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. Cougar Management Plan **ACTION**
   - Leslie McFarlane, Mammals Coordinator

6. Cougar Recommendations and Rule Amendments for 2015-2016 **ACTION**
   - Leslie McFarlane, Mammals Coordinator

7. Furbearer and Bobcat Harvest Recommendations for 2015-2016 **ACTION**
   - Leslie McFarlane, Mammals Coordinator

8. AIS Rule Amendments – R657-60 **ACTION**
   - Jordan Nielson, AIS Coordinator

9. Youth Fishing Exemption Rule Amendments **ACTION**
   - Law Enforcement Personnel

10. Self Defense against Animals Rule Amendment **ACTION**
    - Law Enforcement Personnel

11 Possession of Firearms rule amendments – Waterfowl and Upland **ACTION**
   - Law Enforcement Personnel

12 Fee Schedule **ACTION**
   - Administrative Services Section Personnel

Regional Presentations Only

CRO

5-day Falconry Meet Request **ACTION**
- Carter Wilford, Director of Events, IEEA

NERO

Red Fleet Management Plan **ACTION**
- Trina Hendricks, NER Aquatics Manager

Meeting Locations

NR RAC – July 28th 6:00 PM
Brigham City Community Center
24 N. 300 W. Brigham City

CR RAC – July 29th 6:30 PM
Springville Civic Center
110 South Main Street, Springville

SR RAC – Aug. 4th 7:00 PM
Beaver High School
195 E. Center St., Beaver

SER RAC – Aug. 5th 6:30 PM
John Wesley Powell Museum
1765 E. Main St., Green River

NER RAC – Aug. 6th 6:30 PM
NERO Office
318 N. Vernal Ave., Vernal

Board Meeting – August 27th 9:00 AM
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 J. SHEEHAN
Division Director

MEMORANDUM

Date: July 16, 2015

To: Regional Advisory Council Member and Wildlife Board

From: Leslie McFarlane, Mammals Program Coordinator

SUBJECT: COUGAR MANAGEMENT PLAN V. 3

In December 2014, the Division of Wildlife Resources reassembled the Cougar Advisory Group to review and update the Cougar Management Plan. The group was comprised of 20 voting members with one representative from each of the major sportsmens/houndsmen groups, livestock association, Wildlife Services, Utah Farm Bureau, Mule Deer Committee, Bureau of Land Management, 2 non-consumptive representatives, and representatives from houndsmen and sportsmens groups not affiliated with an organized group. The committee met 5 times between December and April 2015 with over 50 hours of discussion devoted to the plan.

The revised plan meets the direction given to the Division by the Wildlife Board in that the plan provides simplified guidance and direction for management of Utah's cougar populations. The recommendation process has been simplified and will occur annually on a unit by unit basis. The plan also identifies specific performance targets for predator control that use data collected from prey species. Additionally, performance targets account for all females in the harvest along with an age objective that will allow the Division the opportunity to monitor trends in social structure over time. These changes to the plan will allow the Division to be responsive to both predator and prey populations.

Highlights:

- Permits and hunting opportunity are determined annually for each unit and are based on the average data collected for each unit the previous 3 years.
- All females in the harvest are used to determine permit allocation for each unit.
- An age objective has been added to the performance targets that will help determine trends in social structure and population response to hunting pressure over time.
- Deer and bighorn sheep population management objectives are used to determine predator management strategies.

1594 West North Temple, Suite 2110, PO Box 146301, Salt Lake City, UT 84114-6301
telephone (801) 538-4700 • facsimile (801) 538-4709 • TTY (801) 538-7458 • *www.wildlife.utah.gov*

- Predator management actions will be based on the data collected the previous 3 years or the previous year if the prey population is below a certain threshold.
- Allow an individual the opportunity to purchase and possess a cougar control permit in addition to a harvest objective unit permit in limited circumstances. The control permit is valid only on harvest objective units with an unlimited quota and where bighorn sheep are the only prey source for cougars.
- Consider using public hunters authorized through a contract process to remove cougars determined to be preying on bighorn sheep.
- Outreach components of the plan to educate the public, hunters, sportsmen, livestock and agricultural producers remain intact within in the plan with only minor wording changes.
- Chronic depredation sections were not changed and a landowner experiencing chronic livestock depredation from cougars, or that has a history of chronic depredation may still obtain depredation permits to address livestock damage issues.

Utah Cougar Management Plan V.3

2015-2025

Photo Credit: Tom Becker, Utah Division of Wildlife Resources

Utah Cougar Advisory Group

DWR Publication No.

Utah Cougar Advisory Group Members

Group Members

Byron Bateman	Sportsmen for Fish and Wildlife
Adam Bronson	Foundation for North American Wild Sheep
Mike Christensen	Sportsmen Representative – Mule Deer Working Group
Chad Coburn	United Wildlife Cooperative – Houndsmen representative
Dan Cockayne	Utah Houndsmen Association
Brett Guymon	Houndsmen – At Large
Garrick Hall	Utah Farm Bureau
Josh Horrocks	Houndsmen Guides and Outfitters
Mike King	Utah Wildlife Board
Mike Laughter	Mule Deer Foundation
Mike Linnell	USDA Wildlife Services
Robin Naeve	Bureau of Land Management
*Brian Perkes	Nonconsumptive – At Large
*Kirk Robinson	Western Wildlife Conservancy
Brett Selman	Utah Woolgrowers Association
Dr. David Stoner	Utah State University

Formatted: Indent: Left: 0.75"

Utah Division of Wildlife Resources Representatives

Dan Barnhurst	Sergeant Law Enforcement
Bill Bates	Wildlife Section Chief and Facilitator
Leslie McFarlane	Mammals Program Coordinator
Clint Mecham	Predator Specialist
Dustin Mitchell	Wildlife Biologist

* These members of the Cougar Advisory Group support the majority of the plan but are *of the opinion* that the approved targets allow for the possibility of excessive cougar harvest as judged from the standpoint of the best available science.

Formatted: Font: 11 pt

Formatted: Indent: Left: 0.75"

Formatted: Font: 11 pt

Utah Cougar Management Plan V. 3
2015 – 2025

PLAN GOAL: Maintain a healthy cougar population within their current distribution while considering human safety, economic concerns, other wildlife species, and maintaining hunting traditions through 2025.

Definition: A healthy cougar population is one that maintains: 1) a reasonable proportion of older age animals; 2) breeding females; 3) healthy individuals; 4) balance with its natural prey; 5) and genetic variability.

Introduction

The purpose of the Utah Cougar Management Plan is to direct the management of cougars (*Puma concolor*) in accordance with the mission of the Utah Division of Wildlife Resources (Division or DWR) through 2025. An internal review of the plan will be completed 5 years after implementation to ensure that established targets, goals, and objectives meet both management and social needs.

The mission of DWR is:

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

In 1997, the DWR 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 a Cougar Advisory Group. The mission of this group was to aid the Division in preparing a cougar management plan that would gain agreement from diverse groups. The first version of the Utah Cougar Management Plan (UDWR 1999) resulted from these meetings and was used to direct cougar management efforts from 1999 to 2009.

Cougar Management Plan – FINAL DRAFT MAY 20, 2015

In 2009, the DWR reformed the Cougar Advisory Group to review and update the plan. The group met 8 times between December and May 2010 which resulted in Version 2 (UDWR 2010). After approval of this version several social and management issues led to an emergency meeting of the Wildlife Board. The outcome of the meeting was Version 2.1 of the Utah Cougar Management Plan (UDWR 2011). Subsequently, this version did not fully address the concerns of the public or wildlife managers and the Wildlife Board directed the Division to reform the Cougar Advisory Group with the goal of simplifying the cougar management plan.

This document is version 3 of the Utah Cougar Management Plan which seeks to simplify cougar management and address social and management issues created through previous versions of the plan. The Cougar Advisory Group met 5 times between December and April 2015. The first meeting of the group focused on developing a list of issues and concerns that the group could focus on and address in this document (see Attachment D. Issues and Concerns).

The natural history and ecology of cougars is not included or described in this document because more detailed information on cougar ecology can be found in "Managing Cougars in North America" (WAFWA 2011).

Management History

Cougars 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 first Utah Cougar Management Plan (UDWR 1999) guided cougar management through 2009. Consequently, two additional versions of the plan were adopted by the Wildlife Board to guide cougar management between 2010 and 2014 (UDWR 2010, 2011).

Cougars use very broad and diverse areas in Utah. The large scale dynamics and interconnectivity of the states cougar populations have been demonstrated through multiple telemetry and GPS radio collar studies (Stoner et al. 2006; 2008: 2013b).

Evaluation of the genetic relatedness of cougars in Utah also provides evidence that gene flow occurs over large geographic areas (Sinclair et al. 2001). Cougar harvest has traditionally been controlled in specific geographic areas or hunting units. Version 2 of the management plan sought to tie smaller hunting units to larger home ranges or eco-regions to account for the large spatial scale and source-sink population dynamics (Stoner et al. 2013b; cougar management areas; Figure 1). However, implementation of the eco-region concept limited the ability of the Division to distribute hunters adequately which resulted in heavy hunting pressure and high harvest in easily accessible areas and low to no harvest in areas with limited access.

Formatted: Font: Not Italic

Cougar Management Areas and Hunting Units

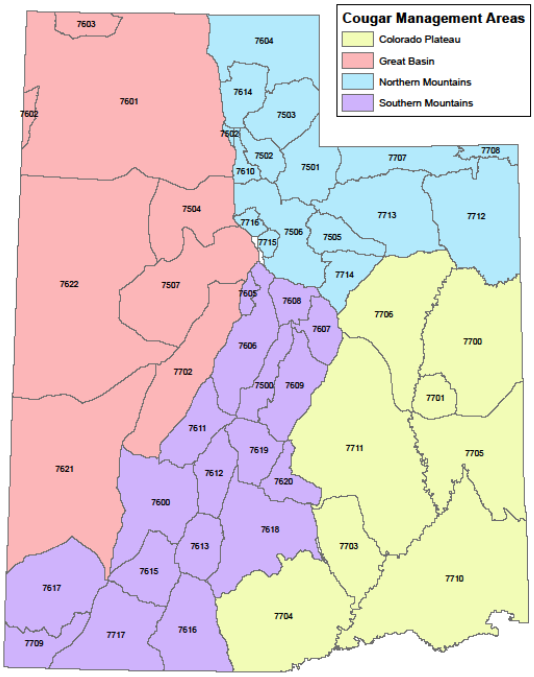


Figure 1. Cougar Management Areas and Hunting Units

Cougar harvest in Utah has been accomplished using three harvest strategies: harvest objective (quota), limited entry and split (limited entry followed by harvest objective).

Under the *harvest objective strategy*, managers prescribe a quota, or number of cougars to be harvested on the unit. An unlimited number of licensed hunters are allowed to hunt during a season which closes as soon as the quota is filled or when the season end date is reached. Hunters are required to check daily to ensure the quota has not been filled. Under the *limited entry strategy*, harvest is managed by limiting the number of hunters on a unit. The number of hunters is determined based upon an expectation of hunting success and the desired harvest size. Individuals are usually selected for hunting on the unit through a random drawing process. Under the *split strategy*, units start the season under the limited entry strategy and then transition 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.

Predator-Prey Relationships

Mule deer are known to be the preferred prey species of cougars (Seidensticker et al. 1973, Ackerman 1982, Mitchell 2013), and in Utah both deer and elk have been identified as primary prey species. In areas where both deer and elk co-exist cougars will usually select deer (Lindzey et al. 1989, Mitchell 2013). Other prey species include lagomorphs, turkey, skunk, fox, porcupines, rodents, bighorn sheep, feral horses, domestic sheep, cattle, bobcat and coyote (Russell 1978, Ackerman et al.1982, Knopf 2010, Mitchell 2013).

Cougar populations may be limited by prey abundance, availability, and vulnerability (Pierce et al 2000*b*, Logan and Sweanor 2001), and the relationship between predator and prey is very complex. Much controversy surrounds whether cougar predation can restrict or limit population growth of prey species; the majority of evidence is circumstantial, revolving around observations that deer are preferred prey, high cougar densities, and/or prey populations are declining. Most research indicates that cougars and predation alone are not a major limiting factor of prey species abundance (Hornocker 1970, Russell 1978, Lindzey et al. 1994, Logan et al. 1996, Pierce et al. 2012). Ballard et al. (2001) reviewed a total of 17 published studies and concluded that

deer-predator relationships are confounded by many factors including the relationship of deer to available habitat and carrying capacity. For example in New Mexico, Logan et al. (1996) found that cougar predation was the major cause of mortality in mule deer but that habitat quality was the critical limiting factor. Conversely, when habitat quality was good and the deer population was below carrying capacity, cougar predation did not prevent the deer population from increasing. In Idaho, Hurley et al. (2011) examined mule deer survival in response to removal of both coyote and cougars. Their data indicated that winter severity had the largest influence on population growth rate and predator removal only resulted in slight prey population increases for short term periods.

In contrast, predator-prey dynamics between cougar and bighorn sheep are less ambiguous because most bighorn sheep populations are small in number and isolated in space. Cougar predation on bighorn sheep typically occurs randomly and most often when one individual learns to specialize on bighorn sheep (Logan et al. 1996, Ross et al. 1997, Ernst et al. 2002, Sawyer and Lindzey 2002, Festa-Bianchet. et al. 2006). In a population of desert bighorn sheep radio collared in southeastern Utah, cougar predation was responsible for 53% of radio collared adult mortalities (UDWR unpublished data). In California and Arizona, cougars were implicated in the decline of bighorn sheep populations (Hayes et al. 2000, Schaefer et al. 2000, Kamler et al. 2002), and in Alberta, a single cougar was responsible for killing 9% of the early-winter bighorn sheep population including 26% of the lambs (Ross et al. 1997). Targeted removal of cougar that learn to specialize on bighorn sheep can be beneficial for both cougar and sheep populations (Ernest et al 2002).

The availability and abundance of different prey species in an area as well as the presence of other predators are also factors that may influence prey populations. In some cases a “predator pit” effect can occur when the primary prey experiences a reduction in numbers but an alternate prey source is available to the predator. This helps artificially keep predator populations high because the predator can switch to other prey, and their population size does not decrease in response to lower availability or preferred prey. The predator can then keep the primary prey species from recovering (Dale et al. 1994, Gassaway 1992).

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 harvest on management units where big game populations are depressed, or where big game has recently been released to establish or supplement new populations. The policy acts under the assumption that predators can slow recovery of prey populations when they are depressed or that a prey population can be kept at a lower density due to predation (Cougar Management Guidelines Working Group 2005). Predator management plans are reviewed by regional staff, the Mammals Program Coordinator, and approved by both the Wildlife Section Chief and DWR Director.

Most predator management plans that affect cougars have been designed to benefit mule deer and/or bighorn sheep. Cougar harvest has been liberalized where mule deer or bighorn sheep are below population management objective, and adult survival is lower than normal under the assumption that large harvests will reduce cougar numbers and hence predation rates, therefore encouraging growth of 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.

This version of the cougar management plan differs from previous versions in that aspects of the Divisions predator management policy are being incorporated into the plan. Mule deer and bighorn sheep population abundance and survival estimates will be used to help determine annual cougar harvest recommendations. This was one of the key social and management issues with previous versions of the Cougar Management Plan identified through both the public recommendations process and by the Cougar Advisory Group.

