RAC AGENDA – July/August 2014

1. Welcome, RAC Introductions and RAC Procedure
   - RAC Chair

2. Approval of Agenda and Minutes
   - RAC Chair

3. Wildlife Board Meeting Update
   - RAC Chair

4. Regional Update **INFORMATIONAL**
   - DWR Regional Supervisor

5. Turkey Depredation Rule – New Rule R657-69 **ACTION**
   - Jason Robinson, Upland Game Coordinator

6. Proposed Fee Schedule FY 2015 **ACTION**
   - Kenny Johnson, Administrative Services Section Chief

7. Cougar Management Plan Revisions and 2015 Recommendations **ACTION**
   - Leslie McFarlane, Mammals Coordinator

8. Furbearer and Bobcat Harvest Recommendations **ACTION**
   - Leslie McFarlane, Mammals Coordinator

Regional Presentations Only

SRO

Additional Turkey Transplant Sites **ACTION**
- Jason Robinson, Upland Coordinator

Monroe Mtn. Aspen Restoration **ACTION**
- Jason Kling, Forest Service

CRO

Deer Management Plans **ACTION**
- Covy Jones, Regional Big Game Coordinator

Meeting Locations

SR RAC – July 29th 7:00 PM
Beaver High School
195 E. Center St., Beaver

SER RAC – July 30th 6:30 PM
John Wesley Powell Museum
1765 E. Main St., Green River

NER RAC – July 31st 6:30 PM
NERO Office
318 N. Vernal Ave., Vernal

CR RAC – Aug. 5th 6:30 PM
Springville Public Library
45 S. Main Street, Springville

NR RAC – Aug. 6th 6:00 PM
Brigham City Community Center
24 N. 300 W., Brigham City

Board Meeting – August 28th 9:00 AM
DNR - Boardroom
1594 W. North Temple
Salt Lake City, UT

GARY R. HERBERT
Governor
SPENCER J. COX
Lieutenant Governor

State of Utah
DEPARTMENT OF NATURAL RESOURCES
MICHAEL R. STYLER
Executive Director
Division of Wildlife Resources
GREGORY SHEEHAN
Division Director

July 16, 2014

TO: Utah Wildlife Board / Regional Advisory Council Members

FROM: Jason D. Robinson
Upland Game Program Coordinator

SUBJECT: R657-69, Turkey Depredation

The Division requests your consideration to create a new Turkey Depredation Rule, R657-69.

This new rule is in response to H.B. 342: Wild Turkey Management, and subsequently Utah Code 23-17-5.1. It outlines UDWR's response to documented cases of material damage caused by wild turkeys.

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R657. Natural Resources, Wildlife Resources.
R657-69 Turkey Depredation.
R657-69-1. Purpose and Authority.

(1) Under authority of Section 23-17-5.1, 23-17-5.2, this rule provides:

(a) the procedures for responding to and verifying reports of material damage caused by turkey;

(b) the procedures, standards, requirements, and limits for addressing instances of material damage caused by turkeys; and

(c) a description of the various hunts that may be held to minimize future instances of material damage caused by turkeys.

R657-69-2. Definitions.

(1) As used in this rule, "turkey" means a wild, free-ranging turkey and does not include a privately-owned wild turkey, domestic turkey, or wild-domestic hybrids.

(2) "Alternate limited entry drawing list" means a chronological list, based upon the permit drawing procedures described in the Upland Game & Turkey Guidebook, of those persons who were unsuccessful in drawing a limited entry turkey hunting permit and would have been successful were additional permits available.

(3) “Control permit” means a nontransferable turkey hunting permit issued by the division under R657-69-6 or R657-69-7 that authorizes the holder to take a turkey for personal use within the described permit boundaries and described dates.

(4) "Control permit voucher" means a document issued to a landowner or lessee that may be retained for personal use or transferred to a third party, and which allows the holder to purchase a turkey control permit from the division.

(5) “Depredation Hunt” means a turkey hunt organized pursuant to R657-69-5, the Wildlife Code, and proclamations of the Wildlife Board.

(6) “Employee” means an individual regularly employed by the landowner or lessee for purposes unassociated with hunting on the private property owned or managed by the landowner or lessee.

(7) “Immediate family member” means the landowner’s or lessee’s spouse, child, son-in-law, daughter-in-law, father, mother, father-in-law, mother-in-law, brother, sister, brother-in-law, sister-in-law, stepchild, and grandchild.

(8) “Landowner” means any person, partnership, or corporation who owns private property in Utah and whose name appears on a deed as the owner or whose name appears as the purchaser on a contract for sale of private property.

(9) “Lessee” means any person, partnership, or corporation whose name appears as the lessee on a written lease, for at least a one-year period, of private property, and who is in actual physical control of the private property.

(10) “Material damage” means physical impacts to private property caused by turkeys that are visible, persistent, and detrimental to the landowner or lessee’s use of the private property.

(11) “Personal property” means any moveable and tangible thing owned by the landowner or lessee.

(12) "Private property" means land in private fee ownership, structures located thereon, and personal property of the landowner or lessee on or adjacent to the land of the landowner or lessee, but not including tribal trust lands.

R657-69-3. Responding to Reports of Material Damage by Turkeys.

(1) Upon discovering material damage to private property attributable to turkeys, a landowner or lessee may request that the division take action to mitigate that damage.

(2) A request for action shall be delivered to a division representative in the appropriate regional office.

(3) A request for action may be made:

(a) orally to expedite a field investigation; or

(b) in writing.

(4)(a) The division will investigate a request for action within 72 hours after receiving the request.

(b) If after completing its investigation the division confirms that material damage did occur and it appears that material damage may continue, the division shall:

(i) remove or drive off turkeys causing material damage; or

(ii) with the written approval of the landowner or lessee, implement a damage mitigation and prevention plan in accordance with R657-69-4.

(5) A landowner or lessee may not harass, hunt, or otherwise take a turkey on private property unless:

(a)(i) they possess a valid turkey hunting permit authorizing them to hunt turkeys; or

(ii) a damage mitigation and prevention plan authorizes them to undertake such actions; and

(b) the landowner or lessee's actions are otherwise consistent with the Wildlife Code, its implementing regulations, and proclamations of the Wildlife Board.

R657-69-4. Turkey Damage Mitigation and Prevention Plans.

(1) A damage mitigation and prevention plan may authorize the division to undertake any or all of the following actions:

(a) provide educational materials regarding turkeys and turkey damage to the landowner or lessee, including strategies on how to alleviate damage;

(b) use, or allow the landowner or lessee to use, nonlethal methods to haze turkeys on private property experiencing material damage and, if necessary, provide the landowner or lessee equipment and supplies necessary to carry out hazing;

(c) exclude turkeys from areas in which material damage has occurred and is expected to continue to occur, using fencing, tarpaulins, or other similar materials;

(d) capture and relocate any turkeys causing, or reasonably likely to cause, material damage to the property to a location on the Wildlife Board approved turkey transplant list;

(e) allow expanded harvest of turkeys by:

(i) increasing permit numbers during limited entry or general season hunts;

(ii) expanding or increasing the areas for turkey hunts;

(iii) enrolling the property in the division's Walk-In Access Program in accordance with R657-56;

(iv) enrolling the property in the division's Cooperative Wildlife Management Unit Program in accordance with R657-37;

(v) schedule and hold a depredation hunt pursuant to R657-69-5;

(vi) issue control permits pursuant to R657-69-6; or

(vii) issue control permit vouchers pursuant to R657-69-7;

(f) allow landowners or lessees to capture and relocate turkeys causing, or reasonably likely to cause, material damage to the property to a location on the Wildlife Board approved turkey transplant list;

(g) allow landowners or lessees to use weapons or methods otherwise prohibited to take a turkey if traditional weapons are unsuitable for the location of the property; and

(h) other reasonable measures aimed at reducing instances of material damage to the private property in question.

(2) Damage mitigation and prevention plans shall have:

(a) a description of the private property covered by the plan;

(b) a specific effective date and effective term for the plan;

(c) a description of the verified instances of material damage and the dates of occurrence; and

(d) an assurance by the landowner or lessee that members of the public holding a control permit or a turkey depredation permit may access the private property at no charge during the hunts for which they hold a permit.

(3) Damage mitigation and prevention plans may be amended or renewed with written consent of the division and the landowner or lessee during their effective term.

(4)(a) The landowner or lessee may unilaterally revoke and withdraw from a damage mitigation and prevention plan by providing the division 30 days prior written notice.

(b) A landowner or lessee's revocation of approval of a damage mitigation and prevention plan eliminates the division's obligations described in the plan.

(c) A landowner or lessee may not revoke approval of a damage mitigation and prevention plan after a depredation hunt has been scheduled on their private property until after the depredation hunt has taken place.

(4) The division may unilaterally revoke and withdraw from a damage mitigation and prevention plan if:

(a) the landowner or lessee fails to exercise reasonable care and diligence to avoid loss or minimize the damage caused by turkeys;

(b) the landowner or lessee fails to comply with the terms of the damage mitigation and prevention plan; or

(c) in the division's discretion, the damage mitigation and prevention plan is not necessary.

(5) The expiration or revocation of a damage mitigation and prevention plan does not preclude the landowner or lessee from making future requests for action.

(6) The division shall not be financially liable for damage to private property caused by:

(a) turkeys;

(b) its efforts to remove or drive off turkeys in response to a request for action; or

(c) actions taken or authorized by a damage mitigation and prevention plan.

(7) A landowner or lessee shall have a copy of the damage prevention and mitigation plan in their possession while undertaking any action authorized in the plan that otherwise violates the Wildlife Code, including, but not limited to, the hazing, capturing, and transplanting of turkeys.

R657-69-5. Depredation Hunts for Turkey.

(1) Turkey depredation hunts are intended to:

(a) mitigate verified reports of material damage by turkeys and prevent future instances

of material damage in the vicinity of the hunt area;

(b) be a focused response to verified reports of material damage;

(c) be a rapid response mechanism to verified reports of material damage; and

(d) have limited permit numbers.

(2) Turkey depredation hunts shall operate consistent with the following guidelines:

(a) turkey depredation hunts may be held August 1 through March 14;

(b) parameters for a turkey depredation hunt must comply with the provisions established in the current Wild Turkey Management Plan approved by the Wildlife Board; and

(c) the boundaries of the hunts, specific season dates, bag limits, sex of birds that may be taken, and allowable weapon types will be further defined in a depredation hunt plan by the division Regional Supervisor.

(3) Hunters will be selected to receive a depredation permit in the following order, based on permit availability:

(a) randomly selected individuals in the depredation hunter pool; and

(b) individuals on the alternate limited entry drawing list, in chronological order.

(4)(a) The turkey hunter depredation pool provides hunters an opportunity to be placed on a wait-list and become eligible to receive a depredation permit as the availability for depredation permits allows.

(b) Applications for the turkey hunter depredation pool must be submitted pursuant to instructions in the current year's Upland Game & Turkey Guidebook of the Wildlife Board for wild turkey.

(c) Applications must be received by the date published in the Upland Game & Turkey Guidebook of the Wildlife Board for wild turkey.

(d) Applications received after the date published in the proclamation Upland Game & Turkey Guidebook of the Wildlife Board for wild turkey may be used after the list of individuals within the depredation hunter pool and the alternate limited entry drawing list has been exhausted.

(5) If a hunter is successful in the depredation permit drawing and possesses a valid unfilled turkey permit for a hunt in the same calendar year as the depredation hunt, that hunter may receive a depredation permit at no cost.

(6) Hunters selected to receive a depredation permit who do not possess a valid unfilled turkey permit must purchase the appropriate permit prior to participating in the depredation hunt.

(7) Hunters selected to receive a depredation permit will not lose bonus points associated with the limited entry application process.

(8) Hunters with depredation permits for turkey may not possess any other turkey permit for that season, except as otherwise provided in this Rule, Rule R657-54, or by proclamation of the Wildlife Board.

(9) Depredation permits may be withheld from persons who have violated this rule, any other wildlife rule, the Wildlife Resources Code, or who are otherwise ineligible to receive a permit.

R657-69-6. Control Permits for Turkey.

(1)(a) As part of a damage mitigation and prevention plan, the division may issue a turkey control permit at no cost directly to the affected landowner or lessee, or to their immediate family member or employee.

(b) No more than two control permits may collectively be issued per calendar year under each damage prevention and mitigation plan.

(2) A control permit allows the permit holder to take a single turkey of either sex within the boundaries designated in the damage mitigation and prevention plan.

(3) Control permit turkey hunts may be held August 1 through March 14.

(4)(a) In the event that the landowner or lessee, or the landowner or lessee's immediate family member or employee, who receives the control permit does not possess a valid hunting or combination license, the division may issue a special turkey control license at no cost to the designated permit holder for the purposes of obtaining a control permit.

(b) A special turkey control license does not authorize the license holder to take any other protected wildlife or to obtain any other permit other than a turkey control permit.

(5) Hunters who receive a control permit will not lose any bonus points accrued as part of the limited entry turkey application process.

(6) Control permits may be withheld from persons who have violated this rule, any other wildlife rule, the Wildlife Resources Code, or who are otherwise ineligible to receive a permit.

R657-69-7. Control Permit Vouchers for Turkey.

(1)(a) As part of the damage mitigation and prevention plan, the division may issue turkey control permit vouchers to the landowner or lessee.

(b) The number of control permit vouchers shall not exceed 10% of the documented turkeys on the private property or fifteen vouchers per calendar year, whichever is less.

(2)(a) Control permit vouchers do not allow turkey hunting and must be redeemed for a control permit prior to going afield.

(b) Control permit vouchers may be redeemed for a turkey control permit at a division office prior to the closing date of the control permit turkey hunt for which the voucher was issued.

(c) Individuals shall pay the required fee in order to redeem a control permit voucher for a turkey control permit.

(3)(a) A landowner or lessee may retain and redeem control permit vouchers as turkey control permits if they have not met their control permit quota identified in R657-69-6(1)(b).

(b) A landowner or lessee transferring control permit vouchers to another individual may not receive any form of compensation or remuneration for the transfer or for allowing access to the private land for turkey hunting under a control permit on the landowner or lessee's private property.

(c) An individual receiving a transferred control permit voucher may only receive one control permit voucher per calendar year.

(4) Individuals redeeming a control permit voucher for a control permit will not lose accrued bonus points for limited entry turkey hunting as a result of redeeming the voucher.

R657-69-8. Hunt Areas for Depredation and Control Permit Hunts.

(1) The hunt area for depredation hunts and control permit hunts may include a buffer zone of up to 2 miles around the parcels of private property experiencing material damage.

(2) Buffer zones, if any, will be defined in the damage mitigation and prevention plan.

(3) Buffer zones may partially encompass or be adjacent to lands experiencing material damage.

(4) If a buffer zone includes the private land of multiple landowners, each affected landowner must be a signatory to the damage mitigation and prevention plan.

R657-69-9. Appeal Procedures.

(1) Upon the petition of an aggrieved party to a final division action relative to material damage caused by turkeys and this rule, a qualified hearing examiner shall take evidence and make recommendations to the Wildlife Board, who shall resolve the grievance in accordance with Rule R657-2.

R657-69-10. Hunting or Combination License Required.

(1)(a) A person must possess or obtain a valid Utah hunting or combination license, or a special turkey control license, to receive a turkey control permit pursuant to R657-69-6.

(b) A person must possess or obtain a valid Utah hunting or combination license to:

(i) receive a turkey depredation permit; or

(ii) or redeem a control permit voucher for the corresponding permit.

(2)(a) Special turkey control licenses are only issued to landowners or lessees, immediate family members, and employees that are designated to receive a turkey control permit under R657-69-6 and do not possess a valid Utah hunting or combination license.

(b) Special turkey control licenses may not be used in lieu of a hunting or combination license to obtain a depredation permit or a control permit under a control permit voucher.

KEY: wildlife, turkey, depredation
Date of Enactment or Last Substantive Amendment: July 16, 2014
Notice of Continuation:
Authorizing, and Implemented or Interpreted Law: 23-17-5.1, 23-17-5.2

GARY R. HERBERT
Governor

SPENCER COX
Lieutenant Governor

State of Utah
DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER
Executive Director

Division of Wildlife Resources

Gregory Sheehan
Division Director

To: Regional Advisory Council
Re: Proposed Fee Schedule FY2016

The purpose of this action item is to propose modifications to the current fee schedule. The division will propose two new opportunities that require fees to be created and two minor changes to existing fees.

The division will propose establishing new fees for 2 cow elk permits, and Rocky Mountain and Desert Bighorn Ewes. The division will present a request to remove fees for muskrat trapping on our waterfowl management areas from the fee schedule, and propose these be awarded through a bid process. The division will also present an increase to the current bobcat fee. These fee changes will not increase revenue significantly; however will provide some needed funding for future wildlife management.

This item seeks to establish fees only at this time; more detail will follow in future RAC proposals on the implementation of these fees with supporting rule from the specific programs and management plans.

