harvest by permitted spring draw hunters to attain maximum harvest.

COMMISSION ORDER 9: BEAR

The Department's Bear Management Goal is to manage black bear population numbers and distribution as an important part of Arizona's fauna, while providing maximum hunting and other related recreational opportunities. The hunt recommendation goal is to allow as much bear hunting opportunity as possible, while minimizing the harvest of adult females.

Season prescriptions:

1. Stratified seasons may be used during general bear seasons to distribute harvest throughout the fall. Any combination of the following hunts may be used. An early fall general hunt will begin on Friday of week 32 (August 6, 2010 and August 5, 2011) and end on Thursday of week 34 (August 19, 2010 and August 18, 2011). A fall general or archery season will begin on Friday of week 34 (August 20, 2010 and August 19, 2011) and run for up to 38 days. A late fall general bear season will open on Friday of week 40 (October 1, 2010 and September 30, 2011) and run through the end of the year. Hunts will be offered to spread female bear harvest throughout the fall. If 3 hunts are recommended for a given unit during the fall, at least 1 season will be archery. In units with female harvest limits that total less than 4, a single season may be offered. Regions 1, 2, 3, 5, and 6 will each have at least 1 archery bear season. Regions will manage hunt structure to ensure that a release site is available for nuisance bears.
2. Spring bear seasons may be offered beginning the Friday of week 12 (March 18, 2011 and March 23, 2012) and running 41 days. A second spring season may be offered beginning the Friday of week 18 (April 29, 2011 and May 5, 2012) and running until July 31. The seasons may be permitted or offered as over-the-counter nonpermits-tags. Both hunt options will be coupled with a female harvest limit.

Opportunity prescriptions:

- A. Each unit will have an annual female harvest limit that coincides with the calendar year. The annual female harvest limit should approximate 10% of the female segment of the estimated population. Individual hunts in each unit will also have a female harvest limit for each hunt to distribute opportunity and will close specific hunts when achieved. Female harvests will be cumulative and include any female bears killed by the Department. Once the annual female harvest limit for a unit is achieved, all subsequent bear hunts in that unit will be closed for the remainder of the year.

- B. Implement hunt structures (season dates, season length) which direct harvest toward the male segment of the bear population.
- C. Evaluate data on a unit basis to determine population status and effect of harvest. Age and sex data from previous harvests should help evaluate the status of a unit's bear population and establish an appropriate female harvest limit. Median age of harvested females should be >5 years of age.
- D. In units where median age of harvested female is <5 years and female harvest limits are exceeded in 3 of 5 years, seasons should be modified to open on or after November 1. Seasons may be reduced in number or shortened to 3 days in length if only a single season exists to address consistently exceeding female harvest limits. If the female harvest limit cannot be met in any other fashion, seasons in specific units may be closed for a period of 1–2 years to affect median age of harvested female.
- E. Population management hunts may be established to meet management objectives with goals, recommendations, or guidelines that were not met during regular seasons.

COMMISSION ORDER 10: MOUNTAIN LION

The Department's Lion Management Goal is to manage the mountain lion population, its numbers and distribution, as an important part of Arizona's fauna while providing maximum mountain lion hunting and other recreational opportunities.

- 1. Hunt recommendations will be made on a unit basis.
- 2. A unit may be recommended for closure if necessary to maintain a lion population.
- 3. Statewide harvest trends will be managed to keep adult (>3 year old) female harvest <35% of the total take. Should 2-year mean female harvest comprise >35% of the harvest for a group of units that biologically may be combined as a zone, female harvest limits may be established to reduce the overall female harvest in that zone. Zones with established female harvest limits may close to mountain lion take for the season or a portion of the season if the female harvest limit is met.
- 4. Mountain lion seasons shall run from Friday of week 34 (August 20, 2010 and August 19, 2011) through Thursday of week 21 of the following year (May 19, 2011 and May 24, 2012), except in hunt areas with multiple bag limits, which will run from July 1 to June 30.
- 5. Multiple bag limits may be offered in hunt units or a portion of a hunt unit to increase lion hunting opportunity. These should be designed to assist in achieving population objectives for another wildlife species. When targets have been achieved for which multiple bag limits were established, the multiple bag limit hunt structure should be removed from that unit.

COMMISSION ORDERS 11–12, 15–22, AND 24: SMALL GAME

The Department's Small Game Management intent is to provide as much small game hunting opportunity as possible. Seasons will be designed to allow standardization and simplification of hunt regulations, better distribution of hunters, and the opportunity to hunt more than 1 species at the same time.

- 1. Small game seasons, excluding migratory game birds, will be set for a 2-year time period.
- 2. Small game seasons will be open statewide.
- 3. Gambel's, scaled, and California quail will begin on Friday of week 40 (October 1, 2010 and September 30, 2011) and close on Sunday of week 6 or 7 (February 6, 2011 and February 5, 2012) the following year.

Falconry-only quail will start September 1 and will close the day prior to the start of the general quail season. Mearns' quail will open Friday of week 48, (November 26, 2010 and November 25, 2011) and close on Sunday of week 6 or 7 (February 6, 2011 and February 5, 2012) the following year. Pheasant will be open for up to 5 seasons. Seasons will run a minimum of 3 days and a maximum of 7 days. The seasons may begin as early as September and close in December. Since pheasant hunting conditions are dependent on local agricultural practices, the dates should remain flexible to take advantage of these conditions. Chukar and blue grouse will open on Friday of week 37 (September 10, 2010 and September 9, 2011). Blue grouse will close on Sunday of week 47 (November 14, 2010 and November 13, 2011). Chukar will end on Sunday of week 6 or 7 (February 6, 2011 and February 5, 2012). Tree Squirrel may open on Friday of week 40 (October 1, 2010 and September 30, 2011) and close December 31. Tassel-eared squirrel season in Units 31 and 33 will be open yearlong. Cottontail rabbit will be open yearlong.

4. Migratory game bird seasons and bag limits will be set according to Migratory Bird Treaty Act and Pacific Flyway guidelines. These recommendations will be reviewed with the Commission annually.

COMMISSION ORDERS 13 AND 23: PREDATORY AND FUR-BEARING MAMMALS AND TRAPPING

The Department's predatory and fur-bearing mammals management intents are to maintain present range, distribution, and population levels in Arizona; and to allow for maximum recreational, economic, and aesthetic uses commensurate with existing populations statewide. Predatory and fur-bearing mammal seasons will be set for a 2-year time period. Seasons and season dates will be reviewed with the Commission.

COMMISSION ORDER 14: OTHER BIRDS AND MAMMALS

The taking of nongame birds and mammals will be consistent with the Department's desire to allow recreational opportunities, commensurate with existing populations statewide. Other birds and mammal seasons will be set for a 2-year time period. Units with black-tailed prairie dogs will not be open to prairie dog hunting. Seasons and season dates will be reviewed with the Commission.