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, reducing public safety concerns, and direction to Division personnel responding to cougar depredation, nuisance, and human safety situations. Any cougar

that poses a threat to human safety or preys upon livestock or pets 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 cougars. The only cougars that are captured and translocated are healthy adults and subadults that wander into urban or suburban areas in situations where they have not been aggressive toward humans, pets, or livestock.

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).

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 421 animals (Figure 2).

	Limited Entry Permits				Harvest Objective Permits			Total Permits	Pursuit Permits
Year	Resident	Nonresident	Conservation / Expo	Total	Resident	Nonresident	Total		
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	283	34	20	337	587	238	825	1,162	880
2008-09	271	34	18	323	543	220	763	1,086	855
2009-10	263	32	18	313	566	192	758	1,071	900
2010-11	330	38	15	383	595	190	785	1,168	909
2011-12	312	36	16	364	613	202	815	1,178	777
2012-13	312	36	17	365	564	226	790	1,096	769
Total	**8,281**	**2,224**	**184**	**10,689**	**9,600**	**3,648**	**14,149**	**24,778**	**16,030**
Mean	**345**	**93**	**15**	**445**	**600**	**228**	**832**	**1,032**	**668**

Table 1. Utah Cougar Permits 1990-2013.

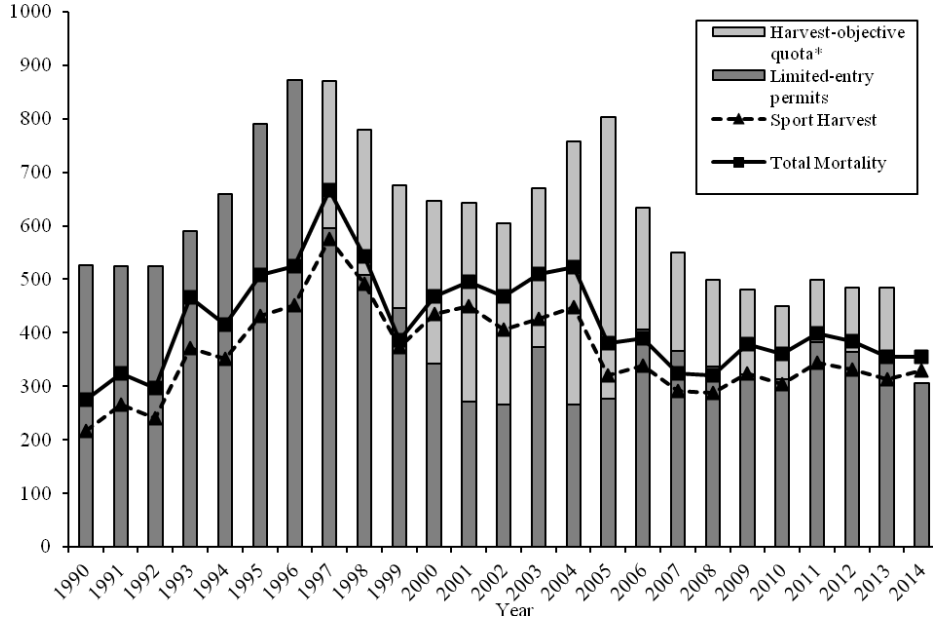


Figure 2. Cougar Mortality 1990-2014

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 they acquire a limited entry permit. The bag limit is 1 cougar per season. Kittens and females accompanied by young are protected from harvest. 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.

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.

A valuable way to assess cougar population response to hunting is to follow the trend of age structure in harvest over time. The effect hunting has on cougar populations depends on the level of harvest and the sex and age of cougars that are removed. In general transient males are most susceptible to harvest (Barnhurst 1996). Under more intensive harvest pressures fewer juveniles tend to be harvested, followed by a decrease in adult males, and then finally a steady increase in adult females. The longer and more intensive the harvest pressure the more young females will occur in the harvest. This happens because older age animals and males are not available in the population. Likewise, relatively light harvest allows hunters to be more selective and tends to produce more males and older animals (WAFWA 2011).

Most cougar populations can sustain harvest rates of 20-30% of the adult population depending on the age and sex composition of the harvest. However, recent work in Washington state suggests the natural rate of increase is approximately 12-14% per year (Beausoleil et al 2013). Large and well connected cougar populations can recover rapidly from over-exploitation (Cougar Management Guidelines 2005) given relaxation from hunting pressure and an adequate influx of immigrants. Cougar populations are most sensitive to the survival or removal of adult females (Martorello and Beusoleil 2003) which may slow or reduce population growth and may eventually lead to population decline (Stoner et al. 2006, Robinson et al. 2008, Cooley et al. 2009*a*; 2009*b*). For example, evaluation of cougar harvest for two different hunting regimes in Utah demonstrated negative impacts on fecundity, density, and age structures when the annual harvest consisted of >30% of the adult population with ≥42% females for periods greater than 3 years (Stoner 2004). Harvest and population data from southern Wyoming indicates that cougar populations can maintain themselves with a harvest comprised of 10-15% adult females (Anderson and Lindzey 2005). For these reasons most states limit female hunting mortality to <50% of the total harvest.

Formatted: Font: Italic

Formatted: Font: Italic

Distribution and Abundance

In Utah cougars occupy 92,696 km² (35,790 mi²) of habitat. Cougars are distributed throughout all available eco-regions (Figure 3) and exhibit a broad habitat tolerance occurring from the semi-arid low-elevation pinion-juniper belt, to the mesic, aspen and conifer dominated forests of the higher mountains and plateaus. Habitat quality varies by ecoregion with the Colorado Plateau and Great Basin containing smaller, naturally fragmented habitats with lower cougar densities, and the mountain ecoregions comprised of relatively large, mesic patches (Stoner et al. 2013a). 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.

Formatted: Font: Not Italic

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 (Riley 1998) and prey density. Cougar densities derived from research within Utah, California and New Mexico were associated with each habitat quality level. High quality habitat was assigned a density range of 2.5-3.9 cougars/100 km², medium quality habitat was assigned a density of 1.7-2.5 cougars/100 km² and a density of 0.26-0.52 cougar/100 km² was assigned to low quality habitat. The first statewide population estimate of 2,528-3,936 cougars resulted from summing unit population estimates.

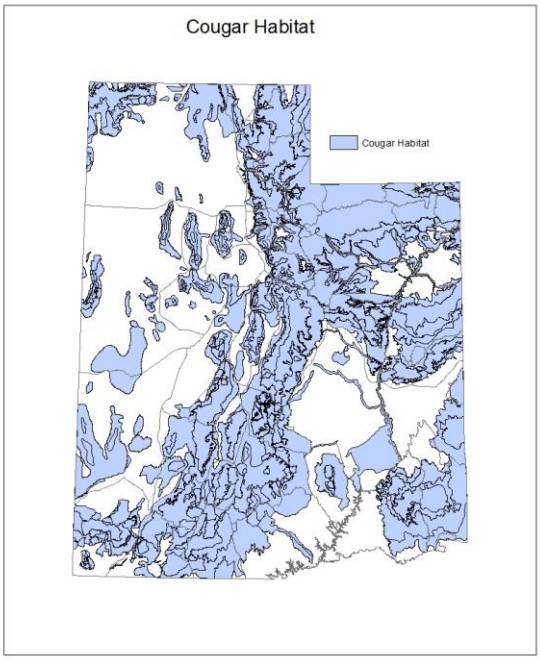


Figure 3. Cougar Habitat in Utah

Formatted: Font: (Default) Arial Unicode MS, 10 pt

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.

Research

Beginning with the observational work of Connolly (1949), up through current investigations of cougar-coyote-mule deer interactions by Julie Young and colleagues, Utah has a rich history of research on cougar ecology and management. Two topics

Formatted: Font: (Default) Arial Unicode MS

dominate the literature on the species: predation effects on big game species, and population estimation techniques. In Utah and most western states cougars are often managed from conflicting standpoints. As a predator of mule deer, elk, and bighorn sheep, cougars can be managed as a pest, in which measureable changes in density are desired in order to evaluate the numerical responses of prey. However, when prey survival is not a concern, cougars may be managed as a trophy game species, in which harvest can be fairly conservative. Under both conditions, the ability to estimate and track changes in local abundance is central to effective management.

Cougar research can be subdivided into a few broad topics; natural history, foraging habits and predation, habitat use, and population dynamics. The latter category has received the most attention and involves estimation of abundance, reproduction, and survival rates. In order for management to be effective, a solid understanding of these life history characteristics is essential. The earliest work in Utah was conducted by houndsman and district PARC agent, Edward Connolly, who used snow tracking to evaluate predation rates and prey selection in the Wasatch Mountains. These efforts were followed in the 1950s by W. L. Robinette and colleagues, who made further evaluations of food habits by examining the stomach contents of harvested cougars (Robinette et al. 1959). Similarly, these authors used necropsy of females removed through harvest and depredation control to evaluate pregnancy rates, litter size, and breeding seasons (Robinette et al. 1961). Other investigations elaborated on the causes of natural mortality (Gashwiler and Robinette 1957). Robinette et al (1977) summarized their findings about cougars and their role in mule deer population dynamics in their study, *The Oak Creek Mule Deer Herd in Utah*. Because of the large sample sizes and relatively simple analyses, some of these papers are still relevant as more recent efforts have only reinforced early findings.

The advent of radio-telemetry in the 1960s facilitated a detailed view of cougar behavior. This tool removed much of the speculation from field work by providing investigators a means of tracking animals in real time. Telemetry allowed for rigorous measures of home range size, sociality, movement behavior, and predation rates. The work of Lindzey et al. (1989) was the first use of radio-telemetry on cougars in the state.

Formatted: Font: (Default) Arial Unicode MS
Formatted: Font: (Default) Arial Unicode MS
Formatted: Font: (Default) Arial Unicode MS
Formatted: Font: (Default) Arial Unicode MS
Formatted: Font: (Default) Arial Unicode MS
Formatted: Font: (Default) Arial Unicode MS
Formatted: Font: (Default) Arial Unicode MS
Formatted: Font: (Default) Arial Unicode MS
Formatted: Font: (Default) Arial Unicode MS
Formatted: Font: (Default) Arial Unicode MS
Formatted: Font: (Default) Arial Unicode MS
Formatted: Font: (Default) Arial Unicode MS
Formatted: Font: (Default) Arial Unicode MS

This project was conducted on the Boulder Plateau and adjacent Henry Mountains in southern Utah from 1978 to 1989. By the time this study was initiated, cougars had been classified as a big game species for over a decade, and many of the uncertainties associated with managing a secretive carnivore were apparent. Lindzey focused on applied questions related to cougar predation impacts on deer, elk, and livestock (Ackerman et al. 1984, 1986), population dynamics (Hemker et al. 1984, 1986; Lindzey et al. 1988, 1994), and survey techniques (Van Dyke et al. 1986; Van Sickle and Lindzey 1991, 1992). During the latter years of the study, Lindzey and his students evaluated cougar demographic responses to typical harvesting regimes (Barnhurst and Lindzey 1989; Lindzey et al.1992; Laing and Lindzey 1993). In 1991 Lindzey published a brief paper on recommendations for future research. Due largely to an inability to accurately census cougars and a rising concern over human/cougar conflicts in many western states, the development of reliable survey techniques, and evaluation of cougar behaviors in and around urban-wildland settings were top among managers concerns.

As the human population in the west grew and became progressively more urban, societal values evolved. Along with these changes came restructuring of wildlife management policy to include greater public input. Wildlife commissions and advisory boards became the norm throughout the region. Continued debate over abundance, reactions to hunting pressure, and the burgeoning issue of cougars living near people prompted the initiation of Utah's second radio-telemetry effort to examine cougars. This project was led by Michael Wolfe at Utah State University, and Clint Mecham, a veteran from Lindzey's fieldwork on the Boulder. This new project involved two study areas; one in central Utah on the Fishlake National Forest (Monroe Mountain), and the other due west of the rapidly expanding Salt Lake metro area in the Oquirrh Mountains. The primary difference between these sites was the pattern of land ownership. The Monroe Mountain site was public land and open to hunting whereas the Oquirrh Mountain site was a patchwork of private properties with restricted access, including large holdings by the Utah Army National Guard and the Kennecott Copper Company. This created a vast region of unhunted habitat on the edge of an expanding metro area.

Formatted: Font: (Default) Arial Unicode MS
Formatted: Font: (Default) Arial Unicode MS
Formatted: Font: (Default) Arial Unicode MS
Formatted: Font: (Default) Arial Unicode MS
Formatted: Font: (Default) Arial Unicode MS
Formatted: Font: (Default) Arial Unicode MS
Formatted: Font: (Default) Arial Unicode MS
Formatted: Font: (Default) Arial Unicode MS
Formatted: Font: (Default) Arial Unicode MS
Formatted: Font: (Default) Arial Unicode MS
Formatted: Font: (Default) Arial Unicode MS
Formatted: Font: (Default) Arial Unicode MS
Formatted: Font: (Default) Arial Unicode MS
Formatted: Font: (Default) Arial Unicode MS
Formatted: Font: (Default) Arial Unicode MS
Formatted: Font: (Default) Arial Unicode MS

Wolfe's study had three central objectives: 1) evaluating cougar enumeration techniques under differing densities, 2) assessing the demographic effects of sustained harvest on cougar demographics, and 3) assessing cougar movement behavior and resource use in an urban-wildland setting. This project ran from 1996 to 2013 and represents the longest comparative study ever conducted on the species. Unlike many diurnally active, herding, or numerically abundant species, there are no robust and widely accepted techniques for cougar enumeration (Choate et al. 2006) and findings from this study underscored the severe limitations imposed by cougar behavior on the development and use of robust survey techniques. Stubbornly small sample sizes, the inherently open nature of cougar populations, and wide dispersal tendencies mean that classic mark-recapture techniques are of limited utility at scales relevant to management (Sinclair et al. 2001, Stoner et al. 2008).

During his Boulder Plateau study, Lindzey addressed the question of harvest effects, but it was an experiment in time on a single study area (before-after). The second objective Wolfe's project was an attempt to replicate the Boulder study in space. The effort here was the first to employ a Before-After-Control-Impact study design in which two populations were monitored simultaneously while varying harvest levels on one site. The Monroe-Oquirrh study lasted 12 years and demonstrated notable demographic differences between populations subjected to different management regimes. Based on these results and combined with the uncertainty of local abundance, Wolfe et al. (2004) recommended statewide implementation of a source-sink type management structure in which known behavioral tendencies, such as male-biased dispersal are used to backfill territories left vacant following harvest. This idea was developed further by Stoner et al. (2013*a*, 2013*b*), who parameterized cougar dispersal and identified a series of *de facto* refugia, i.e. areas of suitable habitat that exhibit low levels of hunting.