Kenneth Johnson
Administrative Services
Utah Division of Wildlife Resources

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Bobcat

Description	Current Fee	Proposed Fee	Est.Quantity	Est. Revenue
Resident Bobcat	$ 5.00	$ 15.00	4,400	$ 44,000.00
Nonresident Bobcat	$ 5.00	$ 45.00	200	$ 8,000.00
Total Est. New Revenue				$ 52,000.00

Muskrat

Description	Current Fee	Proposed Fee	Est.Quantity	Est. Revenue
Resident	$30 - $155	Open Bid	12	$ 2,400.00
Nonresident	$30 - $155	Open Bid	-	$ -
Total Est. New Revenue				$ 2,400.00

2 Cow Elk Permit

Description	Current Fee	Proposed Fee	Est.Quantity	Est. Revenue
Resident	$ -	$ 80.00	40	$ 3,200.00
Nonresident	$ -	$ 350.00	4	$ 1,400.00
Total Est. New Revenue				$ 4,600.00

Rocky Mt. & Desert Bighorn Ewe

Description	Current Fee	Proposed Fee	Est.Quantity	Est. Revenue
Resident	$ -	$ 100.00	10	$ 1,000.00
Nonresident	$ -	$ 300.00	1	$ 300.00
Total Est. New Revenue				$ 1,300.00

Total Estimated All New Revenue	$ 60,300.00

MEMORANDUM

Date: July 17, 2014

To: Wildlife Board and Regional Advisory Council Members

From: Leslie McFarlane, Mammals Program Coordinator

SUBJECT: COUGAR MANAGEMENT PLAN CHANGES AND 2015 PERMIT RECOMMENDATIONS

Last year the Wildlife Board asked the DWR to simplify the Cougar Management Plan and then directed us to set harvest permits and quotas on a unit by unit basis. I have only been in the position of Mammals Program Coordinator for about 3 weeks. This short time frame did not give me adequate time to convene the Cougar Advisory Group to make sure that all groups have input into any changes to the plan. On July 8, 2014, we met with the Utah Houndsmen Association, United Wildlife Cooperative, and Sportsmen for Fish and Wildlife to discuss some minor amendments to the current plan that will allow the DWR to assign permits on a unit-by-unit basis. On July 16, 2014 we also met with Sanpete Valley Houndsmen Association to discuss the same proposed changes. In both meetings the DWR has committed to re-open the Cougar Management Plan over the next year to further simplify the plan with input from the entire Cougar Advisory Group. The proposed changes to the plan will do the following:

- Permits and quotas will be established for cougar management areas using a 3 year average of the harvest data and performance targets
- Permits or quotas will then be assigned on a unit-by-unit basis
- Permits and quotas will be reviewed and adjusted annually, rather than once every 3 years
- Since permits are being allocated to each unit and evaluation of harvest is being done on annual basis female sub-quotas have been eliminated.

Permits and quotas will remain about the same as last year, but adjusted by unit with a few exceptions:

- Permits will be increased by 2 on the Mt. Dutton unit to protect a recent goat transplant
- The Plateau, Boulder and Plateau, Thousand Lakes were each decreased by 1 so that the permits could be put on the Mt. Dutton

- Fillmore Oak Creek changed from a split unit to a harvest objective unit with a quota of 12 to protect a recent bighorn transplant
- The Pine Valley unit is being split into two sub-units (see below for the boundary description). The Pine Valley, North will be a split unit with 8 permits. The Pine Valley, South will be a harvest objective unit with a quota of 10 to protect a bighorn sheep transplant effort.
- Quotas have been established for the following harvest objective units:
    - Book Cliffs, Bitter Creek 20
    - Nine Mile 20
    - Zion 20
    - Henry Mountains 12
    - La Sal Mountain 15
    - San Juan 25
    - South Slope, Bonanza/Diamond Mountain/Vernal 18
    - North Slope, Summit/West Daggett 10
    - North Slope, Three Corners 10
    - South Slope, Yellowstone 10
- The Central Mountains cougar management area will see a reduction in the ability to harvest an additional 34 animals with permits assigned to units as follows:
    - Central Mountains, Nebo 9
    - Central Mountains, Nebo West Face 10
    - Wasatch Mountains, Avintaquin 15
    - Wasatch Mountains, Cascade 5
    - Wasatch Mountains, Timpanogos 5

BOUNDARY CHANGES

Pine Valley North Unit 30a

Iron and Washington Counties - Boundary begins at Ash Creek and I-15; west along this creek to Sawyer Canyon; west along this canyon drainage though Anderson Valley to the Summit Trail at Mill Flat; south along the Summit Trail to the Cottonwood Creek drainage and the Cottonwood Creek Road; south along the Cottonwood Creek Road to the Cedar Bench road; west along this road to Diamond Valley road; west along the this road to Highway 18; north along Highway 18 to Sand Cove Reservoir road; west along Sand Cove reservoir road to the Gunlock Road; South along the Gunlock road to the Manganese Wash road; west along the Manganese Wash road to Motoqua road; North along the Motoqua road to the Utah/Nevada State line; north along the state line to the Union Pacific railway near Uvada; northeast along this railway to the Lund Cedar City road; east along this road to SR-56; east on SR-56 to I-15; southwest on I-15 to Ash Creek.

Pine Valley South Unit 30b

Washington County - Boundary begins at Ash Creek and I-15; west along this creek to Sawyer Canyon; west along this canyon drainage though Anderson Valley to the Summit Trail at Mill Flat; south along the Summit Trail to the Cottonwood Creek drainage and the Cottonwood Creek Road; south along the Cottonwood Creek Road to the Cedar Bench road; west along this road to Diamond Valley road; west along the this road to Highway 18; north along Highway 18 to Sand Cove Reservoir road; west along Sand Cove reservoir road to the Gunlock Road; South along the Gunlock road to the Manganese Wash road; west along the Manganese Wash road to Motoqua road; North along the Motoqua road to the Utah/Nevada State line; south along the state line to the Utah/Arizona state line; east along this line to I-15; north on I-15 to Ash Creek.

SEASON DATES

Season Dates are recommended as follows:

Limited Entry

November 12, 2014 through May 31, 2015

Split

Limited Entry

November 12, 2014 through February 26, 2015

Harvest Objective Transition

March 5, 2014 through May 31, 2015

Harvest Objective

November 12, 2014 through November 8, 2015

Pursuit Season

November 12, 2014 through May 31, 2015

Utah Cougar Management Plan V. 2.1

2009 - 2021

Utah Cougar Advisory Group

DWR Publication No. 09-15

Utah Cougar Advisory Group Members

Group Members

Byron Bateman	Sportsmen for Fish and Wildlife
Mike Linnell	USDA-APHIS Wildlife Services
Clint Mecham	Utah Federation of Houndsmen
Ernie Millgate	Utah Federation of Houndsmen
Kirk Robinson	Western Wildlife Conservancy
Brett Selman	Utah Woolgrowers Association
David Stoner	Utah State University
Rick Woodard	Utah Wildlife Board
Mike Wolfe, Ph.D	Utah State University

Division of Wildlife Resources Representatives

Leslie McFarlane	Mammals Program Coordinator
Justin Dolling	~~Game Mammals Coordinator~~Regional Supervisor
Tom Becker	Central Region Assistant Wildlife Manager

Utah Cougar Management Plan V. 2.0
2009-2021

PLAN GOAL:

Maintain a healthy cougar population within existing occupied habitat while considering human safety, economic concerns, and other wildlife species through 2021.

Introduction

The purpose of the Utah Cougar Management Plan is to direct the management of cougars (*Puma concolor*) in Utah in accordance with the mission of the Utah Division of Wildlife Resources (Division or DWR) through July of 2021. The mission of DWR is:

To serve the people of Utah as trustee and guardian of the state's wildlife

In 1997, the UDWR initiated a process to obtain public input on issues and concerns with cougar management. Individuals representing many diverse points of view were invited to form the Cougar Discussion Group. The mission of this group was to aid the Division in preparing a cougar management plan that would hopefully gain agreement from diverse groups. The result of the Cougar Discussion Group was the first version of the Utah Cougar Management Plan (UDWR 1999) which directed cougar management efforts from 1999 – 2009.

This document is version 2 of the Utah Cougar Management Plan and seeks to build upon the successes of the previous plan and implement new information that has become available over the past ten years. Similar to the original, this plan was prepared with the help of individuals representing diverse interests in cougar management and conservation who formed the Cougar Advisory Group. The Cougar Advisory Group met 8 times between January and May of 2009 and all the members support this management plan.

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Cougar Management Plan – Proposed Amendment July 2014

This document differs from the original plan in that is does not contain information on cougar natural history and ecology. This information was excluded because the Western Association of Fish and Wildlife Agencies (WAFWA) is in the process of publishing "Managing Cougars in North America", which covers these topics in great detail and will be available on the UDWR website as soon as it is available. In addition, the WAFWA document summarizes the research and management findings which provide the basis for the management systems outlined in this plan. Chapter titles in "Managing Cougars in North America" include: Cougar Ecology and Natural History, Cougar-Prey Relationships, Assessing and Monitoring Cougar Populations, Conservation Genetics as Relevant to Cougar Management, Population Management: Cougar Hunting, Population Management: Cougar Depredation, Strategies to Manage Cougar Human Interactions, Human Dimensions of Cougar Management: Public Attitudes and Values, and Cougar Research and Management Information Needs.

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This version of the Utah Cougar Management Plan also differs from the original in that it outlines management systems rather than simply defining performance targets and management strategies. In addition to defining management strategies and performance targets, a management system also outlines the specific actions that will be taken to reach and maintain performance targets. This version of the plan has been amended to allow the Division the ability to assign permits to cougar management unit rather than having them applied to the broader Cougar Management Area.

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Management History

Cougars (*Puma concolor*), or mountain lions, were persecuted as vermin in Utah from the time of European settlement (in 1847) until 1966. In 1967 the Utah State Legislature changed the status of cougars to that of *protected wildlife* and since then they have been considered a game species with established hunting regulations. The Utah Division of Wildlife Resources (UDWR) developed the first Utah Cougar Management Plan in 1999 (UDWR 1999) with the assistance of a Cougar Discussion Group which guided cougar management in Utah from 1999-2009.

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Cougar Management Plan – Proposed Amendment July 2014

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Utah's cougar harvests have been controlled on specific geographic areas, or management units (Figure 1), using three harvest strategies: harvest objective (quota), limited entry and split (limited entry followed by harvest objective). Under the *harvest objective strategy*, managers prescribed a quota, or number of cougars to be harvested on the unit. An unlimited number of licensed hunters were allowed to hunt during a season that is variable in length, as the hunting season closes as soon as the quota is filled or when the season end date is reached. Under the *limited entry strategy*, harvests have been managed by limiting the number of hunters on a unit. The number of hunters was determined based upon an expectation of hunting success and the desired harvest size. Individuals were usually selected for hunting on the unit through a random drawing process. Under the *split strategy*, units started the season under the limited entry strategy, and then transitioned to a harvest objective strategy on a set date using the number of limited entry permits that remained unfilled at the time of the transition as the quota for the remaining weeks of the season.

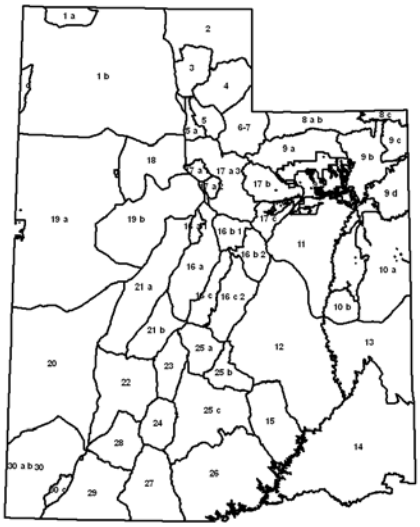

Figure 1. 2009 Cougar Hunt Units

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In 1996 the Utah Wildlife Board approved a Predator Management Policy (DWR Policy No. W1AG-4, last updated in 2006) that authorizes the Division to increase cougar harvests on management units where big game populations are depressed, or where big game has recently been released to establish new populations. Predator management plans are reviewed by regional staff, the Mammals Program Coordinator,

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and aApproved by both the Wildlife Section and DWR Director. Most predator management plans that affect cougars have been designed to benefit mule deer (*Odocoileus hemionus*) and/or bighorn sheep (*Ovis canadensis*). Cougar harvests have been liberalized where big game populations are far below objective (<65% of target densities) under the assumption that large harvests will reduce cougar numbers and hence predation rates on big game, and therefore encourage growth of big game populations by improving survival. However, drought, habitat alteration and loss and predation all substantially impact big game populations making the effectiveness of predator management plans difficult to evaluate.

In 1999, UDWR implemented a Nuisance Cougar Complaints policy (DWR Policy No. W5WLD-5, last updated in 2006) to provide guidance for reducing damage to private property and reducing public safety concerns, and to provide direction to Division personnel responding to cougar depredation, nuisance, and human safety situations. Any cougar that preys upon livestock or pets or that poses a threat to human safety is euthanized, as are sick or injured adult cougars and kittens that are unable to care for themselves in the wild. The Division does not rehabilitate these animals. The only cougars that are captured and translocated are adults and subadults that wander into urban or suburban "no tolerance zones", in situations where they have not been aggressive toward humans, pets, or livestock.

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Harvest Information

The Division began managing cougar harvests through statewide limited entry hunting in 1990 and increased numbers of permits through 1995-1996. In 1996-1997, additional harvest pressure was added by switching some management units to the harvest objective (quota) system and a record high of 1,496 Permits were sold (Table 1).

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Table 1. Utah Cougar Permits 1990 – 2008.

	Limited Entry Permits				Harvest Objective Permits			Total	Pursuit
Year	Resident	Nonresident	Conservation / Convention	Total	Resident	Nonresident	Total	Permits	Permits
1989-90	385	142		527				527	355
1990-91	383	142		525				525	364
1991-92	383	142		525				525	524
1992-93	431	160		591				591	570
1993-94	479	180		659				659	552
1994-95	559	232		791				791	505
1995-96	611	261		872				872	627
1996-97	425	170		595			901	1,496	638
1997-98	381	128		509	472	199	671	1,180	635
1998-99	337	109		446	386	189	575	1,021	630
1999-00	259	84		343	374	170	544	887	545
2000-01	206	66		272	880	290	1,170	1,442	692
2001-02	228	30	8	266	897	300	1,197	1,463	681
2002-03	326	36	12	374	685	266	951	1,325	703
2003-04	215	29	20	264	533	209	742	1,006	772
2004-05	233	30	10	273	841	290	1,131	1,404	703
2005-06	356	38	12	406	464	222	686	1,092	730
2006-07	313	35	18	366	600	245	845	1,211	714
2007-08	278	33	26	337	587	238	825	1162	
2008-09	265	33	26	323					
Total	6,510	2,014	80	8,604	6,132	2,380	9,413	18,017	10,940
Mean	362	112	13	478	613	238	856	1,001	608

Utah's cougar population is monitored through mandatory reporting of all hunter-harvested cougars, cougars that are killed on highways or in accidents and those taken as a result of livestock depredation. Location of kill, sex and age (through a premolar for age estimation) are recorded for every cougar killed, and provide the data used to assess management performance in relation to established target values that serve as indicators of population status. Since 1990 cougar mortality in Utah has ranged from 275 (1990) to 666 (1996) and has averaged 436 (Figure 2). Ongoing research on 2 study sites, under the direction of Dr. Michael Wolfe (Utah State University), is supplying comparative data on the dynamics of cougars subjected to varying levels of hunting harvest, which was used to refine management systems in this management plan (Choate et al. 2006, Stoner et al. 2006, Stoner et al. 2007).

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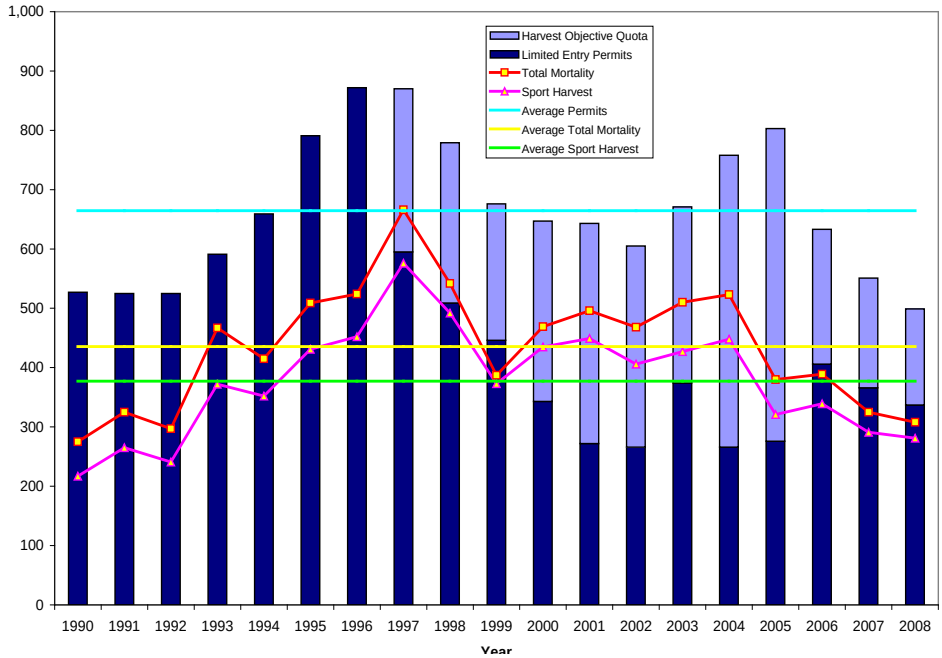

Figure 2. Cougar Mortality and Permits 1990 - 2008

Nearly all cougars harvested in Utah are taken with the aid of dogs. An individual hunter is restricted to holding either a limited entry permit or a harvest objective permit per season, and must wait 3 years to reapply once he/she acquires a limited-entry permit. The bag limit is 1 cougar per season and kittens and females accompanied by young are protected from harvest. Currently the cougar-hunting season runs from late November through early June on both limited entry and most harvest objective units. Some units are open year-round and some have earlier or later opening dates. Because harvest objective units close as soon as the objective (quota) is reached, hunters must call a toll-free number or check the Division website daily to ensure that the unit they plan to hunt is still open.