The third objective of this study was pursued by Rieth (2009), Stoner (2011) and Mitchell (2013). These authors looked at habitat use, movement patterns, and predation behavior in the Oquirrh Mountains- a region that encompassed military training, industrial activities, and suburban land-use. Rieth (2009) demonstrated a shift in cougar habitat selection by behavior, which is correlated with time-of-day. Notably, cougars are

Formatted: Font: (Default) Arial Unicode MS
Formatted: Font: (Default) Arial Unicode MS
Formatted: Font: (Default) Arial Unicode MS
Formatted: Font: (Default) Arial Unicode MS
Formatted: Font: (Default) Arial Unicode MS
Formatted: Font: (Default) Arial Unicode MS
Formatted: Font: (Default) Arial Unicode MS
Formatted: Font: (Default) Arial Unicode MS
Formatted: Font: (Default) Arial Unicode MS
Formatted: Font: (Default) Arial Unicode MS
Formatted: Font: (Default) Arial Unicode MS
Formatted: Font: (Default) Arial Unicode MS
Formatted: Font: (Default) Arial Unicode MS
Formatted: Font: (Default) Arial Unicode MS
Formatted: Font: (Default) Arial Unicode MS
Formatted: Font: (Default) Arial Unicode MS, Italic
Formatted: Font: (Default) Arial Unicode MS
Formatted: Font: (Default) Arial Unicode MS, Italic
Formatted: Font: (Default) Arial Unicode MS
Formatted: Font: (Default) Arial Unicode MS
Formatted: Font: (Default) Arial Unicode MS
Formatted: Font: (Default) Arial Unicode MS
Formatted: Font: (Default) Arial Unicode MS
Formatted: Font: (Default) Arial Unicode MS

farthest from human activity during diurnal hours when human activity is highest, and nearest at night when actively hunting. Subsequently, Stoner (2011) found cougars generally avoided areas of predictable human activity, but that aversion was not absolute and some individuals, particularly males and older females with dependent kittens passed occasionally used human dominated landscapes. Mitchell (2013) followed on this work and noted that despite proximity to urban and mixed-use landscapes, cougar depredation on pets and hobby livestock were rare, and that most livestock depredations were on free-ranging cattle in wilderness parts of the study area.

The capstone of the Monroe-Oquirrh cougar project were the evaluations by Wolfe et al. (2015, in review) of commonly used cougar performance measures with respect to known demographics, and an assessment of the degree to which harvest mortality acts in an additive or compensatory manner in cougar populations. These analyses used radio-telemetry data to calibrate catch-per-unit-effort, survival rates, and percent females in the harvest as an index of population performance. Following these efforts the project moved into a second phase in which the Oquirrh Mountain site was closed and remaining resources were directed to a new study objective on the Monroe site. This segment of the project was lead by Julie Young of the National Wildlife Research Center at Utah State University and changed focus from population demographics to the interaction between coyotes, cougars and mule deer. Results are forthcoming.

Formatted: Font: (Default) Arial Unicode MS
Formatted: Font: (Default) Arial Unicode MS
Formatted: Font: (Default) Arial Unicode MS
Formatted: Font: (Default) Arial Unicode MS
Formatted: Font: (Default) Arial Unicode MS
Formatted: Font: (Default) Arial Unicode MS
Formatted: Font: (Default) Arial Unicode MS
Formatted: Font: (Default) Arial Unicode MS
Formatted: Font: (Default) Arial Unicode MS
Formatted: Font: (Default) Arial Unicode MS

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-.

Strategy:

1. Determine (survey) the general public's knowledge and attitudes toward the role of cougars in Utah's ecosystems.

2. Implement the new Wild Aware Utah program; an effort generated by the Conservation Outreach Section.

Objective 2:

Educate and increase awareness of the public that utilize cougar habitat about cougar safety.

Formatted: Font color: Black

Formatted: Font color: Black

Strategy:

1. Implement the Wild Aware Utah program.

Objective 3:

Provide educational opportunities to the big game hunting public about the relationship between cougar and prey populations .

Formatted: Font color: Black

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 and others.
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 and others.
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 and continue to educate Division employees tagging cougars.

Strategies:

1. Continue to publish information about sex and age identification techniques in the Cougar Guidebook and online.
2. Evaluate the effectiveness of the voluntary online orientation course to determine if desired results ~~have been~~ are being obtained.
3. Modify the harvest reporting form to gather data on effectiveness of orientation course.
4. Survey unsuccessful cougar hunters to gather data on the effectiveness of orientation course.
5. Obtain high quality 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 biannually.

Objective 5:

Increase and develop educational opportunities for sportsmen and other user groups prior to the RAC and Board process

Strategy:

1. Hold informational meetings on recommendations prior to taking them through the public process.

Population Management

Objective 1

Maintain cougar populations within their current statewide distribution in a manner that: 1) recognizes the large geographic and temporal scales at which

Formatted: Indent: Left: 1", Hanging: 0.5"

cougar populations operate, 2) stresses the importance of social structure for long-term viability, 3) directs hunter pressure on a management unit or subunit basis, and 4) manages cougar abundance with respect to their ungulate prey species.

Performance Targets:

- **Primary Target** - Proportion of all females in the harvest < 40% (within a management unit averaged over 3 years)
- **Secondary Target** – Proportion of cougars ≥5 years old in harvest between 15-20% (within a management unit averaged over 3 years)

Strategies (See Attachment A: Cougar Management Tree):

1. Implement the management system based on data for the previous 3 years for all units that mule deer and bighorn sheep triggers are not met as follows:

   a. Select limited entry, harvest objective, or split strategy based on the needs of the unit and what type of hunting pressure is appropriate.

   b. If proportion of all females in the harvest <40% then:

      1). Proportion of cougars ≥5 years old in harvest ≥ 20 % then permits/quota may increase.

      2). Proportion of cougars ≥5 years old in harvest =15-20% then permits/quota may be maintained or decrease/increase at biologist discretion.

      3) Proportion of cougars ≥5 years old in harvest <15% then permits/quota may decrease.

4) Small sample sizes may bias both sex and age data. In these instances the biologist may increase, decrease or maintain permits at their discretion.

c. If proportion of all females in the harvest ≥40% then:

1). Decrease permits/quota

Objective 2:

Be responsive to prey population objectives. Manage cougar populations to reduce predation on big game herds that are below objective when cougar predation is considered a potential limiting factor for herd growth or recovery. Consider development of a predator management plan and implement according to UDWR policy W1AG-4 if annual recommendations are not meeting the needs of the unit.

Performance Targets for units where mule deer or bighorn sheep triggers are met (See Attachment B: Predator Management Tree – Mule Deer):

- **Primary Target -** Proportion of female cougars in the harvest ≥ 40% (within a management area averaged over 3 years)

Strategies:

1. Implement the management system based on data for the previous 3 years for all units that mule deer and bighorn sheep triggers are met as follows:

a. Select limited entry, harvest objective, or split strategy based on the needs of the unit and what type of hunting pressure is appropriate.

b. If mule deer populations are <90% of unit or subunit objective and conditions listed in 1) or 2) below are met:

1). Adult deer survival on the representative unit <84% for 2 of the past 3 years and the herd unit is demonstrating a declining population trend (lambda is <1) or;

2). Adult deer survival on the representative unit is <80% in the previous year and the herd unit is demonstrating a declining population trend (lambda is <1).

i. Proportion of all females in the harvest <40% then permits/quota may be increased and may not exceed +100% of the previous years permits/quota.

ii. Proportion of all females in the harvest ≥40% then permits/quota may be maintained at the current level.

c. If mule deer populations are <65% of unit or subunit objective in the previous year.

1). Proportion of all females in the harvest <40% then permits/quota may be increased and may not exceed +100% of the previous years permits/quota.

2). Proportion of all females in the harvest ≥40% then quota/permits should be maintained at the current level.

d. Bighorn sheep populations where any of the following conditions are met (See Attachment C: Predator Management Bighorn Sheep and Transplants):

1). Population is <90% of unit or subunit objective or;

2). Bighorn sheep population is below viable levels of <125 animals.

i. Proportion of all females in the harvest <40% then permits/quota may be increased and may not exceed +100% of the previous years permits/quota.

ii. Proportion of all females in the harvest ≥40% then quota/permits may remain the same.

e. When a bighorn sheep or mule deer transplant or reintroduction will occur in the next year then (See Attachment C: Predator Management Bighorn Sheep -and Transplants)::

i. Proportion of all females in the harvest <40% then permits/quota may be increased and may not exceed +100% of the previous years permits/quota.

ii. Proportion of all females in the harvest ≥40% then quota/permits may be maintained.

f. Evaluate ungulate population response annually (based on 3 year average) to determine the need to continue or discontinue predator management direction.

g. When a split unit transitions from limited entry to harvest objective the quota will equal the number of limited entry permits that were not filled during the limited entry season.

h. Bighorn sheep only management areas are management units that don't have an appreciable deer population. On these units the ~~C~~cougar prey base consists primarily of bighorn sheep. These units consist of low elevation primarily snow-free habitat and ~~,~~ as a result too few cougars are harvested to analyze relative to performance targets. No quota is assigned to these management units (San Rafael, Kaiparowits, Book Cliffs-Rattlesnake).

i. Offer multiple permits or allow harvest of up to 2 cougars on units/subunits where harvest and access is limited.

j. In special circumstances where it is determined that a cougar may be preying on bighorn sheep the D~~d~~ivision may use DWR

employees, contract with USDA Wildlife Services (WS), or hire/authorize a contractor outside of the agency to remove the offending animal. The director may authorize removal of depredating cougars as needed.

Chronic Depredation Criteria:

- The depredation is occurring on private land and;
- The depredation has occurred in the same area for 3 consecutive years or 4 out of 5 years and;
- 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.
   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 Administrative Code R657-10-21.

4. DWR and WS will work with the houndsmen community to develop a list of houndsmen 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. Potential research projects are listed below in order of priority.

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

1. Investigate alternative population estimation techniques for cougars using the relationships between primary productions, ungulate abundance, and cougar home range size.
2. Radio collar cougars in bellwether units to obtain adult survival estimates to monitor population trends. Consider using bellwether mule deer units to evaluate efficacy of predator control on mule deer survival.
3. Prey switching in cougars. In multi-prey systems, do cougars switch to alternative prey (e.g. livestock, elk, or feral horses) when mule deer numbers decline? To what extent is cougar predation additive to other sources of mule deer mortality?
4. Cougar habitat use and predation behavior in multi-prey communities (bighorn sheep, mule deer, elk, feral horses). Can we predict bighorn vulnerability to cougar predation in space?
5. Indirect effects of predation risk on foraging behavior of livestock.

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

1. Examining DWR livestock depredation records to evaluate the influence or efficacy of cougar removal on depredation rates. Does cougar removal affect depredation losses in subsequent years? How does depredation risk vary in space, i.e. are there depredation hotspots? What are the demographic patterns in cougar depredation of livestock – cattle vs sheep vs. pets?
2. Examine DWR pet depredation and public safety complaints with respect to cougar management in adjacent units. Are conflicts predicatable in time and space? What are management regimes in units defined by high and low complaints?
3. To what extent can we manipulate the cougar-deer relationship through habitat manipulation? For example can we use prescribed fire to simultaneously increase forage and reduce stalking cover?
4. ~~2.~~ Evaluate cougar occupancy of military lands, national parks, and other de facto refugia during winter.
5. ~~3.~~ Modeling the long-term data set to examine 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. Work closely with the big game program, and where possible, develop research projects that improve knowledge and understanding of mule deer and cougar.

Re-visit prioritized list every 5 years after implementation to determine if research direction or funding change or new opportunities become available.

Literature Cited

Ackerman, B. B. 1982. Cougar predation and ecological energetic in south-central Utah. M.S. Thesis. Utah State University. Logan. 95 pp.

Ackerman, B. B., and T. P. Hemker. 1984. Cougar food habits in southern Utah. Journal of Wildlife Management. 48:147-155.

Ackerman, B. B., F. G. Lindzey, and T. P Hemker. 1986. Predictive energetic model for cougars. In Cats of the World: Biology, conservation, and management, ed. S. D. Miller and D. Everett, 333-352. Washington D. C. National Wildlife Federation.

Anderson, C. R. Jr., and F. G. Lindzey. 2005. Experimental evaluation of population trend and harvest composition in a Wyoming cougar population. Wildlife Society Bulletin 33:179-188.

Ballard, W. B., D. Lutz, T.W. Keegan, L. H. Carpenter, and J. C. deVos JR. 2001. Deer-predator relationships: a review of recent North Amercian studies with emphasis on mule and black-tailed deer. Wildlife Society Bulletin 29:99-115.

Barnhurst, D. 1996. Vulnerability of cougars to hunting. Utah State University, Logan Utah. 66 pp.

Barnhurst, D. and F. G. Lindzey. 1989. Detecting female mountain lions with kittens. Northwest Science 63:35-37.

Beausoleil, R., G. M. Koehler, B. Maletzke, B. N. Kertson, and R. Weilgus. 2013. Research to regulation: cougar social behavior as a guide to management. Wildlife Society Bulletin 37:680-688.

Choate, D. M., M. L. Wolfe, and D. C. Stoner. 2006. An evaluation of the accuracy and efficacy of cougar population estimators. Wildlife Society Bulletin 34:782-799.

Connolly, E. J. 1949. Food habits and life history of the mountain lion. Thesis, University of Utah, Salt Lake City, UT.

Cooley, H. S., R. B. Wielgus, H. S. Robinson, and C. S. Lambert. 2008. Cougar prey selection in a white-tailed deer and mule deer community. Journal of Wildlife Management 72:99-106.

Formatted: Font: (Default) Arial Unicode MS

Cooley, H.S., R.B. Wiegus, G.M. Koehler, and B.T. Maletzke. 2009a. Source populations in carnivore management: cougar demography and emigration in a lightly hunted population. Animal Conservation. 1:1-8.

Cooley, H. S, R. B. Wielgus, G. M. Koehler, H. S. Robinson and B. T. Maletzke. 2009b. Does hunting regulate cougar populations? A test of the compensatory mortality hypothesis. Ecology. 90:2913-2921.

Dale, B. W., L. G. Adams, and R. T. Bowyer. 1994. Functional response of wolves preying on barren ground caribou in a multiple-prey system. Journal of Animal Ecology 63:644-652.

Ernst, H. B., E. S. Rubin, and W. M. Boyce. 2002. Fecal DNA analysis and risk assessment of mountain lion predation of bighorn sheep. Journal of Wildlife Management 66:75-85.

Festa-Bianchet, M., T. Coulson, J. Gaillard, J. T. Hogg, and F. Pelletier. 2006. Stochastic predation events and population persistence in bighorn sheep. Proceedings of the Royal Society Bulletin 273:1537-1543.

Gashwiler, J.S. and W. L. Robinette. 1957. Accidental fatalities of the Utah cougar. Journal of Mammalogy 38:123-126.

Gassaway, W. C., R. D. Boertje, D. B. Grangaard, D. G. Kelleyhouse, R. O. Stephenson, and D. G. Larsen. 1992. The role of predationin limiting moose at low densities in Alaska and Yukon and implications for conservation. Wildlife Monographs 120:1-59.

Hayes, C. L., E. S. Rubin, M. C. Jorgensen, and W. M. Boyce. 2000. Mountain lion predation of bighorn sheep in the Peninsular Ranges, California. Journal of Wildlife Management 64:954-959.

Hemker, T. P., F. G. Lindzey, and B. B. Ackerman. 1984. Population characteristics and movement patterns of cougars in southern Utah. Journal of Wildlife Management 48:1275-1284.

Hemker, T. P., F. G. Lindzey, B. B. Ackerman, and A. J. Button. 1986. Survival of cougar cubs in a non-hunted population. Pages 327-332 *in* S. D. Miller and D. D.

Formatted: Font: (Default) Arial Unicode MS

Formatted: Font: (Default) Arial Unicode MS, 12 pt

Everett, editors. Cats of the world: biology, conservation, and management. National Wildlife Federation, Washington D.C., USA.

Hornocker, M. G. 1970. An analysis of mountain lion predation upon mule deer and elk in the Idaho primitive areas. Wildlife Monographs 21:1-39.

Hurley, M. A., J. W. Unsworth, P. Zager, M. Hebblewhite, E. O. Garton, D. M. Montgomery, J. R. Skalski, and C. L. Maycock. 2011. Demographic response of mule deer to experimental reduction of coyotes and mountain lions in southeastern Idaho. Wildlife Monographs 178:1-33.

Kamler, J. F., R. M. Lee, J. C. deVos, Jr., W. B. Ballard, and H.A. Whitlaw. 2002. Survival and cougar predation of translocated bighorn sheep in Arizona. Journal of Wildlife Management 66:1267-1272.

Knopf, K. H., A. A. Knopf, A. Kortello, and M. S. Boyce. Cougar kill rate and prey composition in a multiprey system. Journal of Wildlife Management 74:1435-1447.

Laing, S. P., and F. G. Lindzey. 1993. Patterns of replacement of resident cougar in southern Utah. Journal of Mammalogy 74:1056-1058.

Lindzey, F. G., B. B. Ackerman, D. Barnhurst, and T. P. Hemker. 1988. Survival rates of mountain lions in southern Utah. Journal of Wildlife Management 52:664-667.

Lindzey, F. G., B. B. Ackerman, D. Barnhurst, T. Becker, T. P. Hemker, S. P. Laing, C. Mecham, and W. D. VanSickle. 1989. Boulder-Escalante cougar project. Final Report. Utah Division of Wildlife Resources.

Lindzey, F. G., W. D. VanSickle, B. B. Ackerman, D. Barnhurst, T. P. Hemker, and S. P. Laing. 1994. Cougar population dynamics in southern Utah. Journal of Wildlife Management. 58:619-624.

Lindzey, F. G., W. D. Van Sickle, S. P. Laing, and C. S. Mecham. 1992. Cougar population response to manipulation in southern Utah. Wildlife Society Bulletin. 20:224-227.

Logan, K. A., L. L. Sweanor, T. K. Ruth and M. G. Hornocker. 1996. Cougars of the San Andreas Mountains, New Mexico. Final Report. Federal aid in wildlife

restoration, project W-128-R. New Mexico Department of Game and Fish, Santa Fe.

Logan, K. A. and L. L. Sweanor. 2001. Desert Puma: Evolutionary Ecology and Conservation of an Enduring Carnivore. Island Press, Washington, D.C., USA.

Martorello, D. A. and R. A. Beausoleil. 2003. Characteristics of cougar harvest with and without the use of dogs. Pages 129-135 in S. A. Becker, D. D. Bjornlie, F. G. Lindzey, and D. S. Moody, editors. Proceedings of the Seventh Mountain Lions Workshop, May 15-17, 2003. Wyoming Game and Fish Department, Lander, USA.

Mitchell, D. L. 2013. Cougar predation behavior in North-Central Utah. M. S. Thesis. Utah State University, Logan. 50 pp.

Pierce, B. M., V. C. Bleich, and R. T. Bowyer. 2000b. Social organization of mountain lions: Does a land-tenure system regulate population size? Ecology 81:1533-1543.

Pierce, B. M., V. C. Bleich, K. L. Monteith, and R. T. Bowyer. 2012. Top-down versus bottom-up forcing: evidence from mountain lions and mule deer. Journal of Mammalology 93:977-988.

Rieth, W.R. 2009. Cougar resource selection in two mountain ranges in Utah: a study on scale and behavior. M.Sc. Thesis, Utah State University, Logan, USA, 268 pp.

Riley, S. J. 1998. Integration of environmental, biological, and human dimensions for management of mountain lions (*Puma concolor*) in Montana. Dissertation, Cornell University, Ithaca, New York.

Robinette, W. L., J. S. Gashwiler and O. W. Morris. 1959. Food habits of the cougar in Utah and Nevada. Journal of Wildlife Management 23:261-273.

Robinette, W. L., J. S. Gashwiler, and O. W. Morris. 1961. Notes on cougar productivity and life history. Journal of Mammalogy 42:204-217.

Robinette, W. L., N. V. Hancock, and D. A. Jones. 1977. The Oak Creek mule deer herd in Utah. Utah Division of Wildlife Resources. 148 pp.

Formatted: Font: (Default) Arial Unicode MS, 12 pt

Formatted: Font: Italic

Robinson, H. S., R. B. Wielgus, H. S. Cooley, and S. W. Cooley. 2008. Sink populations in carnivore management: cougar demography and immigration in a hunted population. Ecological Applications 18:1028-1037.

Ross, P. I., M. G. Jalkotzy, and M. Festa-Bianchet. 1997. Cougar predation on bighorn sheep in southwestern Alberta during winter. Canadian Journal of Zoology 74:771-775.

Russell, K. R. 1978. Mountain lion. Page 107-25 in J. L. Schmidt and D. L. Gilbert eds. Big game of north America: Ecology and management. Stackpole. Harrisburg, PA.

Sawyer, H. and F. Lindzey. 2002. A review of predation of bighorn sheep (*Ovis canadensis*). Wyoming Cooperative Fish and Wildlife Research Unit. Laramie, WY 36 pp.

Schaefer, R.J., S.G. Torres, and V.C. Bleich. 2000. Survivorship and causespecific mortality in sympatric populations of mountain sheep and mule deer. California Fish and Game 86:127-135.

Seidensticker, J. C., M. G. Hornocker, W. V. Wiles, and J. P. Messick. 1973. Mountain lion social organization in the Idaho Primitive Areas. Wildlife Monographs. 35:1-60.

Sinclair, E. A., E. L. Swenson, M. L. Wolfe, D. M. Choate, B. Bates, and K. A. Crandall. 2001. Gene flow estimates in Utah's cougars imply management beyond Utah. Animal Conservation 4:257-264.

Stoner, D. C. 2004. Cougar exploitation levels in Utah: Implications for demographic structure, metapopulation dynamics, and population recovery. M.S. Thesis. Utah State University, Logan, UT 84 pp.

Stoner, D. 2011. Ecology and conservation of cougars in the eastern Great Basin: effects of urbanization, habitat fragmentation, and exploitation. Dissertation, Utah State University, Logan.

Stoner, D. C., M. L. Wolfe, and D. M. Choate. 2006. Cougar exploitation levels in Utah: implications for demographic structure, population recovery, and metapopulation dynamics. Journal of Wildlife Management 70:1588-1600.

Formatted: Font: Italic

Formatted: Font: Italic

Formatted: Font: (Default) Arial Unicode MS

Formatted: Font: (Default) Arial Unicode MS, 12 pt

Stoner, D. C., W. R. Rieth, M. L. Wolfe, M. B. Mecham, and A. Neville. 2008. Long distance dispersal of a female cougar in a basin and range landscape. Journal of Wildlife Management 72:-933-939.

Stoner, D. C., M. L. Wolfe, W. R. Rieth, K. D. Bunnell, S. L. Durham, and L. L. Stoner. 2013a. De facto refugia, ecological traps, and the biogeography of anthropogenic cougar mortality in Utah. Diversity and Distributions 19:1114-1124.

Stoner, D. C., M.L. Wolfe, C. Mecham, M. B. Mecham, S. L. Durham, and D. M. Choate. 2013b. Dispersal behavior of a polygynous carnivore: do cougars (Puma concolor) follow source-sink predictions? Wildlife Biology. 19:289-301.

Sweanor, L. L., K. A. Logan, and M. G. Hornocker. 2000. Cougar dispersal patterns, metapopulation dynamics, and conservation. Conservation Biology 14:798-80.]

UDWR 1999. Utah Cougar Management Plan. Utah Division of Wildlife Resources. Salt Lake City, UT 53 pp.

UDWR. 2010. Utah Cougar Management Plan V. 2. Utah Division of Wildlife Resources. Salt Lake City. 28 pp.

UDWR. 2011. Utah Cougar Management Plan V. 2.1. Utah Division of Wildlife Resources. Salt Lake City. 27 pp.

Van Dyke, F. G., R. H. Brock, and H. G. Shaw. 1986. Use of road track counts as indices of mountain lion presence. Journal of Wildlife Management 50:102-109.

Van Sickle, W. D., and F. G. Lindzey. 1991. Evaluation of a cougar population estimator based on probability sampling. Journal of Wildlife Management 55:738-743.

Van Sickle, W. D., and F. G. Lindzey. 1992. Evaluation of road track surveys for cougars (*Felis concolor*). Great Basin Naturalist 52:232-236.

WAFWA. 2011. Managing Cougars in North America. Western Association of Fish and Wildlife Agencies and Jack H. Berryman Institute. Berryman Institute Press, Logan, Utah. 200 pp.

Formatted: Font: (Default) Arial Unicode MS, 12 pt

Formatted: Font color: Red

Formatted: Body Text Indent 2, Indent: Left: 0", Hanging: 0.5", Pattern: Clear

Wolfe, M. L., D. M. Choate, and D. C. Stoner. 2004. USU / UDWR statewide cougar study – *Final Report*. Utah Division of Wildlife Resources, Salt Lake City, UT.

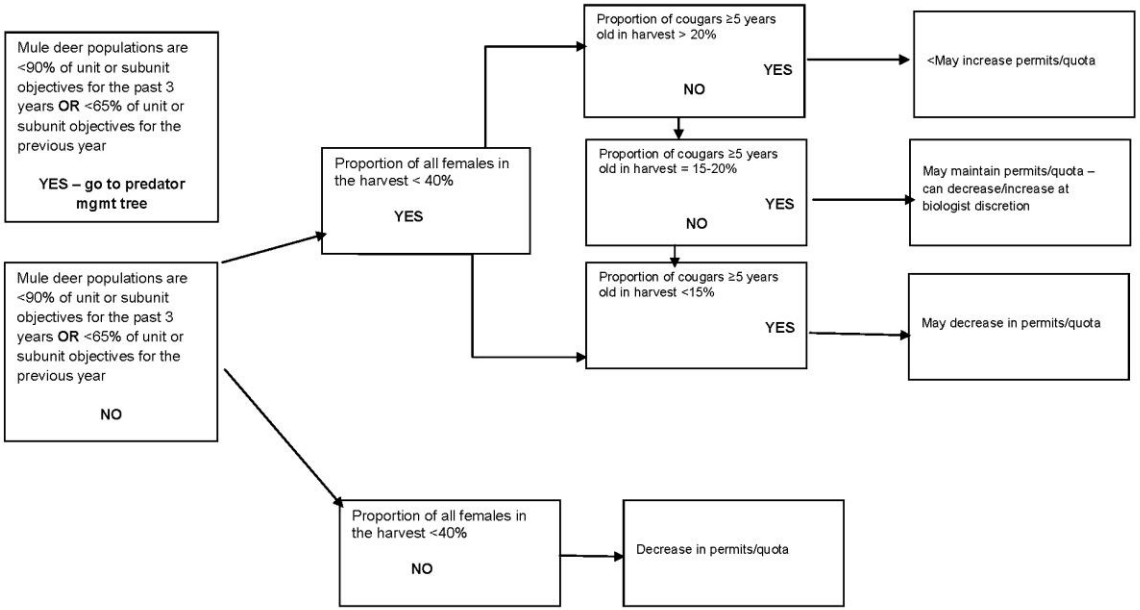
Wolfe, M. L., D. N. Koons, D. C. Stoner, P. Terletzky, E. M. Gese, D. M. Choate, and L. M. Aubry. 2015. Is anthropogenic cougar mortality compensated by changes in natural mortality in Utah? Insight from long-term studies. Biological Conservation 182:187-196.

Wolfe, M. L., E. M. Gese, P. Terletzky, D. C. Stoner, and L. M. Aubry. 2015. Evaluation of harvest indices for monitoring cougar survival and abundance. Journal of Wildlife Management, in review (5/2015).

Formatted: Font: (Default) Arial Unicode MS

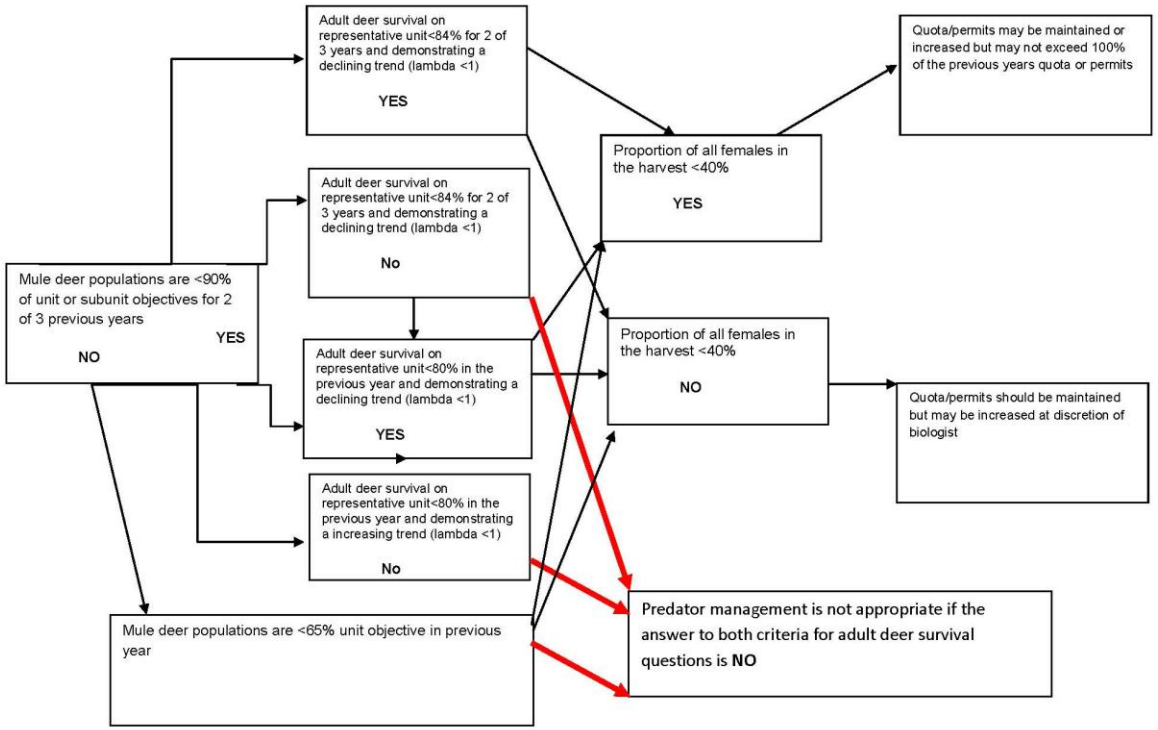
Attachment A: Cougar Management Tree

- **Primary Target** - Proportion of all females in the harvest < 40% (within a management area averaged over 3 years)
- **Secondary Target** – Proportion of cougars ≥5 years old in harvest between 15-20% (within a management area averaged over 3 years)



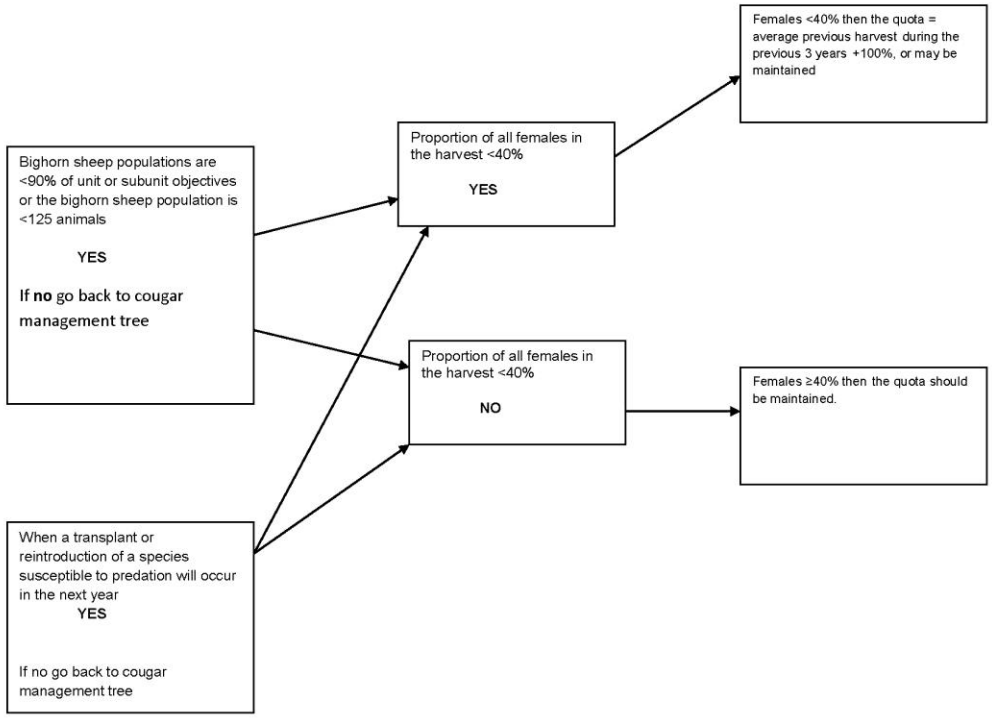
Attachment B: Predator Management Tree - Mule Deer

- **Primary Target -** Proportion of cougar females in the harvest ≥ 40% (within a management area averaged over 3 years)



Attachment C: Predator Management Tree Bighorn Sheep and Transplants

- **Primary Target -** Proportion of cougar females in the harvest > 40% (within a management area averaged over 3 years)



Attachment D: Issues and Concerns

During the meetings of the Cougar Advisory Group the following list of issues and concerns were established by the group members. Subsequent meetings focused on discussion, perceptions, and developing, objectives, strategies and management systems to address issues and concerns.