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Pursuit (chase or no-kill) seasons provide additional recreational opportunities over most of the State. The pursuit season generally follows the hunt season, but specific units have year-round pursuit and a few units are closed to pursuit.

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Distribution and Abundance

Utah's cougar habitat encompasses about 92,696 km^2 (35,790 mi^2). Cougars are distributed throughout all available habitats within the state. Residential and commercial development is incrementally reducing cougar distribution through habitat alteration and destruction, particularly along the western border of the Wasatch Mountains in northern and central Utah.

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The last statewide cougar population estimates were developed in conjunction with the Utah Cougar Management Plan in 1999 (UDWR 1999). These estimates used extrapolations of cougar densities from published studies in the southwestern United States to: 1) the total area within all management units that comprise cougar range, and 2) the total amount of occupied cougar habitat within Utah. The habitat quality within each management unit was classified as either high, medium or low based on vegetative characteristics, terrain ruggedness (following Riley 1998) and prey density. Cougar densities derived from research within Utah, California and New Mexico were associated with each habitat quality level (UDWR 1999b). High quality habitat was assigned a density range of 2.5-3.9 cougars/100 km^2, medium quality habitat was assigned a density of 1.7-2.5 cougars/100 km^2 and a density of 0.26-0.52 cougar/100 km^2 was assigned to low quality habitat.

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The first statewide population estimate of 2,528-3,936 cougars resulted from summing unit population estimates. The number of cougars on each unit was estimated by first multiplying the total area contained within the unit by the highest density of the range assigned to it, and then by the lowest density of the range assigned to it.

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For comparison, a second estimate of 2,927 cougars statewide was generated based upon mean cougar densities and total occupied cougar habitat within the state. Each management unit's cougar population was estimated by extrapolating the mean cougar density assigned to the unit (based on the respective range indicated above) to the amount of occupied cougar habitat within the unit, and unit estimates were summed to obtain the statewide figure. The two methods produced population estimates that show

considerable agreement, but they should be only viewed as general approximations of the statewide cougar population.

Issues and Concerns

At the initial meeting of the Cougar Advisory Group the following list of issues and concerns were identified by the group members. Subsequent meetings focused on developing, objectives, strategies and management systems to address the issues and concerns identified

Outreach / Education

- Educate public about true relationship between cougar and prey populations.
- Educate hunters on sex/age identification
- Educate the general public about cougars and cougar safety

Population Management / Harvest Management

- Explore season timing
- Non resident issues (pursuit permits, commercial vs recreational)
- Explore ways to increase cougar populations on public land
- Explore three year proclamation
- Provide timely data for permit recommendations
- Manage at a broader geographic level (three year proc)
- Simplify the management criteria (performance targets)
- Revisit performance criteria and try to meet them with recommendations
- Minimize year to year permit variations
- Avoid large swings in permit recommendations
- Identify areas for light harvest strategies (source sink management)
- Explore targeting females and leaving older age males (help on sheep ranges)
- Explore source sink management
- Manage to protect adult females

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Predator Management

- Move away from predator management plans
- Reduce units under predator management
- Deal with predator management plans in this process
- Protect big game populations when needed

Livestock Depredation

- Develop process to deal with chronic depredation areas
- Identify the sex of depredating lions
- Develop a way to deal with chronic depredation problems

Research

- Compare ungulate and lion populations
    - Develop monitoring system to measure deer herd response on units under predator management
- Explore using population reconstruction to estimate the population
- Explore mark recapture population estimates (DNA sampling)

Objective, Strategies and Management Systems

Outreach and Education

Objective 1:
Increase awareness and appreciation within the general public for the role of cougars in Utah's ecosystems by 10% through 2021.

Strategy:

1. Pursue development and implementation of the new Living with Wildlife Program in Utah; an effort generated by the Conservation Outreach Section of the Division of Wildlife Resources.

Objective 2:

Reach and educate 10% of the general public about cougar safety by 2021.

Strategy:

1. Pursue development and implementation of the new Living with Wildlife Program in Utah; an effort generated by the Conservation Outreach Section of the Division of Wildlife Resources.

Objective 3:

Contact a minimum of 30% of the big game hunting public that belong to sportsmen's organizations about the relationship between cougar and prey populations annually for the purpose of increasing the understanding of the true effect cougars have on big game populations.

Strategies:

1. Develop an educational presentation highlighting cougar-prey interactions geared toward hunting/conservation organizations such as Sportsmen for Fish and Wildlife, Mule Deer Foundation, Rocky Mountain Elk Foundation, Utah Bowman's Association….
2. Write articles addressing cougar prey interactions for publication in sportsmen magazines/news letters published by hunting/conservation organizations such as: Sportsmen for Fish and Wildlife, Mule Deer Foundation, Rocky Mountain Elk Foundation, Utah Bowman's Association….
3. Explain cougar-prey interactions through radio, television and print media.

4. Periodically assess big game hunter opinions about the effect of cougars on big game populations.

Objective 4:

Educate all cougar hunters on how to determine the age/sex of cougars to increase harvest selectivity through 2021 and continue to educate Division employees tagging cougars.

Strategies:

1. Continue to publish and refine information about sex and age identification techniques in the Cougar Guidebook.
2. Produce a voluntary online orientation course for cougar hunters. In 2015 evaluate effectiveness of orientation course to determine if desired results have been obtained. If not, modify course and re-evaluate in 2021. If determined successful in 2015 consider mandatory course for all cougar hunters.
3. Modify harvest reporting form to gather data on effectiveness of orientation course.
4. Survey unsuccessful cougar hunters to gather data on effectiveness of orientation course.
5. Obtain good digital photographs of cougars for sex and age identification education purposes. Examples: treed cougars, lactating females and track and paw sizes for sex and age differentiation……
6. Explore ways to reward hunters for selective harvest.
7. Train Division employees responsible for tagging cougars at least bi-annually.

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Cougar Population Management

Objective:

Manage populations in a manner that recognizes cougar ecology by incorporating: source-sink dynamics(Lindzey et al. 1992, Ross and Jalkotzy 1996 Sweanor et al. 2000, Logan and Sweanor 2001, Robinson et al. 2008, Cooley et al. 2009), large geographic and temporal scales (Murphy 1983, Logan and Sweanor 2001, Stoner et al. 2006, Robinson et al. 2008, Cooley et al. 2009), and the importance of adult females to population persistence (Lindzey 1992, Ross and Jalkotzy 1996, Logan and Sweanor 2001, Martorello and Beausoleil 2003, Anderson and Lindzey 2005, Stoner et al. 2006, Robinson et al. 2008, Cooley et al. 2009). This will be accomplished by adjusting harvest rates in accordance with the following performance targets, management system and strategies at a management area scale* through 2021.

* Cougar management areas were designed around units where annual adult deer survival is being tracked with radio-collars (deer-survival units). Units were grouped into management areas with the deer-survival unit that was most representative.

Performance Targets*:

Primary Target - Proportion of adult females in the harvest between 17% and 20% (within a management area over 3 years)

Secondary Target - Cougars treed per day averages between 0.25 and 0.35 (within a management area over 3 years)

*A third performance target may be added if a method for tracking cougar densities is developed over the course of this plan

Management System*:

Harvested adult females above 20% reduce tags / quota by 10%

Harvested adult females above 23% reduce tags / quota by 20%

Harvested adult females below17% increase tags / quota by 10%

Harvested adult females below14% increase tags / quota by 20%

Cougar treed per day below 0.25 and adult females above 20% reduce tags / quota an additional 5%

Cougars treed per day above 0.35 and adult females below17% increase tags / quota an additional 5%

Adult females between 17% and 20%, but cougars treed per day above or below 0.25-0.35 maintain tags / quota within 5% of the previous recommendation.

Decrease the tags / quota for units transitioning out of PMPs by 40-60% for the first 3 year cycle and do not include the data from these units in the performance target analysis until after they have been out of a PMP for one 3-year recommendation cycle (data should be included in the analysis of the performance target that unit was under during the previous 3-year cycle).

*If primary and secondary performance targets are in conflict with each other disregard the secondary target and reduce or increase tags according to the primary target.

Strategies:

1. Implement the management system as follows (See Figure 4):
   a. Adjust total available permits~~quotas~~ at the management area ~~scale~~ scale on an annual basis(Figure 3).
   ~~a.~~b. Assign permits to each cougar management unit within the management area on an annual basis.
   ~~b. Assign~~Apply quotas for each management area with a female sub-quota

c. Adjustment of permits on an annual basis will allow the division to be responsive to population fluctuations such as:

1. Large (>30%) annual declines in big game herds (consider entering into a Predator Management Plan).
2. Total female cougars in the harvest > 40%.

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~~i. Female sub-quota will initially be set between 25%-30% of the management area quota and will be adjusted if necessary during subsequent 3-year cycles in order to meet the primary performance target within management areas~~

~~1. Female sub-quotas may be different between management areas if deemed necessary to meet the primary performance target.~~

~~ii. A minimum harvest objective will be set for units within management areas that have bighorn sheep populations – these units will not close unless the minimum harvest has been met~~

~~c.~~d. Use either limited entry or split hunt strategies on units managed under this management system

i. When a split unit transitions from limited entry to the split system the quota will equal the number of limited entry permits that were not filled during the limited entry season. ~~Harvest on limited entry units applies to the management area quota and female sub-qouta.~~

~~d. Keep harvest recommendations stable for 3 years before making adjustments (3-year proclamation).~~

~~i.Maintain the option of adjusting harvest recommendations at shorter intervals to account for exceptional circumstances such as:~~

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~~1.Large (>30%) annual declines in big game herds (consider entering into a Predator Management Plan).~~

~~2.Adult female cougars in the harvest > 30%~~

e. DWR regional wildlife staff will be responsible for the distribution of permits~~tags~~ / quotas to the cougar management units within the cougar management area ~~eco-region~~ (Figure 3).

i. Mammals program staff will calculate tag increases / reductions within the cougar management area ~~eco-region~~

~~2. Review performance targets after 2015~~

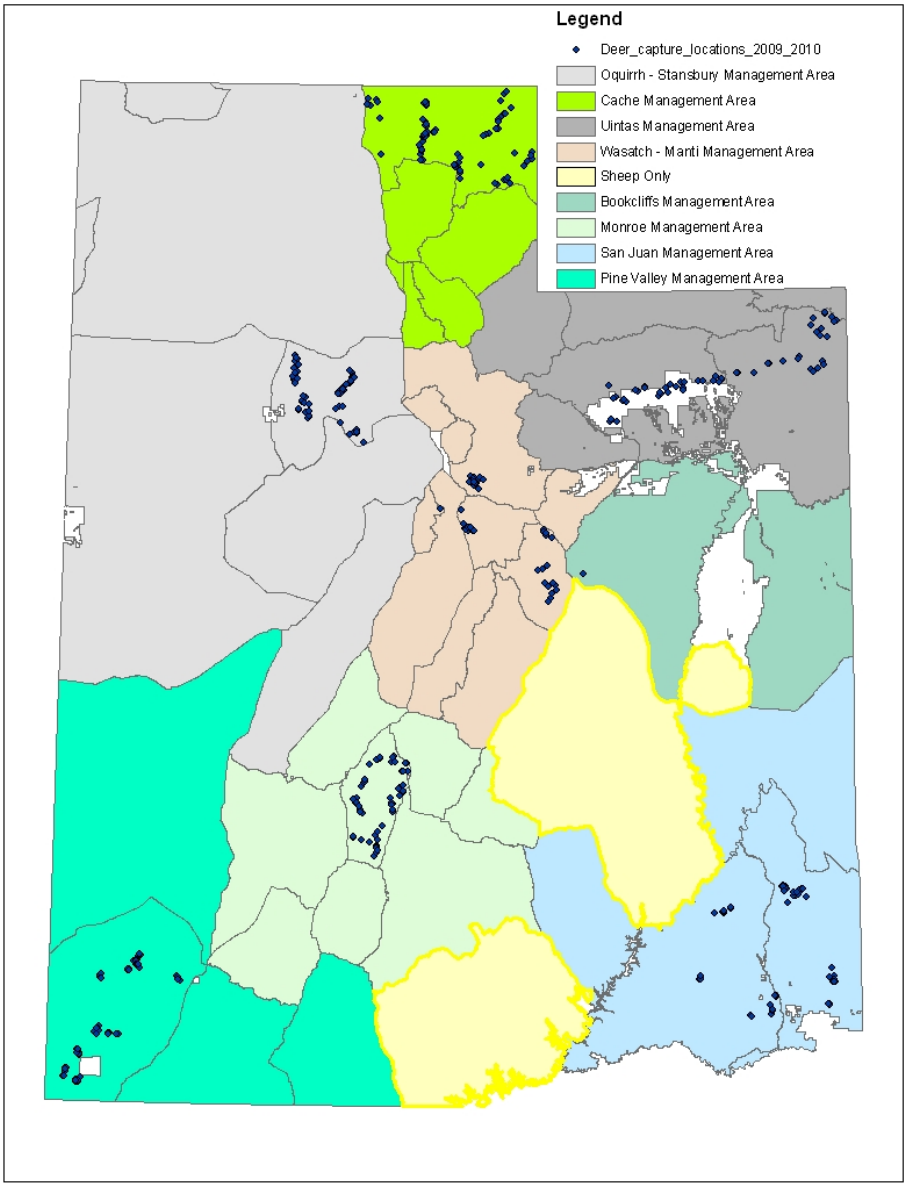

Figure 3. Cougar Management Areas

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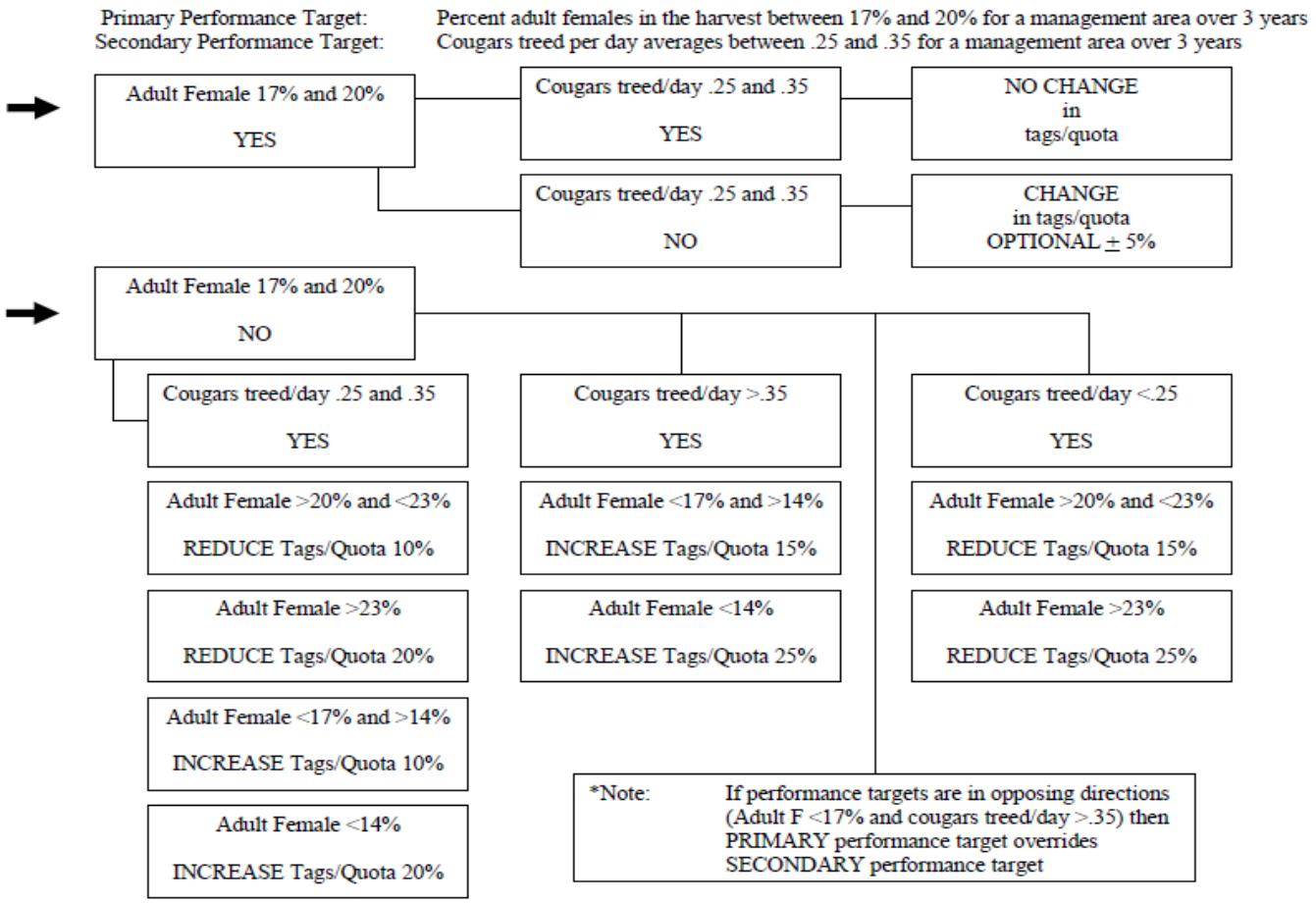

Figure 4. Population Management System Decision Tree

Managing Cougar Populations Under Predator Management Plans

Objective:

Manage cougar populations to reduce predation on big game herds that are chronically below objective (see policy for managing predatory wildlife species W1AG-04) when cougar predation is a potential limiting factor to herd growth / recovery. This will be accomplished by adjusting harvest rates in accordance with the following performance targets and management system for units within each management area that have an approved Predator Management Plan (PMP) through 2021.