Outreach / Education

- Need to educate the public about the relationship between cougar and prey populations and the need to integrate management of both predator and prey.
- Need to educate hunters on sex/age identification to help protect females and kittens.
- Need to educate the general public about cougars and cougar safety. Especially in communities situated along the urban-wildland interface.
- Need to improve efforts to educate sportsmen and interest groups on our decision making and recommendations process – need more education prior to RAC and Wildlife Board meetings.

Population Management / Harvest Management

- Need tools to solve nonresident issues (pursuit permits, commercial vs recreational).
- Three year plan and recommendation process was too inflexible and didn't allow for responsiveness to depredation, nuisance or population concern responses .
- Need to simplify the management criteria (performance targets).
- Revisit performance criteria-.
- Need tools designed to protect all females.
- Female performance targets in previous plan made it difficult to address livestock damage and nuisance using sport harvest .
- Ecoregion/cougar management areas were too broad for hunter management.

- Eco-region/cougar management area quotas shut down entire units too quickly and didn't allow for targeted harvest to address problem areas.
- Need to harvest more females in some situations – female subquota reduces ability to manage in balance with prey.
- Need to recognize the importance of adult males in the social demographic .
- Need to recognize social structure as a predictor of population.
- Need more knowledge and information on source-sink populations.
- Does transition on split units from limited entry to harvest objective lead to over harvest.
- Does harvest objective hunting lead to over harvest of females.
- Hard to encourage harvest in areas that are difficult to hunt.
- Belief that population estimates are too high – need to reevaluate population estimates.
- Would like to require GPS location on all cougar harvests.

Predator Management

- Need to integrate cougar and prey (mule deer and bighorn sheep) management .
- Need to move away from predator management plans.
- Need for evaluation of predator management plans and their effectiveness.
- Need to rReduce units under predator management and find a way to balance prey populations with predator populations.
- Need for triggers to be related to livestock depredation, deer survival and populations.

Livestock Depredation

- Need to identify the sex of depredating cougars.
- Develop a way to deal with chronic depredation problems.
- Triggers need to be to related to livestock depredation and deer survival.

Research

- Compare ungulate and cougar populations
    - Develop monitoring system to measure deer herd response to variation in cougar abundance on units under predator management
- Explore mark recapture population estimates (DNA sampling).
- Explore cougar survival estimates for population management in relation to representative deer survival units.
- Need more robust population estimates.
- Identify limiting factors for predator management units.

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

MEMORANDUM

Date: July 16, 2015

To: Utah Wildlife Board/Regional Advisory Council Members

From: Leslie McFarlane, Mammals Program Coordinator

Subject: 2016 COUGAR RECOMMENDATIONS

The attached table summarizes the Utah Division of Wildlife Resources recommended limited entry, split, and harvest objective permit allocations for the 2016 cougar hunts. These recommendations are based upon evaluation of information from 2015 cougar harvests as well as population management data from the previous 3 years mule deer and bighorn sheep populations. The number of permits proposed for 2016 should help achieve and maintain desired objectives for maintaining Utah's cougar populations, addressing nuisance and livestock depredation issues, and hunting opportunity under Utah's cougar management plan.

Highlights:

1) In this recommendation cycle 23 of 49 cougar management units are under predator management. Two of the 23 are under predator management for mule deer, 7 for both deer and bighorn sheep, while the remaining are for bighorn sheep alone.

2) We recommend that the Central Mountains Units (Nebo, Nebo-West Face, Northwest Manti, and Southwest Manti) switch from a split hunting strategy to limited entry.

3) We recommend that the Box Elder, Pilot Mountain and Ogden units go to harvest objective strategy.

4) We recommend that the West Desert, Mountain Ranges go from split to harvest objective strategy.

5) We recommend that the West Desert, Tintic-Vernon go from limited entry to split strategy.

5) We recommend a decrease in permits on the following units: Beaver (10 to 9), Central Mountains-Northwest Manti (10 to 9), Central Mountains-Southwest Manti (6 to 5), Fillmore-Pahvant (9 to 8), Mt. Dutton (14 to 11), and Ogden (15 to 14).

6) We recommend an increase in permits/quotas on the following units: Book Cliffs-Bitter Creek (20 to 38), Box Elder-Pilot Mountain (4 to 6), Cache (15 to 20), East Canyon (4 to 6), Monroe (8 to 9), Morgan-South Rich (6 to 8), Oquirrh-Stansbury (6 to 9), Plateau-Fishlake (10 to 12), Southwest Desert (8 to 9), and Wasatch Mountains-Current Creek (6 to 8).

7) We recommend that the boundary of the Nine Mile management unit be split into two units; the Nine Mile, North and Nine Mile, South. The Nine Mile, South boundary will be combined with the Book Cliffs-Rattlesnake unit.

8) We recommend that the Book Cliffs, Rattlesnake-Nine Mile, South, Kaiparowits, and San Rafael units have an unlimited quota and be known as an unlimited quota unit.

9) We recommend a rule change that will create a cougar control permit which means a harvest objective permit that authorizes a person to take a second cougar on harvest objective units that have an unlimited quota. In order to purchase a control permit an individual must first obtain a harvest objective permit or a limited entry permit for the a split unit that has transitioned to harvest objective status. An individual may retain a cougar lawfully harvested under both permits.

10) We recommend a boundary change on the Oquirrh-Stansbury and West Desert-Tintic-Vernon units to make the cougar boundary consistent with the mule deer boundary.

11) We recommend no changes to permits/quota or harvest strategies on the remaining cougar hunting units not mentioned above.

11) We recommend a decrease in the number of limited entry and split permits from 253 to 243.

12) We recommend an increase in the number of harvest objective permits from 207 to 249.

2015-16 COUGAR HARVEST RECOMMENDATIONS

Unit Name	PMP (Deer/BHS/No)	Last year's permits/quota	Data from the last 3 years (2013-2015) Male harvest	Female harvest	Total harvest	% females	% ≥5 yrs old	Recommended Permits/Quota	Strategy (LE, split, HO)
Beaver	No	10	16	12	28	43%	19%	9	Split
Book Cliffs, Bitter Creek	Deer	20	50	19	69	28%	30%	38	HO
Book Cliffs, Rattlesnake Canyon	Deer/Sheep	Unlimited	1	0	1	0%		Unl	HO
Box Elder, Desert	Deer/Sheep	6	3	1	4	25%	0%	6	Split
Box Elder, Pilot Mountain	Deer/sheep	4	2	0	2	0%	50%	6	HO
Box Elder, Raft River	Deer	6	9	1	10	10%	30%	6	Split
Cache	No	15	18	8	26	31%	21%	20	Split
Central Mountains, Nebo	Deer/sheep	9	18	11	29	38%	28%	9	LE
Central Mountains, Nebo-West Face	Deer/sheep	10	13	11	24	46%	13%	10	LE
Central Mountains, Northeast Manti	No	10	13	7	20	35%	39%	10	Split
Central Mountains, Northwest Manti	No	10	15	11	26	42%	12%	9	LE
Central Mountains, Southeast Manti	No	10	22	9	31	29%	23%	10	Split
Central Mountains, Southwest Manti	No	6	14	10	24	42%	26%	5	LE
Chalk Creek/Kamas	No	8	15	5	20	25%	17%	8	LE
East Canyon	No	4	8	4	12	33%	9%	6	LE
East Canyon, Davis	Other	5	3	4	7	57%	29%	5	Split
Fillmore, Oak Creek	Sheep	12	7	1	8	13%	38%	12	HO
Fillmore, Pahvant	No	9	19	12	31	39%	29%	8	Split
Henry Mountains	Sheep	12	10	9	19	47%	12%	12	HO
Kaiparowits	Sheep	Unlimited	3	1	4	25%	25%	UNL	HO
La Sal Mountains	Deer/sheep	15	13	13	26	50%	41%	15	HO
Monroe	No	8	14	4	18	22%	7%	9	Split
Morgan-South Rich	No	6	9	7	16	44%	33%	8	LE
Mt. Dutton	No	14	6	9	15	60%	25%	11	Split
Nine Mile	Sheep	20	26	17	43	40%	26%	20	HO
North Slope, Three Corners	Sheep	10	8	4	12	33%	27%	10	HO
North Slope, West Daggett/Summit	Sheep	10	6	7	13	54%	33%	10	HO
Ogden	No	15	14	11	25	44%	40%	14	HO
Oquirrh-Stansbury	Sheep	6	15	3	18	17%	50%	9	LE
Panguitch Lake	No	10	18	9	27	33%	14%	10	Split
Paunsaugunt	No	8	10	5	15	33%	38%	10	Split
Pine Valley, North	No	8	1	1	2	50%		8	Split
Pine Valley, South	Sheep	10	5	2	7	29%		10	HO
Plateau, Boulder	No	11	21	11	32	34%	21%	11	Split
Plateau, Fishlake	No	10	24	9	33	27%	25%	12	Split
Plateau, Thousand Lakes	No	4	3	3	6	50%	20%	4	Split
San Juan	Deer/Sheep	25	31	21	52	40%	17%	25	HO
San Rafael	Sheep	Unlimited	2	5	7	71%	50%	UNL	HO
South Slope, Vernal/Bonanza/Diamond	No	18	26	15	41	37%	20%	18	HO
South Slope, Yellowstone	No	10	11	5	16	31%	20%	10	HO
Southwest Desert	No	8	10	2	12	17%	27%	9	Split
Wasatch Mountains, Avintaquin	Sheep	15	25	12	37	32%	26%	15	HO
Wasatch Mountains, Cascade	Sheep	5	10	7	17	41%	0%	5	HO
Wasatch Mountains, Currant Creek	No	6	14	1	15	7%	43%	8	LE
Wasatch Mountains, Timpanogos	Sheep	5	9	4	13	31%	18%	5	HO
Wasatch Mountains, West	No	9	9	5	14	36%	38%	9	LE
West Desert, Mountain Ranges	No	4	0	0	0			4	HO
West Desert, Tintic-Vernon	No	4	5	0	5	0%	0%	4	Split
Zion	Sheep	20	21	12	33	36%	12%	20	HO
STATEWIDE TOTALS		460	625	340	965	35%	26%	492	

R657. Natural Resources, Wildlife Resources.
R657-10. Taking Cougar.
R657-10-1. Purpose and Authority.

(1) Under authority of Sections 23-14-18 and 23-14-19 of the Utah Code, the Wildlife Board has established this rule for taking and pursuing cougar.

(2) Specific dates, areas, number of permits, limits, and other administrative details which may change annually are published in the guidebook of the Wildlife Board for taking cougar.

R657-10-2. Definitions.

(1) Terms used in this rule are defined in Section 23-13-2.

(2) In addition:

(a) "Canned hunt" means that a cougar is treed, cornered, held at bay or its ability to escape is otherwise restricted for the purpose of allowing a person who was not a member of the initial hunting party to arrive and take the cougar.

(b) “Compensation” means anything of economic value in excess of $100 that is paid, loaned, granted, given, donated, or transferred to a dog handler for or in consideration of pursuing cougar for any purpose.

(c) "Cougar" means Puma concolor, commonly known as mountain lion, lion, puma, panther or catamount.

(d) “Cougar control permit” means a harvest objective permit that authorizes a person to take a second cougar on harvest objective units that have an unlimited quota.

(e) "Cougar pursuit permit" means a permit that authorizes a person to pursue cougar during designated seasons.

([~~e~~]f) “Dog handler” means the person in the field that is responsible for transporting, releasing, tracking, controlling, managing, training, commanding and retrieving the dogs involved in the pursuit. The owner of the dogs is presumed the dog handler when the owner is in the field during pursuit.

([~~f~~]g) "Evidence of sex" means the sex organs of a cougar, including a penis, scrotum or vulva.

([~~g~~]h) "Green pelt" means the untanned hide or skin of any cougar.

([~~h~~]i) “Harvest[~~-~~] objective hunt” means any hunt that is identified as harvest[~~-~~] objective in the hunt table of the guidebook for taking cougar.

([~~i~~]j) “Harvest[~~-~~] objective permit” means any permit valid on harvest[~~-~~] objective units, including limited-entry permits for split units after the split-unit transition date.

([~~j~~]k) “Immediate family member” means a livestock owner’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.

([~~k~~]l) "Kitten" means a cougar less than one year of age.

([~~l~~]m) “Kitten with spots” means a cougar that has obvious spots on its sides or its back.

([~~m~~]n) "Limited entry hunt" means any hunt listed in the hunt tables of the guidebook of the Wildlife Board for taking cougar, which is identified as limited entry and does not include harvest objective hunts.

([~~n~~]o) "Limited entry permit" means any permit obtained for a limited entry hunt by any means, including conservation permits and sportsman permits.

([~~o~~]p) “Private lands” means any lands that are not public lands, excluding Indian trust lands.

([~~p~~]q) “Public lands” means any lands owned by the state, a political subdivision or independent entity of the state, or the United States, excluding Indian trust lands, that are open to the public for purposes of engaging in pursuit.

([~~q~~]r) "Pursue" means to chase, tree, corner or hold a cougar at bay.

([~~r~~]s) “Split unit” means a cougar hunting unit that begins as a limited entry unit then transitions into a harvest objective unit.

([~~s) -~~]t) “Unlimited quota unit” means a harvest objective unit that does not have a limit on the number of cougar that may be harvested during the open season.

(u) "Waiting period" means a specified period of time that a person who has obtained a cougar permit must wait before applying for any other cougar permit.

([~~t~~]v) “Written permission” means written authorization from the owner or person in charge to enter upon private lands and must include:

(i) the name and signature of the owner or person in charge;

(ii) the address and phone number of the owner or person in charge;

(iii) the name of the dog handler given permission to enter the private lands;

(iv) a brief description of the pursuit activity authorized;

(v) the appropriate dates; and

(vi) a general description of the property.

R657-10-3. Permits for Taking Cougar.

(1)(a) To harvest a cougar, a person must first obtain a valid limited entry cougar permit[~~ or a~~], harvest -objective cougar permit, or cougar control permit, for the specified management units as provided in the guidebook of the Wildlife Board for taking cougar.

(b) Any person who obtains a limited entry cougar permit[~~ or a~~], harvest objective cougar permit, or cougar control permit, may pursue cougar on the unit for which the permit is valid.

(2) A person may not apply for or obtain more than one cougar permit for the same season, except:

(a) as provided in Subsection R657-10-25(3); [~~or~~]

(b) as provided in Subsection R657-10-33; or

(c) if the person is unsuccessful in the limited entry drawing, the person may purchase a harvest objective or cougar control permit.

(3) Any cougar permit purchased after the season opens is not valid until three days after the date of purchase.

(4) To obtain a cougar limited entry permit, harvest objective permit, cougar control permit, or pursuit permit, a person must possess a Utah hunting or combination license.

R657-10-4. Permits for Pursuing Cougar.

(1)(a) To pursue cougar without a limited entry, harvest objective, or cougar control permit, the dog handler must:

(i) obtain a valid cougar pursuit permit from a division office; or

(ii) possess the documentation and certifications required in R657-10-25(2) to pursue cougar for compensation.

(b) A cougar pursuit permit or exemption there from does not allow a person to kill a cougar.

(2) Residents and nonresidents may purchase cougar pursuit permits consistent with the requirements of this rule and the guidebooks of the Wildlife Board.

(3) To obtain a cougar pursuit permit, a person must possess a Utah hunting or combination license.

R657-10-9. Prohibited Methods.

(1) Cougar may be taken or pursued only during open seasons and using methods prescribed in this rule and the guidebook of the Wildlife Board for taking cougar. Otherwise, under the Wildlife Resources Code, it is unlawful for any person to possess, capture, kill, injure, drug, rope, trap, snare or in any way harm or transport cougar.

(2) After a cougar has been pursued, chased, treed, cornered or held at bay, a person may not, in any manner, restrict or hinder the animal's ability to escape.

(3) A person may not engage in a canned hunt.

(4) A person may not take any wildlife from an airplane or any other airborne vehicle or device or any motorized terrestrial or aquatic vehicle, including snowmobiles and other recreational vehicles.

(5) Electronic locating equipment may not be used to locate [~~cougars~~]cougar wearing electronic radio devices.

R657-10-12. Use of Dogs.

(1) Dogs may be used to take or pursue cougar only during open seasons as provided in the guidebook of the Wildlife Board for taking cougar.

2) A dog handler may pursue cougar provided he or she possesses:

(a) a valid[~~-limited entry~~] cougar permit issued to the dog handler;

(b) a valid cougar pursuit permit; or

(c) the documentation and certifications required in R657-10-25(2) to pursue cougar for compensation.

(3) When dogs are used in the pursuit of a cougar, the licensed hunter intending to take the cougar must be present when the dogs are released and must continuously participate in the hunt thereafter until the hunt is completed.

(4) When dogs are used to take a cougar and there is not an open pursuit season, the dog handler must have:

(a) a [~~limited entry~~]valid cougar permit issued to the dog handler for the unit being hunted;

(b)(i) a valid cougar pursuit permit; and

(ii) be accompanied, as provided in Subsection (3), by a hunter possessing a[~~limited entry~~] cougar permit for the area; or

(c)(i) the documentation and certifications required in R657-10-25(2) to pursue cougar for compensation and

(ii) be accompanied, as provided in Subsection (3), by a paying client possessing a [~~limited entry~~]valid cougar permit for the area.

(5) A dog handler may pursue cougar under:

(a) a cougar pursuit permit only during the season and in the areas designated by the Wildlife Board in guidebook open to pursuit;

(b) a [~~limited entry~~]valid cougar permit only during the season and in the area designated by the Wildlife Board in guidebook for that permit; or

(c) the pursuit for compensation provisions in this rule only during the seasons and in the areas designated by the Wildlife Board in guidebook open to pursuit.

(6) When dogs are used to take cougar and there is not an open pursuit season, the owner and handler of the dogs must have a valid pursuit permit and be accompanied by a licensed hunter as provided in Subsection (3), or have a cougar permit.

R657-10-21. Livestock Depredation and Human Health and Safety.

(1) If a cougar is harassing, chasing, disturbing, harming, attacking or killing livestock, or has committed such an act within the past 72 hours:

(a) in depredation cases, the livestock owner, an immediate family member or an employee of the owner on a regular payroll, and not hired specifically to take cougar, may kill the cougar;

(b) a landowner or livestock owner may notify the division of the depredation or human health and safety concerns, who shall authorize a local hunter to take the offending cougar or notify a USDA, Wildlife Services specialist; or

(c) the livestock owner may notify a USDA, Wildlife Services specialist of the depredation who may take the depredating cougar.

(2) Depredating cougar may be taken at any time by a USDA, Wildlife Services specialist, supervised by the Wildlife Services program, while acting in the performance of the person's assigned duties and in accordance with procedures approved by the division.

(3) A depredating cougar may be taken by those persons authorized in Subsection (1)(a) with:

(a) any weapon authorized for taking cougar; or

(b) with the use of snares only with written authorization from the director of the division and subject to all the conditions and restrictions set out in the written authorization.

(i) The option in Subsection (3)(b) may only be authorized in the case of a chronic depredation situation where numerous livestock have been killed by a depredating cougar and must be verified by Wildlife Services or division personnel.

(4)(a) The Division may issue depredation permits to take cougar on specified private lands and public land grazing allotments with a chronic depredation situation where numerous livestock have been killed by cougar.

(b) The Division may:

(i) issue one or more depredation permits to the affected livestock owner or a designee, provided the livestock owner does not receive monetary consideration from the designee for the opportunity to use the depredation permit;

(ii) determine the legal weapons and methods of take allowed; and

(iii) specify the area and season that the permit is valid.

(5)(a) Any cougar taken under Subsection (1)(a) or (4)(a) shall remain the property of the state and must be delivered to a division office or employee within 72 hours.

(b) The division may issue a cougar damage permit to a person who has killed a depredating cougar under Subsection (1)(a) that authorizes the person to keep the carcass.

(c) A person that takes a cougar under Subsection (1)(a) or (4)(a) may acquire and use a limited entry permit or harvest objective cougar permit in the same year.

(d) Notwithstanding Subsections (5)(b) and (5)(c), a person may retain no more than one cougar annually.

(6)(a) Hunters interested in taking depredating cougar as provided in Subsection (1)(b) may contact the division.

(b) Hunters will be contacted by the division to take depredating cougar as needed.

R657-10-23. Taking Cougar.

(1)(a) [~~A~~]For each permit issued, a person may [~~take~~]only take one cougar during the season and from the area specified on the permit.

(b) Limited entry permits may be obtained by following the application procedures provided in this rule and the guidebook of the Wildlife Board for taking cougar.

(c) Harvest -objective permits may be purchased on a first-come, first-served basis as provided in guidebook of the Wildlife Board for taking cougar.

(d) Cougar control permits may be purchased as provided in the guidebook of the Wildlife Board for taking cougar.

(2) A person may not:

(a) take or pursue a female cougar with kittens or kittens with spots; or

(b) repeatedly pursue, chase, tree, corner, or hold at bay, the same cougar during the same day after the cougar has been released.

(3) Any cougar may be taken during the prescribed seasons, except a kitten with spots, or any cougar accompanied by kittens, or any cougar accompanied by an adult.

(4) A person may not take a cougar wearing a radio collar from any areas that are published in the guidebook of the Wildlife Board for taking cougar.

(5) The division may authorize hunters who have obtained a [~~limited entry~~]valid cougar permit to take cougar in a specified area of the state in the interest of protecting wildlife from depredation.

(6) Season dates, closed areas, harvest objective permit areas, unlimited quota units, and limited entry permit areas are published in the guidebook of the Wildlife Board for taking cougar.

(7)(a) A person who obtains a limited entry cougar permit on a split unit may hunt on all harvest objective units after the date split units transition into harvest objective units. The split unit transition date is provided in the guidebook of the Wildlife Board for taking cougar.

(b) A person who obtains a limited entry cougar permit on a split unit and chooses to hunt on any harvest objective unit after the transition date is subject to all harvest objective unit closure requirements provided in Sections R657-10-[~~34 and 657-10-35.~~]29.

R657-10-25. Cougar Pursuit.

(1)(a) Except as provided in rule R657-10-3(1)(b) and Subsection (2), cougar may be pursued only by persons who have obtained a cougar pursuit permit.

(b) The cougar pursuit permit does not allow a person to:

(i) kill a cougar; or

(ii) pursue cougar for compensation.

(c) A person may pursue cougar for compensation only as provided in Subsection (2).

(d) To obtain a cougar pursuit permit, a person must possess a Utah hunting or combination license.

(2)(a) A person may pursue cougar on public lands for compensation, provided the dog handler:

(i) receives compensation from a client or customer to pursue cougar;

(ii) is a licensed hunting guide or outfitter under Title 58, Chapter 79 of the Utah Code and authorized to pursue cougar;

(iii) possesses on his or her person the Utah hunting guide or outfitter license;

(iv) possesses on his or her person all permits and authorizations required by the applicable public lands managing authority to pursue cougar for compensation; and

(v) is accompanied by the client or customer at all times during pursuit.

(b) A person may pursue cougar on private lands for compensation, provided the dog handler:

(i) receives compensation from a client or customer to pursue cougar;

(ii) is accompanied by the client or customer at all times during pursuit; and

(iii) possesses on his or her person written permission from all private landowners on whose property pursuit takes place.

(c) A person who is an employee or agent of the Division of Wildlife Services may pursue cougar on public lands and private lands while acting within the scope of their employment.

(3) A pursuit permit is not required to pursue cougar under Subsection (2).

(4)(a) A person pursuing cougar for compensation under subsections (2)(a) and (2)(b) shall comply with all other requirements and restrictions in statute, rule and the guidebooks of the Wildlife Board regulating the pursuit and take of cougar.

(b) Any violation of, or failure to comply with the provisions of Title 23 of the Utah Code, this rule, or the guidebooks of the Wildlife Board may be grounds for suspension of the privilege to pursue cougar for compensation under this subsection, as determined by a division hearing officer.

(5) A cougar pursuit permit authorizes the holder to pursue cougar with dogs on any unit open to pursuing cougar during the seasons and under the conditions prescribed by the Wildlife Board in guidebook.

(6) A person may not:

(a) take or pursue a female cougar with kittens or kittens with spots;

(b) repeatedly pursue, chase, tree, corner or hold at bay, the same cougar during the same day; or

(c) possess a firearm or any device that could be used to kill a cougar while pursuing cougar.

(i) The weapon restrictions set forth in the subsection do not apply to a person licensed to carry a concealed weapon in accordance with Title 53, Chapter 5, Part 7 of the Utah Code, provided the person is not utilizing or attempting to utilize the concealed weapon to injure or kill cougar.

(7) If eligible, a person who has obtained a cougar pursuit permit may also obtain a limited entry cougar permit[~~or~~], harvest objective cougar permit, or cougar control permit.

(8) Cougar may be pursued only on limited entry units[~~or~~], harvest objective units, or unlimited quota units during the dates provided in the guidebook of the Wildlife Board for taking cougar.

(9) A cougar pursuit permit is valid on a calendar year basis.

(10) A person must possess a valid hunting or combination license to obtain a cougar pursuit permit.

R657-10-27. Harvest Objective General Information.

(1) Harvest -objective permits are valid only for [~~the~~]open harvest -objective management units and for the specified seasons published in the guidebook of the Wildlife Board for taking cougar.

(2) Harvest -objective permits are not valid in a specified management unit after the harvest objective has been met for that unit.

R657-10-28. Harvest -Objective Permit Sales.

(1) Harvest -objective permits are available on a first-come, first-served basis beginning on the date published in the guidebook of the Wildlife Board for taking cougar.

(2) Any cougar permit purchased after the season opens is not valid until three days after the date of purchase unless specifically authorized by the division.

(3) A person must possess a valid hunting or combination license to obtain a Harvest objective permit.

R657-10-29. Harvest -Objective Unit Closures.

(1) To hunt in a harvest objective unit, a hunter must call 1-888-668-LION or visit the division's website to verify that the harvest objective unit is still open. The phone line and website will be updated each day by 12 noon. Updates become effective the following day thirty minutes before official sunrise.

(2) Harvest objective units are open to hunting until:

(a) the quota for that harvest objective unit is met and the division closes the unit; or

(b) the end of the hunting season as provided in the guidebook of the Wildlife Board for taking cougar.

(3) Upon closure of a harvest objective unit, a hunter may not take or pursue cougar except as provided in Section R657-10-25.

R657-10-30. Harvest -Objective Unit Reporting.

(1) Any person taking a cougar with a harvest objective permit or a cougar control permit must report to the division, within 48 hours, where the cougar was taken and have a permanent tag affixed pursuant to Section R657-10-15.

(2) Failure to accurately report the correct harvest objective[~~management~~] unit where the cougar was killed is unlawful.

(3) Any conviction for failure to accurately report, or aiding or assisting in the failure to accurately report as required in Subsection (1) shall be considered prima facie evidence of a knowing, intentional or reckless violation for purposes of permit suspension.

R657-10-33. Cougar Control Permits.

(1)(a) The division, with approval of the Wildlife Board, may identify a harvest objective unit as an unlimited quota unit.

(b) An individual may acquire a cougar control permit to hunt on an unlimited quota unit if they first obtain:

(i) a harvest objective permit; or

(ii) a limited entry permit for a split unit and the split unit has transitioned to harvest objective status.

(c) An individual may retain a cougar lawfully harvested under a cougar control permit regardless of whether they lawfully harvested and retained a cougar under a permit listed in Subsections (1)(b)(i) or (ii).

(2) An individual may only acquire one cougar control permit each season.

(3) Cougar control permits are only valid within the boundaries of unlimited quota units and during the dates described on the permit and in the guidebook of the Wildlife Board for taking cougar.

KEY: wildlife, cougar, game laws
Date of Enactment or Last Substantive Amendment: November 7, 2014
Notice of Continuation: August 16, 2011
Authorizing, and Implemented or Interpreted Law: 23-14-18; 23-14-19

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

MEMORANDUM

Date: July 16, 2015

To: Regional Advisory Council Member and Wildlife Board

From: Leslie McFarlane, Mammals Program Coordinator

Subject: 2016 FURBEARER SEASON DATES

The Division recommends the following regarding the management of furbearers in Utah:

Furbearer Seasons by Species:

Beaver and Mink:
September 26, 2015 to April 6, 2016

Badger, gray fox, kit fox, ringtail, spotted skunk, and weasel:
September 26, 2015 to February 7, 2016

Marten
September 26, 2015 to February 7, 2016

Bobcat

RECOMMENDATION

The Division recommends the following bobcat permit numbers and season lengths for 2015-2016:

Permits:
No cap on the number of tags sold. Limit of six tags per individual.