Performance Target:

Proportion of adult females in the harvest > 25% (within a management area over 3 years)

Management System:

Proportion of adult females in the harvest during the previous 3 years < 20% - New quota = average previous harvest during the previous 3 years +100%

Average Proportion of adult females in the harvest during the previous 3 years 20 - 25% - New quota = average previous harvest + 50%

Proportion of adult females in the harvest during the previous 3 years > 25% - New quota = average previous harvest during the previous 3 years +0%

Increase the tags / quota for units transitioning into PMPs by 50-75% for the first 3 year cycle and do not include the data from these units in the performance target analysis until after they have been under a PMP for one 3-year recommendation cycle (data should be included in the analysis

of the performance target that unit was under during the previous 3-year cycle).

Strategies:

1. Determine need for managing cougars under PMPs. If necessary, develop a Unit PMP and begin managing cougars under the management system identified. for the three year period.
   a.f. Including cougars in a PMP may be appropriate under the following circumstances:
      i. Adult deer survival below 85%
      ii. Adult bighorn sheep survival < 75% under normal winter conditions and in the absence of disease
      iii. Large reductions (> 40%) in big game herds resulting from winter loss, disease, prolonged drought conditions…. to avoid the creation of a predator pit.
      iv. Substantial potential that prey switching (alternate prey source) is negatively impacting sensitive big game herds. For example, if a bighorn sheep herd is located in an area with a healthy deer or elk herd and it isn't growing despite favorable habitat conditions and the absence of disease.

2. Implement the management system as follows:
   b. Adjust quotas at the management area scale.
   c. Apply quotas for each management area and assign permits to each unit within that management area. for each management area with a female sub-quota
   i. Female sub-quota will initially be set between 40%-50% of the management area quota and will be adjusted if necessary during subsequent 3-year cycles in order to meet the primary performance target within management areas

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1. Female sub-quotas may be different between management areas if deemed necessary to meet the primary performance target.

ii. A minimum harvest objective will be set for units within management areas that have bighorn sheep populations – these units will not close unless the minimum harvest has been met

iii.v. The sSheep only management areas (Figure 3) are management units that don't have an appreciable deer population. Cougar prey base consists primarily of bighorn sheep. These units consists of low elevation primarily snow-free habitat, as a result too few cougars cougars are harvested in these management units from this area to analyze relative to performance targets. No quota is assigned to these management units (San Rafael, Kaiparowits, Book Cliffs-Rattlesnake).

d.g. Use either split or harvest objective hunt strategies on units under PMPs

i.Make Keep harvest recommendations on an annual basis which will allow the division to be responsive to population fluctuations such as: stable for 3 years before making adjustments (3-year proclamation).

i. Maintain the option of adjusting harvest recommendations at shorter intervals to account for exceptional circumstances such as:

1. Continued substantial (>20%) annual decline in big game herds where there is a PMP already in place.
2. Adult female cougar in the harvest > 40% for units within an cougar management areaeco-region that are under a PMP

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f. h. DWR regional wildlife staff will be responsible for the distribution of tags / quotas to the units within the eco-region that are managed under PMPs.

i. Distribute tag increases / reductions within the cougar management area ~~eco-region~~ based on the amount of cougar habitat in a particular cougar management area ~~eco-region~~ within each administrative region boundary (see table under population management).

3. Evaluate ungulate population response after three years to determine need to continue or discontinue predator management direction.

g. i. Units should not remain under PMPs for more than 2 management cycles except under extraordinary circumstances such as:

i. Continued high potential for prey switching to cause declines in sensitive big game herds.

ii. Large declines in big game herds not associated with cougar predation (e.g. significant winter mortality) that occurs while the unit is under a PMP

4. When possible enter or leave PMPs focused on cougars on the three year recommendation cycle.

Managing Chronic Cougar Depredation

Objective:

Work to resolve all chronic* cougar depredation problems on private land by removing the offending animal(s) with the cooperation of APHIS Wildlife Services, livestock producers and houndsmen through 2021.

*In order for a depredation problem to be considered chronic for the purpose of this objective it must meet the following criteria:

1. The depredation is occurring on private land;

2. The depredation has occurred in same area for 3 consecutive years or 4 out of five years and;
3. WS has attempted to remove the offending animal(s), but has been unsuccessful.

Strategies:

1. WS increase efforts and/or bring cougar specialists in from other areas to help resolve chronic depredation problems – option to implement after 2 years.
2. Division request that WS continue efforts to remove the offending animal after livestock have left the area, or before they have arrived to resolve chronic depredation problems – option to implement after 2 years.
3. The Division may authorize the livestock owner, an immediate family member or an employee of the owner (not someone specifically hired to take cougar) to remove the offending animal beyond the 72hr period stipulated in Utah Admin Code R657-10-21 – implemented after year 3.

   Conditions to the authorization to remove a cougar(s) should include:

   i. The time period during which the cougar(s) can be removed;
   ii. A description of the geographic area from which a cougar(s) can be removed;
   iii. A description of the cougar(s) authorized to be removed (i.e. male, female……)
   iv. Other relevant conditions

   Any cougars removed are considered depredating cougars and are subject to the reporting and possession requirements in the Utah Admin. Code R657-10-21

4. DWR and WS will work with the houndsmen community to develop a list of houndsmen that are willing to volunteer their time to help livestock owners resolve chronic depredation issues.

Cougar Research

Objective:

Increase base understanding through continued research designed to address questions relative to cougar management in Utah through 2021. Potential research projects are listed below in order of priority.

High Cost Research Priorities (> $100,000 / Year)

1. Investigate DNA mark-recapture for population estimation – Currently part of USU Research Contract
2. Prey selection and predation rates by cougars; combined with deer study could elucidate prey selection among hunters, cougars, and the deer population; need radioed deer.
3. Cougar human interactions – Westside of SL valley –
    a. How often do cougar go into residential areas vs. how often are they detected
    b. Changes in cougar habitat use following development
4. Niche partitioning of cougars and coyotes and their effects on mule deer and elk; would require radioed coyotes and prey. – Camp Williams
5. Cougar bighorn sheep relationships
6. Indirect effects of predation risk on foraging behavior of livestock.
7. Effects of a keystone predator on biodiversity (ala Yellowstone wolf recovery on elk and vegetation).

Low to Moderate Cost Research Priorities (< $100,000 / Year)

1. Predation sites and kill composition by cougars (possible Dustin Mitchell thesis project).

2. Examining the depredation records of the DWR and seeing the influence or efficacy of removing cougars and subsequent livestock depredations. Does removing cats affect future depredations? Are there depredation hotspots? What age and sex class is removed for livestock depredations and does the effect what comes in the next time?
3. Modeling the long-term data set for examining cougar population ecology and demographics; population persistence; possible PhD student interested in population models.

Strategies:

1. Continue collaborative research efforts to maximize knowledge base, funding sources and available resources.
2. Explore new funding sources and ways to leverage those resources.
3. Whenever possible use Division employees enrolled in the educational assistance program to conduct research.
4. Re-visit prioritized list before 2021 if research direction or funding change or new opportunities become available.

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Cougar Recommendations 2014-15

Cougar Management Area	Cougar Hunting Unit	PMP?	Strategy	Total Permits	**Conv.	Resident	Nonres	Quota to be divided
Book Cliffs	Book Cliffs, Bitter Creek	**Y**	HO	20				40
	Nine Mile	**Y**	HO	20				
Cache	Cache	N	Split	15	1	12	2	45
	Ogden	N	Split	15	1	12	2	
	Morgan-South Rich	N	LE	6		5	1	
	East Canyon	N	LE	4		4	0	
	East Canyon, Davis	N	Split	5		4	1	
Monroe	Beaver	N	Split	10		9	1	76
	Fillmore, Pahvant	N	Split	9		8	1	
	Mt Dutton	N	Split	14	1	12	1	
	Monroe	N	Split	8		7	1	
	Panguitch Lake	N	Split	10		9	1	
	Plateau, Boulder	N	Split	11	2	8	1	
	Plateau, Fishlake	N	Split	10		9	1	
	Plateau, Thousand Lakes	N	Split	4		4	0	
Oquirrh-Stansbury	Box Elder, Desert	N	Split	6		5	1	30
	Box Elder, Pilot Mountain	N	Split	4		4	0	
	Box Elder, Raft River	N	Split	6		5	1	
	Oquirrh-Stansbury	N	LE	6		5	1	
	West Desert, Mountain Ranges	N	Split	4		4	0	
	West Desert, Tintic-Vernon	N	LE	4		4	0	
	Fillmore, Oak Creek	**Y**	HO	12				
Pine Valley	Paunsaugunt	N	Split	8		7	1	24
	Pine Valley, North	N	Split	8	1	6	1	
	Pine Valley, South	**Y**	HO	10				
	Southwest Desert	N	Split	8		7	1	
	Zion*	**Y**	HO	20				
San Juan	Henry Mountains	**Y**	HO	12				52
	La Sal Mountains	**Y**	HO	15				
	San Juan	**Y**	HO	25				
Uintas	Chalk Creek / Kamas	N		8	1	6	1	14
	Wasatch Mtns, Currant Creek	N	LE	6		5	1	
	South Slope, Bonanza/Diamond/Vernal	**Y**	HO	18				48
	North Slope, Summit/West Daggett	**Y**	HO	10				
	North Slope, Three Corners	**Y**	HO	10				
	South Slope, Yellowstone	**Y**	HO	10				
Wasatch-Manti	Central Mtns, Northeast Manti	N	Split	10		9	1	45
	Central Mtns, Northwest Manti	N	Split	10	1	8	1	
	Central Mtns, Southeast Manti	N	Split	10		9	1	
	Central Mtns, Southwest Manti	N	LE	6		5	1	
	Wasatch Mtns, West	N	LE	9		8	1	
	Central Mtns, Nebo	**Y**	Split	9	1	7	1	44
	Central Mtns, Nebo-West Face	**Y**	Split	10	2	7	1	
	Wasatch Mtns, Avintaquin	**Y**	HO	15		13	2	
	Wasatch Mtns, Cascade	**Y**	HO	5		4	1	
	Wasatch Mtns, Timpanogos	**Y**	HO	5		4	1	
Bighorn sheep units	Book Cliffs, Rattlesnake	**Y**	HO	NA				n/a
	Kaiparowits	**Y**	HO	NA				
	San Rafael	**Y**	HO	NA				

**** Convention permits mentioned on this sheet were previously approved by the Wildlife Board**
They are mentioned here because they are included in the total permits offered for each unit

MEMORANDUM

Date: July 17, 2014

To: Wildlife Board and Regional Advisory Council Members

From: Leslie McFarlane, Mammals Program Coordinator

SUBJECT: BOBCAT PERMIT RECOMMENDATIONS

The Division recommends the following bobcat permit numbers and season lengths for the 2014-2015 season.

The bobcat management plan uses 4 variables to adjust permit numbers and season dates:

Variable	Target Range
%Young	42-56
% Adult Survival	65-72
% Females	41-45
Set-days/bobcat	177-220

For the past 3-4 years the variables have been outside of target ranges however, the last year has seen improvement with 3 of the 4 target values being met and the fourth value continues to move toward the target range.

Variable	2011	2012	2013	2014	TARGET
% Juvenile	31	35	35	46	42-56
% Survival	69	70	75	70	65-72
% Female	43	45	48	45	41-45
Set-day/bobcat	492	400	392	333	171-220

In accordance with the bobcat management plan when <2 variables are outside of the target range then recommendations move back to baseline. The Division recommends the baseline which is:

- 6 permits per person
- No cap on the number of tags that are sold

Season Dates

- November 19, 2014 until February 8, 2015

M E M O R A N D U M

Date: July 23, 2014

To: Regional Advisory Council Members and Wildlife Board

From: Leslie McFarlane, Mammals Coordinator

SUBJECT: 2013—2016 Furbearer Recommendations

RECOMMENDATIONS

No changes are needed in the furbearer program and the Division recommends the following regarding the management of furbearers in Utah:

Furbearer Seasons by Species:

Beaver and Mink:
Consistent with previous years.
Sept 27, 2014 to April 7, 2015

Badger, gray fox, kit fox, ringtail, spotted skunk, and weasel:
Consistent with previous years.
Sept 27, 2014 to February 2, 2015

Marten
Consistent with previous years.
Sept 27, 2014 to February 2, 2015

RAC Proposed Addition

- SR RAC recommended the addition of 7 sites:
  - Marysvale Canyon, Birchville, City Creek, Mammoth Creek, Upper Sevier, Minersville, and Coal Creek.
- Wildlife Board approved to move forward with adding the above 7 sites to the Transplant List
- Recommendation: We would like to add the above 7 sites to the statewide turkey transplant list.

  The sites have gone through Resource Development Coordinating Committee, and local government officials (Code 23-14-21 requirement)

  ✓ No Comments Received

DEER HERD UNIT MANAGEMENT PLAN
Deer Herd Unit # 17
(Wasatch Mountains)
May 2014

BOUNDARY DESCRIPTION

Carbon, Duchesne, Salt Lake, Summit, Utah and Wasatch counties—Boundary begins at the junction of I-15 and I-80 in Salt Lake City; east on I-80 to US-40; south on US-40 to SR-32; east on SR-32 to SR-35; southeast on SR-35 to SR-87; south on SR-87 to Duchesne and US-191; south on US-191 to US-6; northwest on US-6 to I-15; north on I-15 to I-80 in Salt Lake City. EXCLUDING ALL NATIVE AMERICAN TRUST LAND WITHIN THIS BOUNDARY.

LAND OWNERSHIP

RANGE AREA AND APPROXIMATE OWNERSHIP

	YEARLONG RANGE		SUMMER RANGE		WINTER RANGE		TOTAL ACRES
Ownership	**Area (acres)**	**%**	**Area (acres)**	**%**	**Area (acres)**	**%**	
Forest Service	17,268	31.6%	687,185	62.0%	104,466	21.7%	808,919
Bureau of Land Management	0	0%	12,105	1.1%	8,768	1.8%	20,873
Utah State Institutional Trust Lands	0	0%	34,450	3.1%	3,939	.8%	38,389
Native American Trust Lands	4,732	8.6%	20,930	1.9%	51,061	10.6%	76,723
Private	28,660	52.4%	297,425	26.8%	240,366	50.0%	566,451
Department of Defense	0	0%	0	0%	0	0%	0
USFWS Refuge	0	0%	0	0%	0	0%	0
National Parks	235	.4%	0	0%	0	0%	235
Utah State Parks	401	.7%	9,153	.8%	13,462	2.8%	23,016
Utah Division of Wildlife Resources	3,433	6.3%	47,363	4.3%	58,330	12.1%	109,126
TOTAL	54,729	100%	1,108,611	100%	480,392	100%	1,643,732

UNIT MANAGEMENT GOALS

- Manage for a population of healthy animals capable of providing a broad range of recreational opportunities, including hunting and viewing.
- Balance deer herd impacts on human needs, such as private property rights, agricultural crops and local economies.
- Maintain the population at a level that is within the long-term capability of the available habitat to support.

POPULATION MANAGEMENT OBJECTIVES

- Target Winter Herd Size - Achieve a long-term combined target population size of 40,800 wintering

deer (modeled number).

Unit 17

17a Wasatch West subpopulation:	22,600
17b Currant Creek subpopulation:	15,000
17c Avintaquin subpopulation:	3,200
Total:	40,800 (no change from previous plan)

- 5 year Winter Herd Size – Manage for a 5-year target population of 40,800 wintering deer during the five-year planning period unless range conditions become unsuitable, as evaluated by DWR. Range Trend data coupled with annual browse monitoring will be used to assess habitat condition. If habitat damage by deer is occurring due to inadequate habitat, measures will be taken to reduce the population to sustainable levels.

- Herd Composition – All Wasatch Mountains subunits are General Season subunits and will be managed to maintain a three year average postseason buck to doe ratio according to the statewide plan (17a is managed for 15-17 bucks per 100 does / 17b,c is managed for 18-20 bucks per 100 does).

- Harvest – General Buck Deer hunt regulations, using archery, Rifle, and Muzzleloader hunts apply.

POPULATION MANAGEMENT STRATEGIES

Monitoring

- Population Size - Utilizing harvest data, postseason and spring classifications, and mortality estimates, a computer model has been developed to estimate winter population size. The 2013 model estimates the 17a population at 18,700, 17b at 14,300 and 17c at 2,500 deer.

- Buck Age Structure - Monitor age class structure of the buck population through the use of checking stations, postseason classification, uniform harvest surveys and field bag checks.

- Harvest - The primary means of monitoring harvest will be through the statewide uniform harvest survey and the use of checking stations. Achieve the target population size by use of antlerless harvest using a variety of harvest methods and seasons. Recognize that buck harvest will be above or below what is expected due to climatic and productivity variables. Buck harvest strategies will be developed through the RAC and Wildlife Board process to achieve management objectives for buck: doe ratios

Limiting Factors (May prevent achieving management objectives)

- Crop Depredation - Take all steps necessary to minimize depredation as prescribed by state law and DWR policy.

- Habitat - Public land winter range availability, landowner acceptance and winter range forage conditions will determine herd size. Excessive habitat utilization will be addressed with hunting.

- Predation - Follow DWR predator management policy:
  - If the population estimate is less than 90% of objective and fawn to doe ratio drops below 70 for 2 of the last 3 years or if the fawn survival rate drops below 50% for one year, then a Predator Management Plan targeting coyotes may be implemented on that subunit.
  - If the population estimate is less than 90% of objective and the doe survival rate drops

below 85% for 2 of the last 3 years or below 80% for one year, then a Predator Management Plan targeting cougar could be implemented on that subunit.

- Highway Mortality - Cooperate with the Utah Dept. Of Transportation in construction of highway fences, passage structures and warning signs etc.

- Illegal Harvest - If illegal harvest is identified as a significant source of mortality, an attempt to develop specific preventive measures within the context of an action plan will be developed in cooperation with the Law Enforcement Section.

HABITAT MANAGEMENT OBJECTIVES

- Maintain mule deer habitat throughout the unit by protecting and enhancing existing crucial habitats and mitigating for losses due to natural and human impacts.

- Seek cooperative projects to improve the quality and quantity of deer habitat.

- Provide improved habitat security and escapement opportunities for deer.

HABITAT MANAGEMENT STRATEGIES

Monitoring

- Determine trends in habitat condition through permanent range trend studies, spring range assessments, pellet transects, and field inspections. Land management agencies will similarly conduct range monitoring to determine vegetative trends, utilization and possible forage conflicts.

- Range trend studies will be conducted by DWR to evaluate deer habitat health, trend, and carrying capacity using the deer winter range Desirable Component Index (DCI) and other vegetation data. The DCI was created as an indicator of the general health of deer winter ranges. The index incorporates shrub cover, density and age composition as well as other key vegetation variables. Changes in DCI suggest changes in winter range capacity. The relationship between DCI and the changes in deer carrying capacity is difficult to quantify and is not known.

Habitat Protection and Maintenance

- Work with public land management agencies to develop specific vegetative objectives to maintain the quality of important deer use areas.

- Continue to coordinate with land management agencies in planning and evaluating resource uses and developments that could impact habitat quality.

- Work toward long-term habitat protection and preservation through the use of agreements with land management agencies and local governments, and through the use of conservation easements, etc. on private lands.

Habitat Improvement

- Cooperate with federal land management agencies and private landowners in carrying out habitat improvement projects. Protect deer winter ranges from wildfire by reseeding burned areas, creating fuel breaks and vegetated green strips and reseed areas dominated by Cheatgrass with desirable perennial vegetation.

- Reduce expansion of Pinyon-Juniper woodlands into sagebrush habitats and improve habitats dominated by Pinyon-Juniper woodlands by completing habitat restoration projects like lop & scatter, bullhog and chaining.

- Cooperate with federal land management agencies and local governments in developing and administering access management plans for the purposes of habitat protection and escape or security areas.

- Future habitat work should be concentrated on the following areas.
  - 17a
    - North side of hwy 6 in the Sheep Creek drainage.
    - Wallsburg WMA.
    - North side of Diamond Fork Canyon.
    - Quaking Aspen forests unit wide.
    - Anywhere along the front that would avert deer from entering cities.
  - 17b
  - 17c

Projects Unit 17a 2006-2014	# Projects	Acres
Pinyon-Juniper Projects	1	1,061
Sagebrush Improvement Projects	1	40
Mountain Brush Improvement Projects	3	2,159
OHV Trail Closures	4	104
Weed Control Projects	5	4,700
Total	14	8,064

PERMANENT RANGE TREND SUMMARIES

Unit 17bc, Wasatch Mountains, Currant Creek, and Avintaquin Subunits 2010

The following table summarizes the condition of deer winter range on Unit 17bc, as indicated by DWR permanent Big Game Range Trend studies:

Year	Mountain Brush Sites (n=1)		Mountain Big Sagebrush Sites (n=7)		Wyoming Big Sagebrush Sites (n=8)	
	score	Ranking	score	Ranking	score	ranking
1995	83	Good	59	Fair	49	Good
2000			67	Fair-Good	50	Good
2005	72	Fair-Good	64	Fair-Good	46	Fair-Good
2010	90	Good-Excellent	73	Good	47	Good

Winter range is the critical habitat factor on these subunits. Approximately half of the 200,000 plus acres of winter range is owned and managed by the State while the other half is in private ownership. Most of the privately owned winter range is currently under threat of cabin site & ranchette development (Davis et. al. 1995).

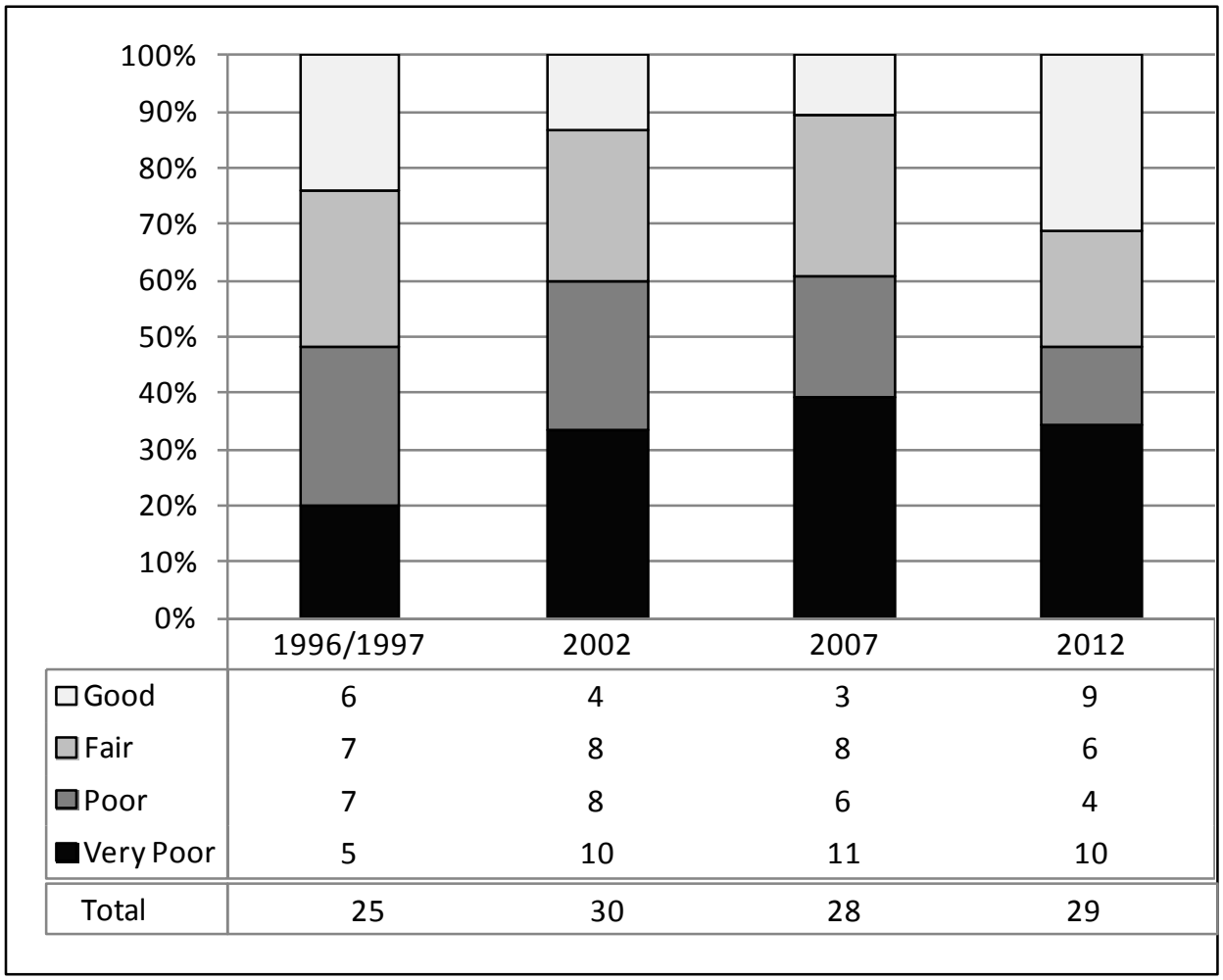
All 16 range trend study sites on these subunits are located in mule deer winter range. Vegetation varies from Pinyon-Juniper at lower elevations to sagebrush-grass and mountain brush communities at the higher elevations.

A total of 16 study sites were read on these subunits in 2010. Range trend varies depending upon the sites ecological potential. The Mid to High potential sites are mostly in Good-Excellent condition. The Low potential sites range from Fair to Excellent. The low potential sites are the most critical deer winter range.

Eight of the study sites are located at sites with a low ecological potential. Of those 8 sites, 5 are in Fair condition, 1 is in Good condition, 1 is in Good-Excellent condition, and 1 is in Excellent condition. Several of these sites have suffered from the drought caused sagebrush die-off in 2003. They are recovering slowly.

Seven study sites are located at sites with a mid to high range ecological potential. Only one of these sites is in Fair condition, three are in Good condition, and 3 are in Good-Excellent condition. These areas did not experience browse die-offs during the drought.

Unit 17a, Wasatch Mountains, West Subunit 2012



	1996/1997	2002	2007	2012
Good	6	4	3	9
Fair	7	8	8	6
Poor	7	8	6	4
Very Poor	5	10	11	10
Total	25	30	28	29

Deer winter range condition trend summary for subunit 17a, Wasatch Mountains, West, as indicated by the deer winter range Desirable Components Index (DCI).

There were 29 permanent range trend study sites sampled on subunit 17a in 2012, all of which are considered to be in deer winter range. For summary purposes the subunit was divided into three distinct areas; Heber Valley, Bonneville Shoreline, and Spanish Fork Canyon.

Heber Valley: Much of the winter range in the Heber Valley area (50%) is privately owned and development has been a continuing concern. Since the early 2000's development has accelerated and some of the most critical range is being converted to housing. Division of Wildlife Resources, State Parks, and federal lands will likely be the key to the survival of deer into the future on this portion of the unit. Important vegetation types monitored include antelope bitterbrush, mixed mountain browse, mixed oakbrush/sagebrush, and mountain big sagebrush.

There were 11 range trend study sites sampled around the Heber Valley area in 2012. Sites in the area showed a general decrease in sagebrush density, cover, and health in 2007. It is thought that an infestation of the sagebrush defoliator moth (*Aroga websteri*) likely occurred throughout the Heber Valley from 2002 to 2007 affecting many of the studies adversely. The moth was sampled on many of the studies in that area in 2007. The health of these sagebrush populations appears to be improving, but density and

cover of sagebrush remained at reduced levels. The abundance of the weedy annual grass species (namely cheatgrass) and bulbous bluegrass is a particular concern on these sites and may inhibit the recovery of sagebrush in the areas.

Bonneville Shoreline: Winter habitat is limited by quality and quantity in this area of the subunit. A large portion of deer winter range is privately owned making it susceptible to development. Housing developments in recent years have consumed much of this important winter range and will likely continue to do so in the future. Most winter range has been reduced to a narrow bench above the communities of Alpine, Pleasant Grove, Orem, Springville and Mapleton. Important vegetation types monitored include antelope bitterbrush, true mountain mahogany, mixed mountain browse, mixed oakbrush/sagebrush, and Stansbury cliffrose.

There were nine studies sampled along the Bonneville Shoreline area in 2012. The lack of browse species is a primary concern in this area, and is likely an artifact of historic wildfires on many of these studies. The abundance of weedy annual grass species (namely cheatgrass) and bulbous bluegrass is a particular concern on these sites.

Spanish Fork Canyon: The majority of deer winter range is managed by the US Forest Service in this area. These sites are typically higher elevation winter range and may not be used as heavily in more severe winters. Important vegetation types monitored include mixed mountain browse, mixed oakbrush/sagebrush, and sagebrush.

There were nine studies sampled in the Spanish Fork Canyon area in 2012. Browse species do not appear to be limited within this area. The primary concern in this area is the abundance of the weedy grass species bulbous bluegrass. A desirable trend is the increase in perennial grass species on many of the studies in this area.

General Assessment: The winter range within the Heber Valley and Spanish Fork Canyon areas of the subunit appear suitable to support planned deer population objectives. Suitable winter range on the Bonneville Shoreline is more limited due primarily to development and poor quality habitat. Deer will likely be forced to winter in an urban setting during more sever winters in this area. The abundance and increase of bulbous bluegrass is a concern in all of the areas of the subunit because this perennial species can form dense mats of cover that may compete with other more desirable herbaceous species and with seedlings and young shrubs, which potentially limits establishment of new plants into the population. The abundance of cheatgrass in the Heber Valley and Bonneville Shoreline areas of the unit is a concern because this annual species can increase fuel loads and increases the chance of a catastrophic fire event.

Unit 17, Wasatch Mountains/Salt Lake County, East Bench Subunit

Range trend studies have not been done on this subunit since 1983. Lack of access to trend study plots that have not been destroyed by development has resulted in these studies being abandoned. Very little winter range is available on this subunit and deer are forced to winter in an urban setting during more severe winters.

Precipitation

Vegetation trends are dependent upon annual and seasonal precipitation patterns. Precipitation and Palmer Drought Severity Index (PDSI) data for the unit were compiled from the National Oceanic and Atmospheric Administration (NOAA) Physical Sciences Division (PSD) as part of the Northern Mountains division (Division 5). The Northern Mountains division had a historic annual mean precipitation of 19.13 inches from 1895 to 2012. The mean annual PDSI of the Northern Mountains division displays a cycle of several wet years followed by several drought years over the course of study years (Figure 1 and Figure 2) (Time Series Data 2013).

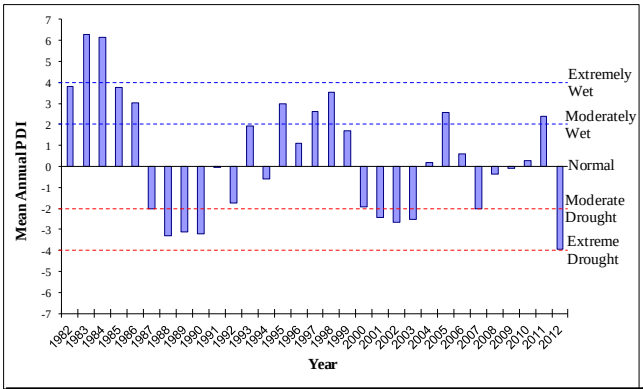


Figure 1. The 31 year mean annual Palmer Drought Severity Index (PDSI) for the Northern Mountains division (Division 5). The PDSI is based on climate data gathered from 1895 to 2012. The PDSI uses a scale where 0 indicates normal, positive deviations indicate wet and negative deviations indicate drought. Classification of the scale is ≥4.0 = Extremely Wet, 3.0 to 3.9 = Very Wet, 2.0 to2.9 = Moderately Wet, 1.0 to 1.9 = Slightly Wet, 0.5 to 0.9 = Incipient Wet Spell, 0.4 to -0.4 = Normal, -0.5 to -.9 = Incipient Dry Spell, -1.0 to -1.9 = Mild Drought, -2.0 to -2.9 = Moderate Drought, -3.0 to -3.9 = Severe Drought and ≤-4.0 = Extreme Drought (Time Series Data 2013).

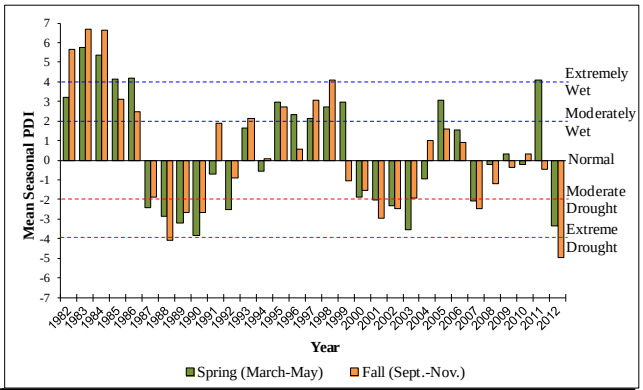


Figure 2. The 31 year mean spring (March-May) and fall (Sept-Nov.) Palmer Drought Severity Index (PDSI) for the Northern Mountains division (Division 5). The PDSI is based on climate data gathered from 1895 to 2012. The PDSI uses a scale where 0 indicates normal, positive deviations indicate wet and negative deviations indicate drought. Classification of the scale is ≥4.0 = Extremely Wet, 3.0 to 3.9 = Very Wet, 2.0 to2.9 = Moderately Wet, 1.0 to 1.9 = Slightly Wet, 0.5 to 0.9 = Incipient Wet Spell, 0.4 to -0.4 = Normal, -0.5 to -.9 = Incipient Dry Spell, -1.0 to -1.9 = Mild Drought, -2.0 to -2.9 = Moderate Drought, -3.0 to -3.9 = Severe Drought and ≤-4.0 = Extreme Drought (Time Series Data 2013).