Season:
November 18, 2015 to February 7, 2016

1594 West North Temple, Suite 2110, PO Box 146301, Salt Lake City, UT 84114-6301
telephone (801) 538-4700 • facsimile (801) 538-4709 • TTY (801) 538-7458 • *www.wildlife.utah.gov*

JUSTIFICATION

These permit numbers and season dates are recommended because the net performance targets outside of the desired range is <2, which in accordance with the Bobcat Management Plan. The number of juveniles in the harvest is slightly higher than the target range and the %survival is also higher than the desired range, which is a desirable target. These two variables cancel each other out. The percent female is within the desired range while set-days per bobcat is greater than the desired range. This leaves a net of 1 performance target outside of the desired range. In accordance with the Bobcat Management plan when less than 2 variables are outside the target range it is recommended that recommended tags and seasons return to baseline.

The recommended permits for 2015-2016 are consistent with those that were adopted in previous years. Source Data and Target Ranges:

Variable	2012	2013	2014	2015	Target
% Juvenile	35	35	46	60	42-56
% Survival	70	75	70	74	65-72
% Female	45	48	45	45	41-45
Set-day/bobcat	400	392	333	373	171-220

FURBEARER RULE CHANGES

We recommend that a person may not possess a green pelt or unskinned carcass from a bobcat or marten that does not have a permanent tag affixed after the first Friday in March.

Muskrat Trapping on State Waterfowl Management Areas

We recommend a change in rule that will give the Division the ability to contract with individuals interested in trapping muskrats on State Waterfowl Management Areas (WMA). Trapping on State Waterfowl Management Areas is not a recreational opportunity and is used for management purposes to protect:

- Improvements to DWR property from damage (burrowing on dikes etc).
- Prevent predation on nesting waterfowl.

The Division will collect proposals from the public interested in providing trapping services on WMA's. The proposal with the greatest benefit to DWR and sportsmen will be selected. Applicants must possess trapping experience, familiarity with the WMA's, and an ability to focus on areas where removal is needed.

R657. Natural Resources, Wildlife Resources.
R657-11. Taking Furbearers.
R657-11-1. Purpose and Authority.

(1) Under authority of Sections 23-14-18 and 23-14-19, the Wildlife Board has established this rule for taking furbearers.

(2) Specific dates, areas, number of permits, limits, and other administrative details which may change annually are published in the guidebook of the Wildlife Board for taking furbearers.

R657-11-7. Permanent Possession Tags for Bobcat and Marten.

(1) A person may not:

(a) possess a green pelt or unskinned carcass from a bobcat or marten that does not have a permanent tag affixed after the [~~Saturday following the close of the bobcat trapping season and marten seasons~~]first Friday in March ;

(b) possess a green pelt or the unskinned carcass of a bobcat with an affixed temporary bobcat possession tag issued to another person, except as provided in Subsections (5) and (6); or

(b) buy, sell, trade, or barter a green pelt from a bobcat or marten that does not have a permanent tag affixed.

(2) Bobcat and marten pelts must be delivered to a division representative to have a permanent tag affixed and to surrender the lower jaw.

(3) Bobcat and marten pelts may be delivered to the following division offices, by appointment only, during the dates published in the guidebook of the Wildlife Board for taking furbearers:

(a) Cedar City - Regional Office;
(b) Ogden - Regional Office;
(c) Price - Regional Office;
(d) Salt Lake City - Salt Lake Office;
(e) Springville - Regional Office; and
(f) Vernal - Regional Office.

(4) There is no fee for permanent tags.

(5) Bobcat and marten which have been legally taken may be transported from an individual's place of residence by an individual other than the fur harvester to have the permanent tag affixed; bobcats must be tagged with a temporary possession tag and accompanied by a valid furbearer license belonging to the fur harvester.

(6) Any individual transporting a bobcat or marten for another person must have written authorization stating the following:

(a) date of kill;
(b) location of kill;
(c) species and sex of animal being transported;
(d) origin and destination of such transportation;
(e) the name, address, signature and furbearer license number of the fur harvester;
(f) the name of the individual transporting the bobcat or marten; and
(g) the fur harvester's marten permit number if marten is being transported.

(7) Green pelts of bobcats and marten legally taken from outside the state may not be possessed, bought, sold, traded, or bartered in Utah unless a permanent tag has

been affixed or the pelts are accompanied by a shipping permit issued by the wildlife agency of the state where the animal was taken.

(8)(a) Fur harvesters taking marten are requested to present the entire skinned carcass intact, including the lower jaw, to the division in good condition when the pelt is presented for tagging.

(b) "Good condition" means the carcass is fresh or frozen and securely wrapped to prevent decomposition so that the tissue remains suitable for lab analysis.

R657-11-27. [~~Applications for Trapping~~]Approval to Trap on State Waterfowl Management Areas.

(1)(a) [~~Applications for trapping on state waterfowl management areas are available at the division's internet address, and must be completed and submitted online by the date prescribed in the respective guidebook of the Wildlife Board~~]Trapping on state waterfowl management areas is a property management tool used to protect waterfowl populations and infrastructure improvements found on the property.

([~~i) Applicants submitting more than one application per calendar year will be rejected.~~]b) The authorization to trap on state waterfowl management areas shall be provided through a certificate of registration that is awarded to an individual or individuals through a competitive proposal solicitation process.

(c) On or before October 1 of each year, the division shall publicly notice which state waterfowl management areas are available for proposal by publishing the notice on its website and by publishing a notice in a newspaper of general circulation at least once a week for two consecutive weeks.

(d) The notification and advertising shall include:

(i) the deadline for applying for the certificate of registration;

(ii) a general description of the trapping area authorized under the certificate of registration;

(iii) the desired form of compensation to the division, whether monetary, in-kind, or both; (iv) the division's management objectives for the state waterfowl management area; and (v) any special considerations or limitations the division will require of the trapper or trappers while they are on the state waterfowl management area.

(2)(a) Applications must include the following:

(i) a nonrefundable application fee;

(ii) the name of the state waterfowl management area being applied for;

(iii) a description of the applicant's familiarity with the state waterfowl management area being applied for;

(iv) a list of the individuals who will conduct trapping activities under the certificate of registration;

(v) a description of each individual's experience trapping and their ability to utilize removal of targeted species to protect waterfowl populations and infrastructure found at state waterfowl management areas;

(vi) the projected number of animals, specifically muskrat, that may be removed via trapping;

(vii) how the proposal accomplishes the identified management objectives for the waterfowl management area;

(viii) how the proposal conforms with any special considerations or limitations identified by the division in its public notice; and

(viii) a bid amount to be paid to the Division in exchange for the authorization to trap on the state waterfowl management area.

([~~b) Applicants~~]c) All individuals listed on the application who will conduct trapping activities under the certificate of registration must meet all age requirements, proof of hunter education and furharvester requirements, and youth restrictions as provided in Utah Code 23-19-24, 23-19-11 and 23-20-20.

([~~c) Applicants may select up to two WMA choices on the application.~~]d) The bid amount described in Subsection (vi) above may include non-monetary, in-kind contributions.

[~~(d) Hunt choices must be listed in order of preference.~~]

[~~(e) Up to three trappers may apply as a group for a single permit.~~]

[~~(f) A person who applies for or obtains a permit must notify the division of any change in mailing address, residency, telephone number, email address, and physical description.~~]

[~~(g) If the number of applications received for a WMA exceeds the number of permits available, a drawing will be held. This drawing will determine successful or unsuccessful applicants.~~]

[~~(i) each application will be assigned a computerized random drawing number.~~]

[~~(ii) a drawing order will be established by arranging applications beginning with the lowest random drawing number.~~]

[~~(iii) in sequence of the drawing order, the applicant's first selection will be considered. If a permit is not available for that selection, that applicant's second selection will be considered.~~]

[~~(iv) remaining permits will be offered to the alternate list beginning with the first eligible alternate.~~]

[~~(A) the alternate list is comprised of unsuccessful applicants.~~]

[~~(B) the alternate list is arranged in order beginning with the lowest drawing number.~~]

[~~(2) Permits, trapping dates and boundaries~~]

([~~a) Open areas, trapping dates, allowable species, fees, and number of permits shall be determined by the waterfowl management area superintendent.~~]3)(a) Late or incomplete applications may be rejected.

(b) [~~Superintendents of waterfowl management areas offering more than one trapping permit will determine the trapping boundaries of each permit~~]A separate application must be submitted for each state waterfowl management area an individual wishes to trap on.

(c) [~~Only the trapper or trappers listed on the permit may trap on the waterfowl management area.~~]

[~~(d) All trappers must trap under the supervision of the waterfowl management area superintendent. Permits are not valid until signed by the superintendent in charge of the area to be trapped~~]In the event that there is more than one application for a

certain state waterfowl management area, the division will analyze each application and select a successful applicant or applicants whose proposal best accomplishes the division objectives identified in the public notice.

(4) The selected applicant will be issued a certificate of registration authorizing trapping activities on the state waterfowl management area for a period of up to two years.

([~~e) Violation of this section is cause for forfeiture of all trapping privileges on management areas for that trapping year.~~]5) A certificate of registration issued pursuant to this Part may be revoked, suspended, or terminated consistent with the terms of Utah Code 23-19-9 and Utah Admin. Code R657-26.

[~~(f) Applicants may be notified of drawing results by the date prescribed in the respective guidebook of the Wildlife Board.~~]

KEY: wildlife, furbearers, game laws, wildlife law
Date of Enactment or Last substantive Amendment: November 7, 2014
Notice of Continuation: August 16, 2010
Authorizing, and Implementing or Interpreted Law: 23-14-18; 23-14-19; 23-13-17

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 14, 2015

TO: Utah Wildlife Board/Regional RAC Members

FROM: Jordan Nielson

SUBJECT : Changes to Administrative Rule R657-60

The Division requests your consideration to the following changes to R657-60, Aquatic Invasive Species Interdiction.

The Division recommends an addition to the definition for accepted decontamination practices to allow for alternate forms of decontamination for business entities authorized through a certificate of registration. The Division also recommends a modification to the boundary of Lake Powell on the Colorado River to the boundary of Glen Canyon National Recreation Area instead of the Spanish Bottom in Canyonlands National Park. It also recommends defining in rule the unlawful nature of destroying inspection certifications applied to watercraft leaving a quagga mussel affected waterbody or a watercraft inspection station.

1594 West North Temple, Suite 2110, PO Box 146301, Salt Lake City, UT 84114-6301
telephone (801) 538-4700 • facsimile (801) 538-4709 • TTY (801) 538-7458 • *www.wildlife.utah.gov*

UTAH DNR WILDLIFE RESOURCES

R657. Natural Resources, Wildlife Resources.
R657-60. Aquatic Invasive Species Interdiction.
R657-60-1. Purpose and Authority.

(1) The purpose of this rule is to define procedures and regulations designed to prevent and control the spread of aquatic invasive species within the State of Utah.

(2) This rule is promulgated pursuant to authority granted to the Wildlife Board in Sections 23-27-401, 23-14-18, and 23-14-19.

R657-60-2. Definitions.

(1) Terms used in this rule are defined in Section 23-13-2 and 23-27-[~~101.~~]102.

(2) In addition:

(a) "Conveyance" means a terrestrial or aquatic vehicle, including a vessel, or a vehicle part that may carry or contain a Dreissena mussel.

(b) "Decontaminate" or “Decontaminated” means to comply with one of the following methods:

(i) [~~Self~~]If no adult mussels are attached to the conveyance after exiting the water body, an owner or operator may self-decontaminate equipment or a conveyance that has been in an infested water in the previous 30 days by:

(A) removing all plants, fish, [~~mussels~~]and mud from the equipment or conveyance;

(B) draining all water from the equipment or conveyance, including water held in ballast tanks, bilges, livewells, and motors; and

(C) drying the equipment or conveyance for no less than 7 days in June, July and August;18 days in September, October, November, March, April and May; 30 days in December, January and February; or expose the equipment or conveyance to sub-freezing temperatures for 72 consecutive hours; or

(ii) Professionally decontaminate equipment or a conveyance that has been in an infested water in the previous 30 days by:

(A) Using a professional decontamination service approved by the division to apply scalding water (140 degrees Fahrenheit) to completely wash the equipment or conveyance and flush any areas where water is held, including ballast tanks, bilges, livewells, and motors[~~.~~]; or

(iii) Complying with all protocols identified in a certificate of registration.

(c) "Detected Water" or "Detected" means a water body, facility, or water supply system where the presence of a Dreissena mussel is indicated in two consecutive sampling events using visual identification or microscopy and the results of each sampling event is confirmed in two polymerase chain reaction tests, each conducted at independent laboratories.

(d) "Dreissena mussel" means a mussel of the genus Dreissena at any life stage, including a zebra mussel, a quagga mussel and a Conrad's false mussel.

(e) "Controlling entity" means the owner, operator, or manager of a water body, facility, or a water supply system.

(f) "Equipment" means an article, tool, implement, or device capable of carrying or containing water or Dreissena mussel.

(g) "Facility" means a structure that is located within or adjacent to a water body.

(h) "Infested Water" or "Infested" means a water body, facility, water supply system, or geographic region where the presence of multiple age classes of attached Dreissena mussels is indicated in two or more consecutive sampling events using visual detection or microscopy and

the result of each sampling event is confirmed in two polymerase chain reaction tests, each conducted at independent laboratories.

(i) "Juvenile or adult Dreissena mussel" means a macroscopic Dreissena mussel that is not a veliger.

(j) "Suspected Water" or "Suspected" means a water body, facility, or water supply system where the presence of a Dreissena mussel is indicated through a single sampling event using visual identification or microscopy and the result of that sampling event is confirmed in two independent polymerase chain reaction tests, each conducted at independent laboratories.

(k) "Veliger" means a microscopic, planktonic larva of Dreissena mussel.

(l) "Vessel" means every type of watercraft used or capable of being used as a means of transportation on water.

(m) "Water body" means natural or impounded surface water, including a stream, river, spring, lake, reservoir, pond, wetland, tank, and fountain.

(n) "Water supply system" means a system that treats, conveys, or distributes water for irrigation, industrial, wastewater treatment, or culinary use, including a pump, canal, ditch or, pipeline.

(o) "Water supply system" does not include a water body.

R657-60-5. Transportation of equipment and conveyances that have been in waters containing Dreissena mussels.

(1) The owner, operator, or possessor of any equipment or conveyance that has been in an infested water or in any other water subject to a closure order under R657-60-8 or control plan under R657-60-9 that requires decontamination of conveyances and equipment upon leaving the water shall:

(a) immediately drain all water from the equipment or conveyance at the take out site, including water held in ballast tanks, bilges, livewells, motors, and other areas of containment; and

(b) immediately inspect the interior and exterior of the equipment or conveyance at the take out site for the presence of Dreissena mussels.

(2) If all water in the equipment or conveyance is drained and the inspection undertaken pursuant to Subsection (1)(b) reveals the equipment and conveyance are free from mussels or shelled organisms, fish, plants and mud, the equipment and conveyance may be transported in or through the state directly from the take out site to the location where it will be:

(a)[~~(i) professionally~~] decontaminated; or

[~~(ii) stored and self-decontaminated; or~~]

(b) temporarily stored and subsequently returned to the same water body and take out site as provided in Subsection (5).