Duration of Plan

This unit management plan was approved by the Wildlife Board on _____ and will be in effect for five years from that date, or until amended.

APPENDIX

Unit 17-Wasatch Mountains, Wasatch West Subunit

Salt Lake, Summit, Utah and Wasatch counties—Boundary begins at I-80 and I-15 in Salt Lake City; east on I-80 to US-40; south on US-40 to the Strawberry Bay Marina road; south on this road to USFS Road 042 (Indian Creek road); south and west on this road to USFS Road 051; south on this road to US-6; west on US-6 to US-89; northwest on US-6 to I-15; north on I-15 to I-80 in Salt Lake City. Excludes all CWMUs.

Unit 17-Wasatch Mountains, Avintaquin/Currant Creek Subunit

Carbon, Duchesne, Utah and Wasatch counties—Boundary begins SR-87 and US-40 in Duchesne; north on SR-87 to SR-35; west on SR-35 to SR-32 at Francis; west on SR-32 to US-40; southeast on US-40 to Strawberry Bay Marina Road; south on this road to USFS Road 042 (Indian Creek); south and west on this road to USFS Road 051; south on this road to US-6; southeast on US-6 to US-191; north on US-191 to US-40; east on US-40 to SR-87 in Duchesne. EXCLUDES ALL NATIVE AMERICAN TRUST LANDS WITHIN THIS BOUNDARY. Excludes all CWMUs.

Unit 17-Wasatch Mountains, Salt Lake Subunit

Davis, Salt Lake, and Summit counties—Boundary begins at I-15 and the Weber/Davis county line; east on this county line to the Davis/Morgan county line; south on this county line to the Morgan/Salt Lake county line; south on this county line to the Salt Lake/Summit county line; south on this county line to I-80; east on I-80 to US-40; south on US-40 to Summit/Wasatch county line; west on this county line to the Wasatch/Salt Lake county line; west on this county line to the Salt Lake/Utah county line; west on this county line Upper Corner Canyon Road; north on this road to Highland Drive; north on this road to Pioneer Road; west on this road to 700 East; north on this road to 12300 South; west on this road to I-15; north on I-15 to the Salt Lake/Davis county line; west on this county line to the 4200ft elevation line; north along this elevation to Weber/Davis county line; east on this county line to I-15. EXCLUDES ALL WATERFOWL MANAGEMENT AREAS.

DEER HERD UNIT MANAGEMENT PLAN
Deer Herd Unit # 18
(Oquirrh-Stansbury)
May 2014

BOUNDARY DESCRIPTION

Salt Lake, Tooele and Utah counties--Boundary begins at I-15 and I-80 in Salt Lake City; south on I-15 to SR-73; west on SR-73 to SR-36; south on SR-36 to Pony Express Road; west on this road to the Skull Valley road; north on this road to I-80 at Rowley Junction; east on I-80 to I-15. The Carr Fork Wildlife Management Area is closed to motorized travel year-round. EXCLUDES ALL NATIVE AMERICAN TRUST LANDS WITHIN THIS BOUNDARY.

LAND OWNERSHIP

RANGE AREA AND APPROXIMATE OWNERSHIP

	SUMMER RANGE		WINTER RANGE		TOTAL RANGE
Ownership	Area (acres)	%	Area (acres)	%	Area (acres)
Forest Service	48386	28.8%	20269	7.2%	68,655
Bureau of Land Management	45,888	27.3%	88,076	31.3%	133,694
Utah State Institutional Trust Lands	5,727	3.4%	20319	7.2%	26,046
Native American Trust Lands	28	0%	28,777	10.2%	28,805
Private	64,177	38.2%	108,703	38.6%	172,880
Department of Defense	3,969	2.4%	15,263	5.4%	19,232
Utah State Parks	0	0%	0	0%	0
Utah Division of Wildlife Resources	0	0%	0	0%	0
TOTAL	168,175	100%	281,407	100%	449,582

UNIT MANAGEMENT GOALS

- Manage for a population of healthy animals capable of providing a broad range of recreational opportunities, including hunting and viewing.
- Balance deer herd impacts on human needs, such as private property rights, agricultural crops and local economies.
- Maintain the population at a level that is within the long term capability of the available habitat to support.

POPULATION MANAGEMENT OBJECTIVES

- Target Winter Herd Size - Achieve a target population size of 11,600 wintering deer.

Unit 18

2006 – 2013 Objective: 10,600
2014 – 2019 Objective: 11,600
Increase: 1,000

- 5 year Winter Herd Size – Manage for a 5-year target population of 11,600 wintering deer during the five-year planning period unless range conditions become unsuitable, as evaluated by DWR. Range Trend data coupled with annual browse monitoring will be used to assess habitat condition. If habitat damage by deer is occurring due to inadequate habitat, measures will be taken to reduce the population to sustainable levels.

- Herd Composition Maintain a three year average postseason buck to doe ratio according to the statewide plan (unit 18 is managed for 15-17 bucks per 100 does).

- Harvest – General Buck Deer hunt regulations, using archery, Rifle, and Muzzleloader hunts apply on Oquirrh/Stansbury, Unit 18.

POPULATION MANAGEMENT STRATEGIES

Monitoring

- Population Size - Utilizing harvest data, postseason and spring sex and age classifications and mortality estimates, a computer model has been developed to estimate winter population size. The 2013 model estimates the population at 10,800 deer.

- Harvest - The primary means of monitoring harvest will be through the statewide uniform harvest survey. Achieve the target population size by use of antlerless harvest using a variety of harvest methods and seasons.

Limiting Factors (May prevent achieving management objectives)

- Crop Depredation - Take all steps necessary to minimize depredation as prescribed by state law and DWR policy.

- Hunter Access - Because of the large amount of private land on this unit, its location and the number of owners, public access for deer hunting will continue to be a problem. Formation of the Heaston East CWMU may help in this regard on the North Oquirrh Mountains.

- Habitat - At present, the availability of high quality summer range may be more limiting to this deer population than winter range. Condition of winter ranges is a long-term problem. Fire and encroachment by pinyon and juniper trees results in the loss of forage production, diversity and quality.

- Predation - Refer to DWR predator management policy.
    - If the population estimate is less than 90% of objective and postseason fawn to doe ratio drops below 55 for 2 of the last 3 years or if the fawn survival rate drops below 40% for one year, then a Predator Management Plan targeting coyotes will be implemented on that subunit.
    - If the population estimate is less than 90% of objective and the doe survival rate drops below 85% for 2 of the last 3 years or below 80% for one year, then a Predator Management Plan targeting cougar could be implemented on that subunit.

- Highway Mortality - Cooperate with the Utah Dept. Of Transportation in construction of highway fences, passage structures and warning signs etc.

- Illegal Harvest - If illegal harvest is identified as a significant source of mortality, an attempt to develop specific preventive measures within the context of an action plan will be developed in cooperation with the Law Enforcement Section.

HABITAT MANAGEMENT OBJECTIVES

- Maintain and protect existing critical deer ranges sufficient to support the population objectives. Seek cooperative projects to improve the quality and quantity of deer habitat. Promote enhancement of habitat security and escapement areas for deer.

HABITAT MANAGEMENT STRATEGIES

Monitoring

- Determine trends in habitat condition through permanent range trend studies, spring range assessments, pellet transects, and field inspections. Land management agencies will similarly conduct range monitoring to determine vegetative trends, utilization and possible forage conflicts.

- Range trend studies will be conducted by DWR to evaluate deer habitat health, trend, and carrying capacity using the deer winter range Desirable Component Index (DCI) and other vegetation data. The DCI was created as an indicator of the general health of deer winter ranges. The index incorporates shrub cover, density and age composition as well as other key vegetation variables. Changes in DCI suggest changes in winter range capacity. The relationship between DCI and the changes in deer carrying capacity is difficult to quantify and is not known.

Habitat Protection and Maintenance

- Work with public land management agencies to develop specific vegetative objectives to maintain the quality of important deer use areas.

- Continue to coordinate with land management agencies in planning and evaluating resource uses and developments that could impact habitat quality.

- Work toward long-term habitat protection and preservation through the use of agreements with land management agencies and local governments, and through the use of conservation easements, etc. on private lands.

Habitat Improvement

- Cooperate with federal land management agencies and private landowners in carrying out habitat improvement projects. Protect deer winter ranges from wildfire by reseeding burned areas, creating fuel breaks and vegetated green strips and reseed areas dominated by Cheatgrass with desirable perennial vegetation.

- Reduce expansion of Pinyon-Juniper woodlands into sagebrush habitats and improve habitats dominated by Pinyon-Juniper woodlands by completing habitat restoration projects like lop & scatter, bullhog and chaining.

- Cooperate with federal land management agencies and local governments in developing and administering access management plans for the purposes of habitat protection and escape or security areas.

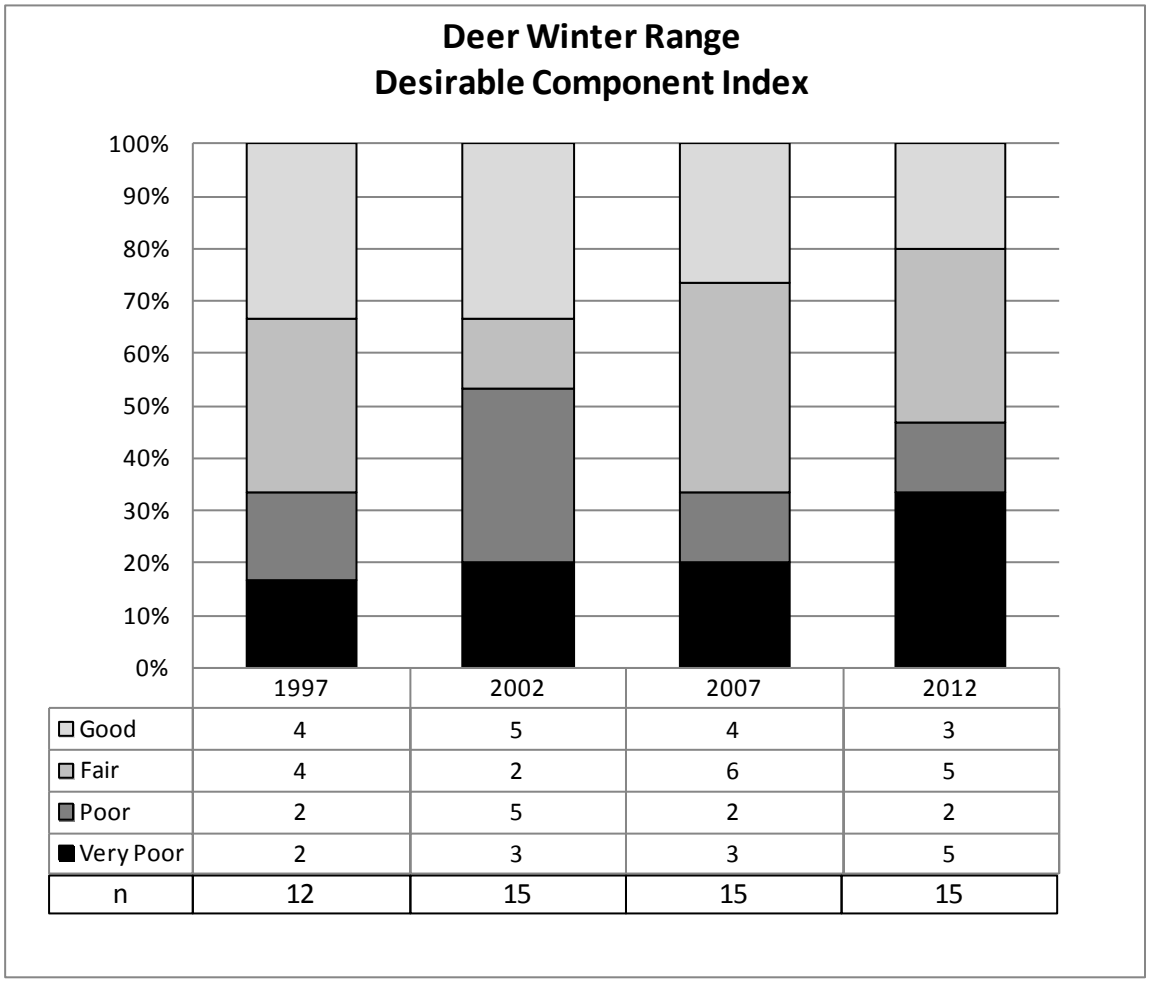
- Future Pinyon Juniper work should be concentrated on the following areas.
  - North East Stansbury Mountains, South of Grantsville.
  - South West portion of the Oquirrh, including Manning and Pole Canyon also SITLA ground north of Cedar Fort.

Projects 2006-2014	# Projects	Acres
Pinyon-Juniper Projects	24	17,050
Sagebrush Improvement Projects	6	1,773
Fire Rehabilitation Projects	10	29,337
Total	40	48,160

Total Habitat Projects and Acres by Project Type

*see appendix A for specific projects

PERMANENT RANGE TREND SUMMARIES



	1997	2002	2007	2012
Good	4	5	4	3
Fair	4	2	6	5
Poor	2	5	2	2
Very Poor	2	3	3	5
n	12	15	15	15

Deer winter range condition on Unit 18, Oquirrh-Stansbury, as indicated by the Desirable Components Index (DCI).

Unit 18, Oquirrh-Stansbury 2012
DWR Winter Range Trend Assessment

There were 15 range trend range sites sampled within unit 18 in 2012. All of the study sites are on deer winter range.

There were 6 range trend study sites sampled on the Oquirrh mountain range in 2012. Trends of sagebrush have remained relatively stable across this range. There has been a slight decrease in the density of mountain big sagebrush, but cover has remained similar on study sites. The perennial

herbaceous component has also remained relatively stable throughout the sample years. Of particular concern on this mountain range is the abundance of invasive and weedy grass species, namely cheatgrass and bulbous bluegrass. Summer range makes up about 48% of the area. Winter range comprises 48% of the area. During severe winters the available winter habitat is reduced by half. Another major concern is that 63% and 45% of the summer and winter range respectfully is under private ownership.

There were 9 range trend studies sampled on the Stansbury mountain range in 2012. Wildfires have had a major impact on the deer winter ranges on this mountain range. The Big Pole fire in 2009 and Patch Springs fire in 2013 burned much of the deer winter range on the west side of the mountain. The general response of vegetation to these fires has been a reduction of shrub species and increase in both perennial and annual herbaceous species. Of particular concern on this mountain range is the abundance of invasive and weedy annual grass species, namely cheatgrass. The weedy perennial grass species bulbous bluegrass has also been increasing on sites on the range, especially the lower potential Wyoming big sagebrush communities. Summer range is limited to above 6800 ft contour where it makes up 45% of the range that is classified as suitable for big game. The remainder of the range is considered winter range (55%). The portion of private lands on this big game habitat is 6% and 14% of the summer and winter range respectively.

Apart from the areas impacted by wildfire, the winter range within the unit appears suitable to support planned deer population objectives. The abundance of cheatgrass on the unit is a concern because this annual species can increase fuel loads and increases the chance of a catastrophic fire event. The abundance and increase of bulbous bluegrass is a concern because this perennial species can form dense mats of cover that may compete with other more desirable herbaceous species and with seedlings and young shrubs, which potentially limits establishment of new plants into the population. Encroachment of pinyon and juniper trees into shrub winter ranges is also a concern in areas across the unit. Encroachment of pinyon and juniper can reduce desirable shrub and herbaceous cover.

Precipitation

Vegetation trends are dependent upon annual and seasonal precipitation patterns. Precipitation and Palmer Drought Severity Index (PDSI) data for the unit were compiled from the National Oceanic and Atmospheric Administration (NOAA) Physical Sciences Division (PSD) as part of the North Central division (Division 3). The South Central division had a historic annual mean precipitation of 16.51 inches from 1895 to 2012. The mean annual PDSI of the North Central division displays a cycle of several wet years followed by several drought years over the course of study years (Figure 1 and Figure 2) (Time Series Data 2013).

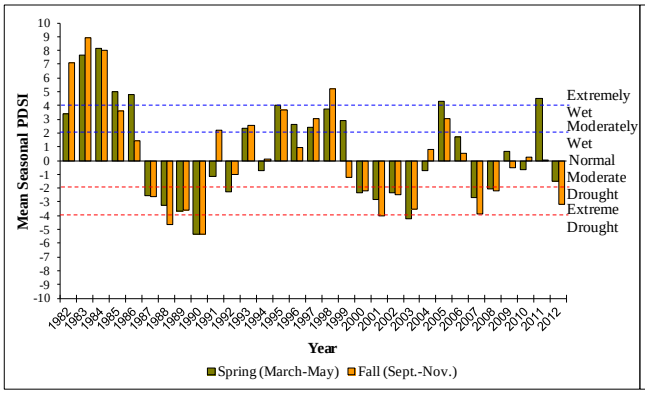


Figure 1. The 31 year mean annual Palmer Drought Severity Index (PDSI) for the North Central division (Division 3). The PDSI is based on climate data gathered from 1895 to 2012. The PDSI uses a scale where 0 indicates normal, positive deviations indicate wet and negative deviations indicate drought. Classification of the scale is ≥4.0 = Extremely Wet, 3.0 to 3.9 = Very Wet, 2.0 to2.9 = Moderately Wet, 1.0 to 1.9 = Slightly Wet, 0.5 to 0.9 = Incipient Wet Spell, 0.4 to -0.4 = Normal, -0.5 to -.9 = Incipient Dry Spell, -1.0 to -1.9 = Mild Drought, -2.0 to -2.9 = Moderate Drought, -3.0 to -3.9 = Severe Drought and ≤-4.0 = Extreme Drought (Time Series Data 2013).

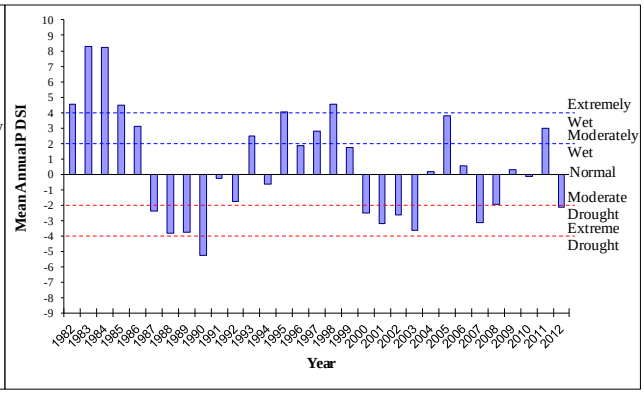


Figure 2. The 31 year mean spring (March-May) and fall (Sept-Nov.) Palmer Drought Severity Index (PDSI) for the North Central division (Division 3). The PDSI is based on climate data gathered from 1895 to 2012. The PDSI uses a scale where 0 indicates normal, positive deviations indicate wet and negative deviations indicate drought. Classification of the scale is ≥4.0 = Extremely Wet, 3.0 to 3.9 = Very Wet, 2.0 to2.9 = Moderately Wet, 1.0 to 1.9 = Slightly Wet, 0.5 to 0.9 = Incipient Wet Spell, 0.4 to -0.4 = Normal, -0.5 to -.9 = Incipient Dry Spell, -1.0 to -1.9 = Mild Drought, -2.0 to -2.9 = Moderate Drought, -3.0 to -3.9 = Severe Drought and ≤-4.0 = Extreme Drought (Time Series Data 2013).

Duration of Plan

This unit management plan was approved by the Wildlife Board on _____ and will be in effect for five years from that date, or until amended.

DEER HERD UNIT MANAGEMENT PLAN
Deer Herd Unit # 19
(West Desert)
May 2014

BOUNDARY DESCRIPTION

Tooele, Utah, Juab and Millard counties - Boundary begins at the Utah-Nevada state line and I-80 in Wendover; east on I-80 to the Dugway road at exit 77, Rowley Junction; south on this road to 14-mile road (Dugway Valley road); south on 14-mile road to the Pony Express Road: east on this road to SR-36; north on SR-36 to SR-73; east on SR-73 to I-15 in Lehi; south on I-15 to Exit 207 and Mills Road; west on this road to the Sevier River; north along this river to SR132; west on 132 to US 6; south on US-6 to its junction with US-50 near Delta; west on US-50 & 6 to the Utah-Nevada state line; north along this state line to I-80 at Wendover.

LAND OWNERSHIP

RANGE AREA AND APPROXIMATE OWNERSHIP

	YEARLONG RANGE		SUMMER RANGE		WINTER RANGE		TOTAL ACRES
Ownership	Area (acres)	%	Area (acres)	%	Area (acres)	%	
Forest Service		0%	48,468	22.2%	21,282	3.9%	69,750
Bureau of Land Management	541,579	87.8 %	115,988	54.8%	412,392	75.9 %	1,069,959
Utah State Institutional Trust Lands	46,914	7.6%	8,486	4%	32,716	6%	88,116
Native American Trust Lands	0	0%	10,711	5.1%	9,877	1.8%	20,588
Private	5,776	.9%	27,961	13.2%	64,159	11.8 %	97,896
Department of Defense	22,299	3.6%	0	0%	2,688	.5%	24,987
USFWS Refuge	0	0%	0	0%	0	0%	0
Bankhead Jones	0	0%	0	0%	0	0%	0
Utah State Parks	0	0%	0	0%	0	0%	0
Utah Division of Wildlife Resources	0	0%	0	0%	0	0%	0
TOTAL	616,568	100%	211,614	100%	543114	100%	1,371,296

UNIT MANAGEMENT GOALS

- Manage for a population of healthy animals capable of providing a broad range of recreational opportunities, including hunting and viewing.
- Balance deer herd impacts on human needs, such as private property rights, agricultural crops and local economies.
- Maintain the population at a level that is within the long-term capability of the available habitat to support.

POPULATION MANAGEMENT OBJECTIVES

- Target Winter Herd Size - Achieve a long-term combined target population size of 11,200 wintering deer (modeled number)

  Unit 19

  Target Objective 2014 – 2019: 11,200 (no change from last plan)

- 5 year Winter Herd Size – Manage for a 5-year target population of 11,200 wintering deer during the five-year planning period unless range conditions become unsuitable, as evaluated by DWR. Range Trend data coupled with annual browse monitoring will be used to assess habitat condition. If habitat damage by deer is occurring due to inadequate habitat, measures will be taken to reduce the population to sustainable levels.

- Herd Composition (19a,c) – Maintain a three year average postseason buck to doe ratio according to the statewide plan (19a,c is managed for 15-17 bucks per 100 does).

- Vernon (19b) – (limited entry portion of unit 19); maintain a three year average postseason buck to doe ratio ranging from 25-35:100.

- Harvest – General Buck Deer hunt regulations, using archery, Rifle, and Muzzleloader hunts apply on the West Desert Mountain Ranges (19a,c). Limited Entry hunt regulation for Archery, Rifle and Muzzleloader apply to Vernon subunit 19b.

POPULATION MANAGEMENT STRATEGIES

Monitoring

- Population Size - Utilizing harvest data, postseason and spring classifications and mortality estimates, a computer model has been developed to estimate winter population size. Because of low deer densities resulting in inadequate classification on (19a,c) harvest data will play a more significant role in characterization of that part of this population. If harvest data proves inadequate the region could request helicopter time for (19a,c). Based on harvest data the population for (19a,c) is approximately 9,000. The 2013 model estimates the 19b population at 2,000 deer.

- Harvest - The primary means of monitoring harvest will be through the statewide uniform harvest survey. Achieve the target population size by use of antlerless harvest using a variety of harvest methods and seasons.

Limiting Factors (May prevent achieving management objectives)

- Crop Depredation - Take all steps necessary to minimize depredation as prescribed by state law and DWR policy.

- Habitat - Deer numbers on unit 19 are primarily limited by the amount and quality of summer range and water distribution. Preservation and even enhancement of the very limited areas of higher altitude good quality summer range is very important. At present, only the Deep Creek range offers any significant expanse of this type of habitat. Condition of winter ranges is a long-term problem. Fire and encroachment by pinyon and juniper trees results in the loss of forage production, diversity and quality. Although it may not be the primary limiting factor pinyon and juniper encroachment on the south slope of the Sheep Rock Range needs to be addressed moving forward to ensure abundance of high quality winter forage.

- Predation - Refer to DWR predator management policy.
    - If the population estimate is less than 90% of objective and postseason fawn to doe ratio drops below 55 for 2 of the last 3 years or if the fawn survival rate drops below 40% for one year, then a Predator Management Plan targeting coyotes will be implemented on that subunit.
    - If the population estimate is less than 90% of objective and the doe survival rate drops below 85% for 2 of the last 3 years or below 80% for one year, then a Predator Management Plan targeting cougar could be implemented on that subunit.

- Highway Mortality - Cooperate with the Utah Dept. Of Transportation in construction of highway fences, passage structures and warning signs etc.

- Illegal Harvest - If illegal harvest is identified as a significant source of mortality, an attempt to develop specific preventive measures within the context of an action plan will be developed in cooperation with the Law Enforcement Section.

HABITAT MANAGEMENT OBJECTIVES

- Maintain and protect existing critical deer ranges sufficient to support the population objectives. Seek cooperative projects to improve the quality and quantity of deer habitat. Promote enhancement of habitat security and escapement areas for deer.

HABITAT MANAGEMENT STRATEGIES

Monitoring

- Determine trends in habitat condition through permanent range trend studies, spring range assessments, pellet transects, and field inspections. Land management agencies will similarly conduct range monitoring to determine vegetative trends, utilization and possible forage conflicts.

- Range trend studies will be conducted by DWR to evaluate deer habitat health, trend, and carrying capacity using the deer winter range Desirable Component Index (DCI) and other vegetation data. The DCI was created as an indicator of the general health of deer winter ranges. The index incorporates shrub cover, density and age composition as well as other key vegetation variables. Changes in DCI suggest changes in winter range capacity. The relationship between DCI and the changes in deer carrying capacity is difficult to quantify and is not known.

Habitat Protection and Maintenance

- Work with public land management agencies to develop specific vegetative objectives to maintain the quality of important deer use areas.

- Continue to coordinate with land management agencies in planning and evaluating resource uses and developments that could impact habitat quality.

- Work toward long-term habitat protection and preservation through the use of agreements with land management agencies and local governments, and through the use of conservation easements, etc. on private lands.

Habitat Improvement

- Cooperate with federal land management agencies and private landowners in carrying out habitat improvement projects. Protect deer winter ranges from wildfire by reseeding burned areas, creating fuel breaks and vegetated green strips and reseed areas dominated by Cheatgrass with desirable perennial vegetation.

- Reduce expansion of Pinyon-Juniper woodlands into sagebrush habitats and improve habitats dominated by Pinyon-Juniper woodlands by completing habitat restoration projects like lop & scatter, bullhog and chaining.

- Cooperate with federal land management agencies and local governments in developing and administering access management plans for the purposes of habitat protection and escape or security areas.

- Future pinyon juniper work should be concentrated on the following areas.
  - The south slope of the Sheep Rock Mountains.
  - The north and west slope of The Deep Creek Mountains.

- Future summer range work should be concentrated on the Deep Creek Mountains.

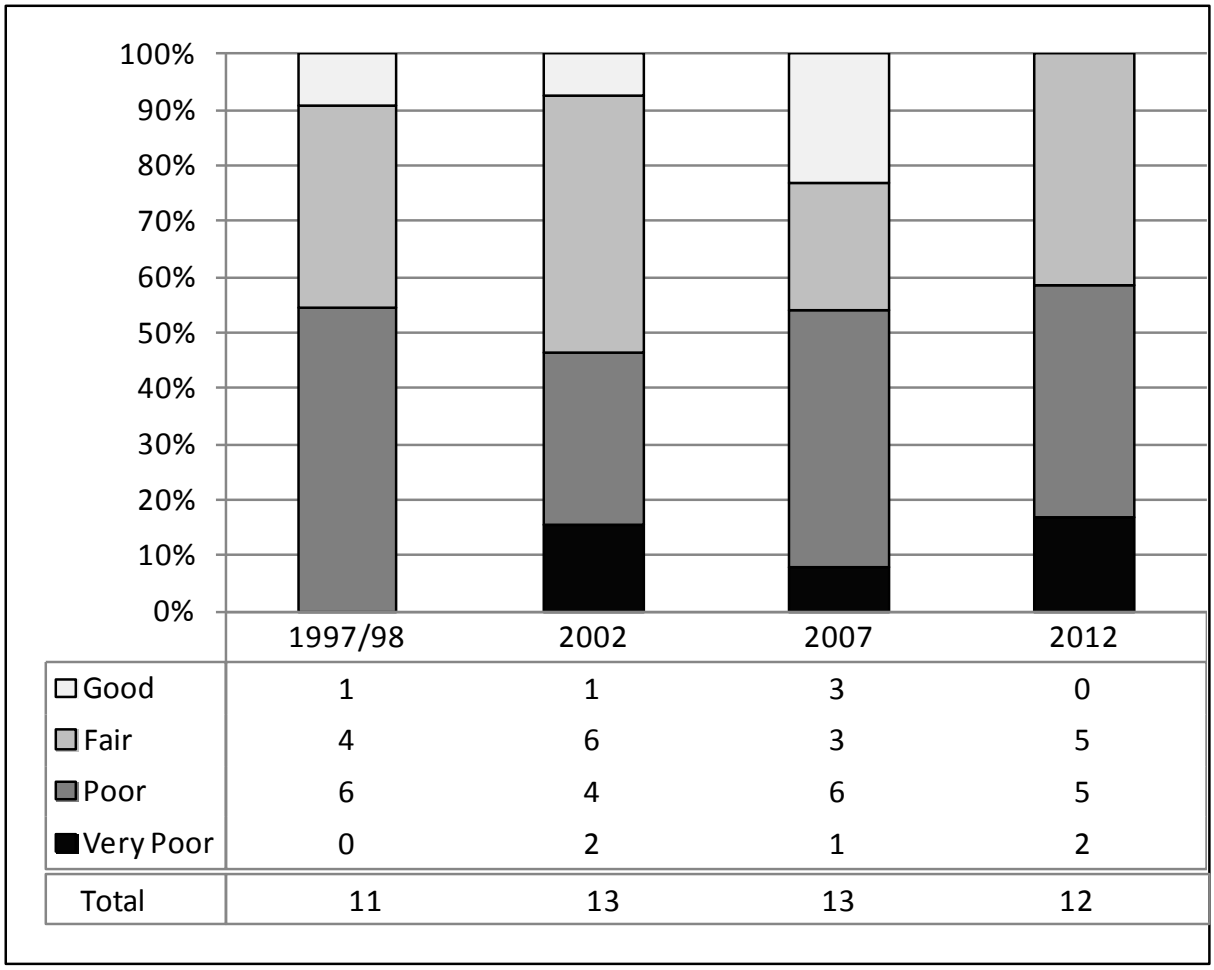
Projects Unit 19 2006-2014	# Projects	Acres
Pinyon-Juniper Projects	19	18,194
Sagebrush Improvement Projects	11	5,957
Fire Rehabilitation Projects	11	11,807
Weed Eradication Projects	7	1,847
Total	48	37,805

Total Habitat Projects and Acres by Project Type

*see appendix for specific projects

PERMANTENT RANGE TREND SUMMARIES (Added 2001)

Units 19a & 19c, West Desert/Deep Creek/Tintic Subunits (2012)



	1997/98	2002	2007	2012
Good	1	1	3	0
Fair	4	6	3	5
Poor	6	4	6	5
Very Poor	0	2	1	2
Total	11	13	13	12

Deer winter range condition trend summary for subunit 19a & 19c, West Desert/Deep Creek/Tintic subunits, as indicated by the deer winter range Desirable Components Index (DCI).

DWR Winter Range Trend Assessment

There were 14 range trend study sites sampled on the Deep Creek mountain range and Tintic Subunit in 2012. There are 12 studies that are considered to be deer winter range and two studies considered to be deer summer range.

There are seven range trend study sites on the Deep Creek mountain range. Browse species are typically common on the higher elevation winter ranges, but are generally more limited at the lower elevation deer winter range sites. The primary concern on the studies within the subunit is the abundance of weedy annual grass species (cheatgrass), particularly on the lower elevation sites.

There are seven range trend study sites in the Tintic subunit, five of which are deer winter range and two that are summer range. Browse species are typically common on the higher elevation winter ranges, but are generally much more limited at the lower elevation deer winter range sites. The Leamington Burn Complex in 1996 burned a large portion of the southern part of subunit 19c, and browse species remain

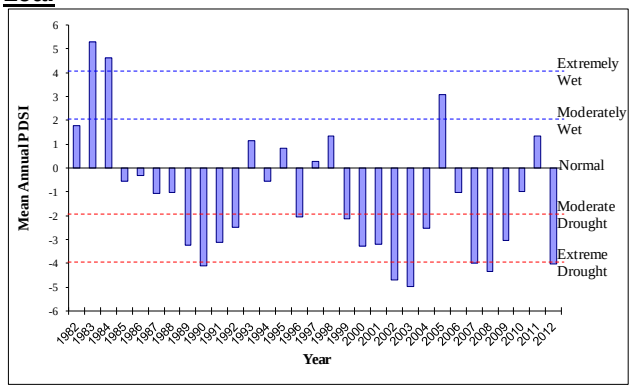
rare in these areas. The abundance of weedy annual grass species (cheatgrass) is a particular concern on this subunit.

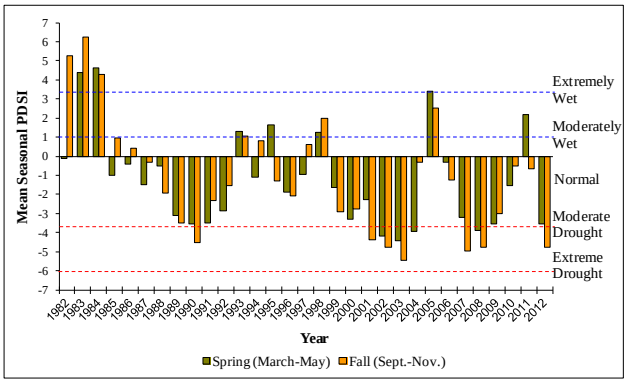
Apart from the areas impacted by wildfire, the winter range within the subunits appears suitable to support planned deer population objectives. The abundance of cheatgrass on the subunits is a concern because this annual species can increase fuel loads and increases the chance of a catastrophic fire event. Encroachment of pinyon and juniper trees into shrub winter ranges is also a concern in areas across the subunist. Encroachment of pinyon and juniper can reduce desirable shrub and herbaceous cover.

Precipitation 19a & 19c

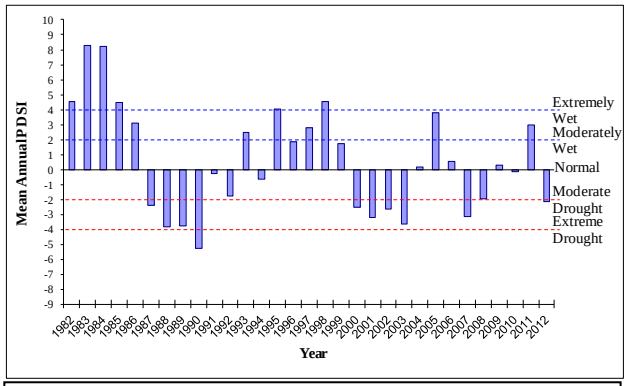
Vegetation trends are dependent upon annual and seasonal precipitation patterns. Precipitation and Palmer Drought Severity Index (PDSI) data for the unit were compiled from the National Oceanic and Atmospheric Administration (NOAA) Physical Sciences Division (PSD) as part of the Western division (Division 3). The Western division had a historic annual mean precipitation of 8.66 inches from 1895 to 2012. The mean annual PDSI of the Western division displays a pattern of drought years with a few periods of wet years over the course of study years (Figure 1 and Figure 2) (Time Series Data 2013).

19a.





19c



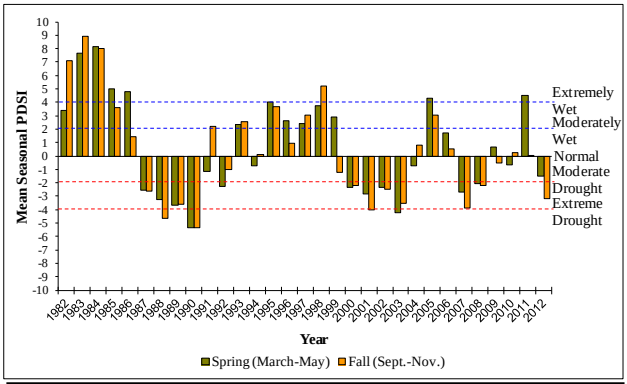
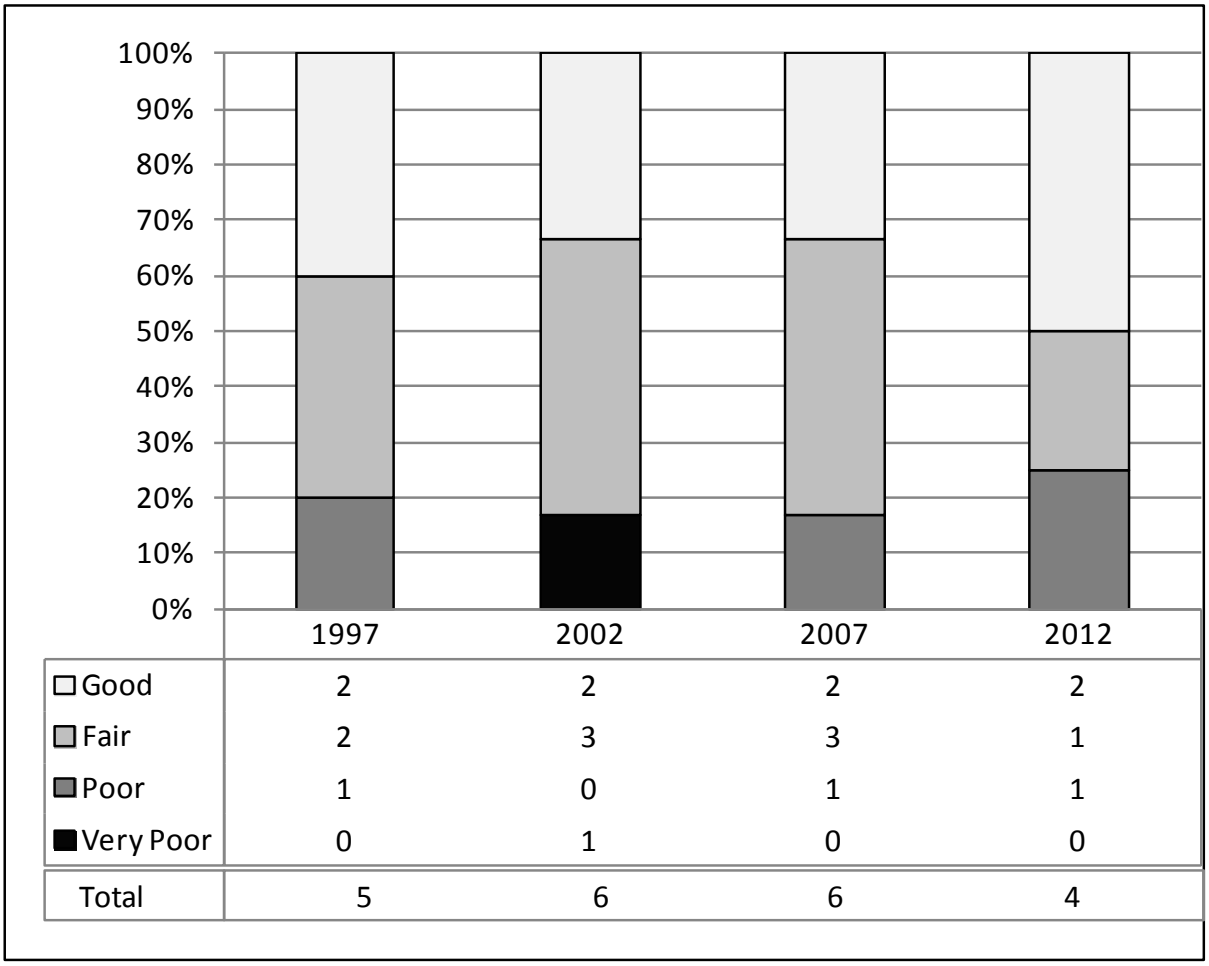


Figure 1. The 31 year mean annual Palmer Drought Severity Index (PDSI) for the Western division (Division 1). The PDSI is based on climate data gathered from 1895 to 2012. The PDSI uses a scale where 0 indicates normal, positive deviations indicate wet and negative deviations indicate drought. Classification of the scale is ≥4.0 = Extremely Wet, 3.0 to 3.9 = Very Wet, 2.0 to2.9 = Moderately Wet, 1.0 to 1.9 = Slightly Wet, 0.5 to 0.9 = Incipient Wet Spell, 0.4 to -0.4 = Normal, -0.5 to -.9 = Incipient Dry Spell, -1.0 to -1.9 = Mild Drought, -2.0 to -2.9 = Moderate Drought, -3.0 to -3.9 = Severe Drought and ≤-4.0 = Extreme Drought (Time Series Data 2013).

Figure 2. The 31 year mean spring (March-May) and fall (Sept-Nov.) Palmer Drought Severity Index (PDSI) for the North Central division (Division 3). The PDSI is based on climate data gathered from 1895 to 2012. The PDSI uses a scale where 0 indicates normal, positive deviations indicate wet and negative deviations indicate drought. Classification of the scale is ≥4.0 = Extremely Wet, 3.0 to 3.9 = Very Wet, 2.0 to2.9 = Moderately Wet, 1.0 to 1.9 = Slightly Wet, 0.5 to 0.9 = Incipient Wet Spell, 0.4 to -0.4 = Normal, -0.5 to -.9 = Incipient Dry Spell, -1.0 to -1.9 = Mild Drought, -2.0 to -2.9 = Moderate Drought, -3.0 to -3.9 = Severe Drought and ≤-4.0 = Extreme Drought (Time Series Data 2013).



	1997	2002	2007	2012
Good	2	2	2	2
Fair	2	3	3	1
Poor	1	0	1	1
Very Poor	0	1	0	0
Total	5	6	6	4

Deer winter range condition trend summary for subunit 19b, West Desert/Vernon subunit, as indicated by the deer winter range Desirable Components Index (DCI).

There were eight range trend study sites sampled on the Vernon subunit in 2012. Four of the sites are considered to be deer summer range and four are considered to be deer winter range. The summer range study sites appear to be doing well; however, with the presence of the weedy species bulbous bluegrass on most of these sites there is a concern that this weedy species may increase throughout the area. On deer winter range sites, the mean density of Wyoming big sagebrush has generally decreased over the duration of the sample years. However, mean cover of Wyoming big sagebrush has slightly increased over the same duration. Mean decadence of Wyoming big sagebrush has also generally increased. All sagebrush trends imply that on these low-level potential studies sagebrush populations are self-thinning and senescing, and at the same time individual plants within the populations are becoming larger.

The summer and winter range within this subunit appears suitable to support planned deer population objectives. Cheatgrass and bulbous bluegrass are not primary problems within the study sites on the subunit, but could become a more substantial threat in the future. Decreases in sagebrush on the lower elevation winter range study sites may become more pronounced with further maturation of stands. Encroachment of pinyon and juniper trees into shrub winter ranges is also a concern in areas across the subunits. Encroachment of pinyon and juniper can reduce desirable shrub and herbaceous cover.

Precipitation 19b

Vegetation trends are dependent upon annual and seasonal precipitation patterns. Precipitation and Palmer Drought Severity Index (PDSI) data for the unit were compiled from the National Oceanic and Atmospheric Administration (NOAA) Physical Sciences Division (PSD) as part of both the Western (Division 1) and North Central (Division 3) divisions. Studies that are located in the Western division include the Upper Little Canyon, Bennion Creek, Harker Canyon, West Government Creek, Lee's Creek,

19b

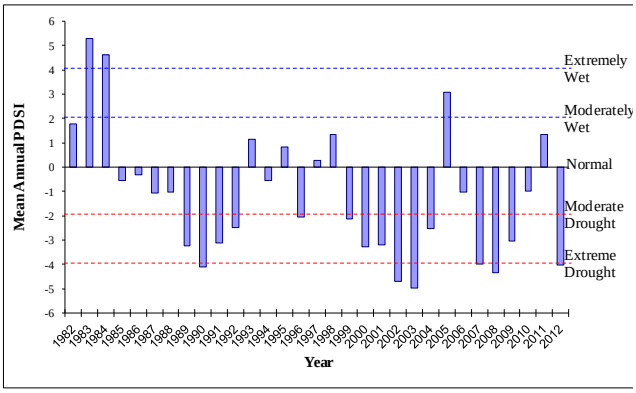


Figure 1. The 31 year mean annual Palmer Drought Severity Index (PDSI) for the Western division (Division 1). The PDSI is based on climate data gathered from 1895 to 2012. The PDSI uses a scale where 0 indicates normal, positive deviations indicate wet and negative deviations indicate drought. Classification of the scale is ≥4.0 = Extremely Wet, 3.0 to 3.9 = Very Wet, 2.0 to2.9 = Moderately Wet, 1.0 to 1.9 = Slightly Wet, 0.5 to 0.9 = Incipient Wet Spell, 0.4 to -0.4 = Normal, -0.5 to -.9 = Incipient Dry Spell, -1.0 to -1.9 = Mild Drought, -2.0 to -2.9 = Moderate Drought, -3.0 to -3.9 = Severe Drought and ≤-4.0 = Extreme Drought (Time Series Data 2013).

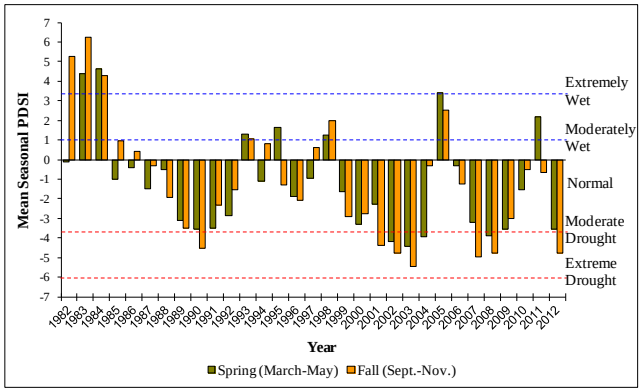


Figure 2. The 31 year mean spring (March-May) and fall (Sept-Nov.) Palmer Drought Severity Index (PDSI) for the Western division (Division 1). The PDSI is based on climate data gathered from 1895 to 2012. The PDSI uses a scale where 0 indicates normal, positive deviations indicate wet and negative deviations indicate drought. Classification of the scale is ≥4.0 = Extremely Wet, 3.0 to 3.9 = Very Wet, 2.0 to2.9 = Moderately Wet, 1.0 to 1.9 = Slightly Wet, 0.5 to 0.9 = Incipient Wet Spell, 0.4 to -0.4 = Normal, -0.5 to -.9 = Incipient Dry Spell, -1.0 to -1.9 = Mild Drought, -2.0 to -2.9 = Moderate Drought, -3.0 to -3.9 = Severe Drought and ≤-4.0 = Extreme Drought (Time Series Data 2013).

Duration of Plan

This unit management plan was approved by the Wildlife Board on _____ and will be in effect for five years from that date, or until amended.

APPENDIX

Unit 19a, West Desert Mountain Ranges Subunit

Juab, Millard and Tooele counties—Boundary begins at the Utah-Nevada state line and I-80 in Wendover; east on I-80 to Exit 77 and SR-196; south on SR-196 to Government Creek Road near Dugway; south on this road to the Pony Express Road: southwest on this road to 14-mile road (Dugway Valley road); south on this road to SR-174; east on SR-174 to US-6; south on US-6 to US-6/50; west on US-6/50 to the Utah Nevada state line; north on this state line to I-80 in Wendover. EXCLUDES ALL NATIVE AMERICAN TRUST LANDS WITHIN THIS BOUNDARY. Excludes all CWMUs. USGS 1:100,000 Maps: Bonneville Salt Flat, Currie, Delta, Ely, Fish Springs, Kern Mountains, Lynndyl, Rush Valley, Tooele, Tule Valley, Wildcat Mountain. Boundary questions? Call the Springville office, 801-491-5678 or the Cedar City office, 435-865-6100.

Unit 19b, West Desert/Vernon/ Subunit

Juab, Millard and Tooele counties—Boundary begins at SR-36 and the Pony Express road; south on SR-36 to US-6; southwest on US-6 to SR-174 (the IPP road); northwest on SR-174 to the Dugway Valley road; north on this road to the Pony Express road; northeast on this road to SR-36. USGS 1:100,000 Maps: Lynndyl, Delta, Fish Springs, Rush Valley. Boundary questions? Call the Springville office, 801-491-5678.

Unit 19c, West desert, Tintic

Tooele, Juab, Utah and Millard counties – Boundary begins at I-15 and SR-73 in Lehi; south on I-15 to Exit 207 and Mills road; west on this road to the Sevier River; north along this river to SR-132; west on SR-132 to US-6; north on US-6 to SR-36; north on SR-36 to SR-73; east on SR-73 to I-15 in Lehi. Excludes all CWMUs USGS maps: Delta Lynndyl, Manti, Nephi, Provo, Rush Valley. Boundary questions? Call DWR Springville office, (801) 491-5678.

GARY R. HERBERT
Governor

SPENCER J. COX
Lieutenant Governor

State of Utah
DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER
Executive Director

Division of Wildlife Resources
GREGORY J. SHEEHAN
Division Director

July 21, 2014

To Whom it May Concern:

The Wildlife Board understands that the U.S. Forest Service ("USFS") is considering the implementation of an aspen recruitment and regeneration program on Monroe Mountain, within the Fishlake National Forest. As part of this program, USFS is creating an adaptive management response document to describe USFS's response to aspen regeneration following large scale habitat treatments. One proposed mechanism is the reduction in ungulate numbers through hazing and/or antlerless hunts in areas experiencing low aspen recruitment. As the state agency holding primary management authority over wildlife in the State of Utah, implementation of such a response will require separate and independent approval by the Division of Wildlife Resources' Wildlife Board.

While fully preserving this primary management authority, the Wildlife Board supports the concept of increasing aspen recruitment on Monroe Mountain, and supports collaboration and cooperation by all stakeholders that use the Fishlake National Forest. In the event that USFS recommends a reduction in ungulate numbers, USFS may bring that proposal to the attention of the Division of Wildlife Resources and participate in their public comment process. The Wildlife Board will independently assess requests for the implementation of an antlerless hunt at that time.

Sincerely,

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Jake Albrecht
Chairman – Wildlife Board

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