(3) If all the water in the equipment or conveyance is not drained or the inspection undertaken pursuant to Subsection (1)(b) reveals the equipment or conveyance has attached mussels or shelled organisms, fish, plants, or mud, the equipment and conveyance shall not be moved from the take out site until the division is contacted and written or electronic authorization received to move the equipment or conveyance to a designated location for professional decontamination.

(4) Except as provided in Subsection (5), a person shall not place any equipment or conveyance into a water body or water supply system in the state without first decontaminating

the equipment and conveyance when the equipment or conveyance in the previous 30 days has been in:

(a) an infested water; or

(b) other water body or water supply system subject to a closure order under R657-60-8 or control plan under R657-60-9 that requires decontamination of conveyances and equipment upon leaving the water.

(5) Decontamination is not required when a conveyance or equipment is removed from an infested water or other water body subject to decontamination requirements, provided the conveyance and equipment is:

(a) inspected and drained at the take out site, and is free from attached mussels, shelled organisms, fish, plants, and mud as required in Subsections (1) and (2);

(b) returned to the same water body and launched at the same take out site; and

(c) not placed in or on any other Utah water body in the interim without first being decontaminated.

(6)(a) Division personnel may provide the operator of a vessel leaving an infested water, or any water subject to a closure order under R657-60-8 or control plan under R657-60-9, with an inspection certification indicating the date which that vessel left the water body.

(b) An individual who receives a certification of inspection from the division must retain that certification of inspection until:

(i) the operator returns to the same body of water and receives a new certification of inspection upon leaving the water body;

(ii) the operator completes a certification of decontamination; or

(iii) the operator receives a professional decontamination certificate.

R657-60-6. Certification of Inspection; Certification of Decontamination; Certificate of Registration to Perform Decontamination.

(1) The owner, operator or possessor of a vessel desiring to launch on a water body in Utah must:

(a) present an inspection certificate to division personnel if required; and

(b) verify the vessel and any launching device, in the previous 30 days, have not been in an infested water or in any other water subject to closure order under R657-60-8 or control plan under R[~~656~~]657-60-9 that requires decontamination of conveyances and equipment upon leaving the water; or

(b) certify the vessel and launching device have been decontaminated.

(2) Certification of decontamination is satisfied by:

(a) previously completing self-decontamination since the vessel and launching device were last in a water described in Subsection (1)([~~a~~]b) and completely filling out and dating a decontamination certification form which can be obtained from the division; or

(b) providing a signed and dated certificate by a division approved professional decontamination service verifying the vessel and launching device were professionally decontaminated since the vessel and launching device were last in a water described in Subsection (1)([~~a~~]b)[~~.~~]; or

([~~3~~]c) complying with the terms identified in a certificate of registration issued for alternative decontamination measures.

(3) A certificate of registration to complete alternate forms of decontamination may be issued to an individual who:

(a) operates conveyances as a part of their business;

(b) whose conveyances cannot be decontaminated using self decontamination or professional decontamination as defined in R657-60-2(b)(i) and (ii).

(4) Both the decontamination certification form and the professional decontamination certificate, where applicable, must be signed and placed in open view in the window of the launching vehicle prior to launching or placing the vessel in a body of water.

([~~4~~]5)(a) It is unlawful under Section 76-8-504 to knowing falsify a decontamination certification form.

(b) It is unlawful under Section 23-13-11(2) to alter or destroy a certificate of inspection prior to completing a decontamination certification form.

(c) The division may suspend, revoke, or terminate a certificate of registration if the business entity or an employee thereof has violated a term of this rule, the Wildlife Resources Code, or a certificate of registration.

R657-60-7. Wildlife Board designations of Infested Waters.

(1) The Wildlife Board may designate a geographic area, water body, facility, or water supply system as Infested with Dreissena mussels pursuant to Section 23-27-102 and 23-27-401 without taking the proposal to or receiving recommendations from the regional advisory councils.

([~~a~~]2) The Wildlife Board may designate a particular water body, facility, or water supply system within the state as Infested with Dreissena mussels when sampling indicates the water body, facility, or water supply system meets the minimum criteria for an Infested Water as defined in this rule.

(3) The Wildlife Board may designate a particular water body, facility, or water supply system outside the state as Infested with Dreissena mussels when it has credible evidence suggesting the presence of a Dreissena mussel in that water body, facility, or water supply system.

(4) Where the number of Infested Waters in a particular area is numerous or growing, or where surveillance activities or infestation containment actions are deficient, the Wildlife Board may designate geographic areas as Infested with Dreissena mussels.

(5) The following water bodies and geographic areas are classified as infested:

(a) all coastal and inland waters in:

(i) Colorado;

(ii) California;

(iii) Nevada;

(iv) Arizona;

(v) all states east of Montana, Wyoming, Colorado, and New Mexico;

(vi) the provinces of Ontario and Quebec Canada; and

(vii) Mexico;

(b) Lake Powell and that portion of the:

(i) Colorado River [~~between Lake Powell and Spanish Bottoms in Canyonlands~~]within the boundaries of Glen Canyon National [~~Park~~]Recreation Area;

(ii) Escalante River between Lake Powell and the Coyote Creek confluence;

(iii) Dirty Devil River between Lake Powell and the Highway 95 bridge; and

(iv) San Juan River between Lake Powell and Clay Hills Crossing; and

(c) other waters established by the Wildlife Board and published on the DWR website.

(6) The Wildlife Board may remove an infested classification if:

(a) the division samples the affected water body for seven (7) consecutive years without a single sampling event producing evidence sufficient to satisfy the criteria for a "suspected" classification, as defined in this rule; or

(b) the controlling entity eradicates all Dreissena mussels at the water body, facility, or water supply system through chemical or biological treatments, desiccation, or freezing, and the division verifies in writing that Dreissena mussels are no longer present.

R657-60-8. Closure Order for a Water Body, Facility, or Water Supply System.

(1)(a) The division may classify a water body, facility, or water supply system as suspected or detected if it meets the minimum criteria for suspected or detected, as defined in this rule.

(b) If the division classifies a water body, facility, or water supply system as either suspected or detected, the division director or designee may, with the concurrence of the executive director, issue an order closing the water body, facility, or water supply system to the introduction or removal of conveyances or equipment.

(c) The director shall consult with the controlling entity of the water body, facility, or water supply system when determining the scope, duration, level and type of closure that will be imposed in order to avoid or minimize disruption of economic and recreational activities.

(d) A closure order may;

(i) close the water entirely to conveyances and equipment;

(ii) authorize the introduction and removal of conveyances and equipment subject to the decontamination requirements in R657-60-2(2)(b) and R657-60-5; or

(iii) impose any other condition or restriction necessary to prevent the movement of Dreissena mussels into or out of the subject water.

(iv) a closure order may not restrict the flow of water without the approval of the controlling entity.

(2)(a) A closure order issued pursuant to Subsection (1) shall be in writing and identify the:

(i) water body, facility, or water supply system subject to the closure order;

(ii) nature and scope of the closure or restrictions;

(iii) reasons for the closure or restrictions;

(iv) conditions upon which the order may be terminated or modified; and

(v) sources for receiving updated information on the presence of Dreissena mussels and closure order.

(b) The closure order shall be mailed, electronically transmitted, or hand delivered to:

(i) the controlling entity of the water body, facility, or water supply system;

and

(ii) any governmental agency or private entity known to have economic, political, or recreational interests significantly impacted by the closure order; and

(iii) any person or entity requesting a copy of the order.

(c) The closure order or its substance shall further be:

(i) posted on the division's web page; and

(ii) published in a newspaper of general circulation in the state of Utah or the affected area.

(3)(a) If a closure order lasts longer than seven days, the division shall provide the controlling entity and post on its web page a written update every 10 days on its efforts to address the Dreissena mussel infestation.

(b) The 10 day update notice cycle will continue for the duration of the closure order.

(4)(a) Notwithstanding the closure authority in Subsection (1), the division may not unilaterally close or restrict a suspected or detected water supply system where the controlling entity has prepared and implemented a control plan in cooperation with the division that effectively controls the spread of Dreissena mussels from the water supply system.

(b) The control plan shall comply with the requirements in R657-60-9.

(5) Except as authorized by the Division in writing, a person may not violate any provision of a closure order.

(6) A closure order or control plan shall remain effective so long as the water body, water supply system, or facility remains classified as suspected or detected.

(7) The director or his designee may remove a Suspected classification if:

(a) the division samples the affected water body for three (3) consecutive years without a single sampling event producing evidence sufficient to satisfy the criteria for a "suspected" classification, as defined in this rule; or

(b) the controlling entity eradicates all Dreissena mussels at the water body, facility, or water supply system through chemical or biological treatments, desiccation, or freezing, and the division verifies that Dreissena mussels are no longer present.

[~~; or~~] (8) The director or his designee may remove a detected classification if:

(a) the division samples the affected water body for five (5) consecutive years without a single sampling event producing evidence sufficient to satisfy the criteria for a "suspected" classification, as defined in this rule; or

(b) the controlling entity eradicates all Dreissena mussels at the water body, facility, or water supply system through chemical or biological treatments, desiccation, or freezing, and the division verifies that Dreissena mussels are no longer present.

R657-60-11. Conveyance or Equipment Detainment.

[~~(~~]([~~1~~]1) To eradicate and prevent the infestation of a Dreissena mussel, the division may:

(a) [~~temporary~~]temporarily stop, detain, inspect, and impound a conveyance or equipment that the division reasonably believes is in violation of Section 23-27-201 or R657-60-5;

(b) order a person to decontaminate a conveyance or equipment that the division reasonably believes is in violation of Section 23-227-201 or R657-60-[~~5'~~]5.

(2) The division, a port-of-entry agent or a peace officer may detain or impound a conveyance or equipment if[~~,~~]:

(a) the division, agent, or peace officer reasonably believes that the person transporting the conveyance or equipment is in violation of Section 23-27-201 or R657-60-5.

(3) The detainment or impoundment authorized by Subsection (2) may continue for[~~,~~]:

(a) up to five days; or

(b) the period of time necessary to:

(i) decontaminate the conveyance or equipment; and

(ii) ensure that a Dreissena mussel is not living on or in the conveyance or equipment.

KEY: fish, wildlife, wildlife law

Date of Enactment or Last Substantive Amendment: June 24, 2014

Notice of Continuation: August 5, 2013

Authorizing, and Implemented or Interpreted Law: 23-27-401; 23-14-18; 23-14-19

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

MEMORANDUM

Date: July 14, 2015

To: Regional Advisory Council Member and Wildlife Board

From: Rick Olson, Law Enforcement Captain

SUBJECT: License Exemption for Youth Organizations or School Activities; Amendments to Rule 657-45

Highlights:

- Utah Code 23-19-4.5 creates a program where youth in certain organizations (Boy Scouts, Girl Scouts, and non profits) may fish without a license. The statute requires that the Wildlife Board adopt a rule specifying the documentation required.
- Documentation will be completed online and available to print from home. This will allow DWR to monitor participation in the program.
- Must provide the name of the organization, date and location of activity approximate number of youth (under 16) and name and contact info of group leader.
- The leader must, be 18 or older, possess a valid Utah fishing or combo license and have approval from school or youth organization.

1594 West North Temple, Suite 2110, PO Box 146301, Salt Lake City, UT 84114-6301
telephone (801) 538-4700 • facsimile (801) 538-4709 • TTY (801) 538-7458 • *www.wildlife.utah.gov*

R657. Natural Resources, Wildlife Resources.
R657-45. Wildlife License, Permit, and Certificate of Registration Forms and Terms.
R657-45-1. Purpose and Authority.

Under authority of Sections 23-14-18, 23-14-19, 23-19-2 and 23-19-7 the Wildlife Board has established this rule for prescribing the forms and terms of a wildlife license, permit, and certificate of registration.

R657-45-4. Persons Participating in Youth Organization or School Activity Authorized to Fish Without a License.

(1)(a) A school or youth organization, as defined in Subsection (5), that sponsors a recreational or instructional fishing activity for youth may obtain a certificate of registration from the Division authorizing participating youth to fish without a license.

(b) A school or youth organization may obtain a certificate of registration by submitting an online application with the Division specifying the:

(i) name and address of the school or youth organization applicant, including verification it qualifies as a school or youth organization, as defined in Subsection (5);

(ii) date and location of the fishing activity;

(iii) fishing activity is part of a recreational or instructional program of the school or youth organization;

(iv) fishing activity is officially sanctioned or authorized by the school or youth organization;

(v) approximate number of youth that will participate in the fishing activity, including verification that each youth is:

(A) under 16 years of age; and

(B) an enrolled student in the school or a registered member of the youth organization;

(vi) name, address, and age of the adult leader that will supervise the fishing activity;

(vii) adult leader will:

(A) possess a valid Utah fishing or combination license; and

(B) provide instruction and training to the youth participants on Utah fishing laws and regulations; and

(viii) adult leader has obtained from the school or youth organization a valid tour permit or written documentation that specifies:

(A) the date and place of the fishing activity;

(B) the name of the adult leader that will supervise the fishing activity; and

(C) that the activity is officially sanctioned or authorized by the school or youth organization.

(2)(a) Upon receipt of a complete application from a school or youth organization and upon determination that the requirements of this Section are satisfied, the Division may issue a certificate of registration authorizing the identified youth participating in the sponsored fishing activity to fish without a license.

(b) The certificate of registration will include the following information:

(i) name and address of the school or youth organization.

(ii) name, address, and age of the adult leader supervising the fishing activity;
(iii) date of the fishing activity;
(iv) location of the fishing activity; and
(v) approximate number youth participating in the fishing activity.
(3) A youth participating in a fishing activity on a school or youth organization certificate of registration issued under this Section may fish without a license, provided:
(a) the youth is:
(i) a member of the youth organization or a student enrolled in the school; and
(ii) younger than 16 years old; and
(b) the fishing is conducted:
(i) in compliance with all Utah fishing laws and regulations;
(ii) on the date and at the location identified on the certificate of registration; and
(iii) under the supervision of the adult leader identified on the certificate of registration.
(4) The adult leader supervising a youth fishing activity under this section shall:
(a) be 18 years of age or older;
(b) possess a valid Utah fishing or combination license;
(c) provide direct supervision to the activity participants; and
(d) instruct the activity participants on Utah fishing laws and regulations.
(5) As used in this section:
(a) "School" means an elementary school or a secondary school that:
(i) is a public or private school located in the state; and
(ii) provides student instruction for one or more years of kindergarten through grade 9.
(b) "Youth organization" means a local Utah chapter of:
(i) the Boy Scouts of America;
(ii) the Girls Scouts of the USA; or
(iii) an organization that:
(A) is exempt from taxation under Section 501(c)(3), Internal Revenue Code; and
(B) promotes character building through outdoor activities.

KEY: license, permit, certificate of registration
Date of Enactment or Last substantive Amendment: July 8, 2014
Notice of Continuation: May 06, 2013
Authorizing and implemented or Interpreted Law: 23-19-2

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

MEMORANDUM

Date: July 14, 2015

To: Regional Advisory Council Member and Wildlife Board

From: Rick Olson, Law Enforcement Captain

SUBJECT: Self Defense Against Wild Animals; Amendments to DWR Rule 657-63

Highlights:

- Changes a person's responsibility to "safely retreat from the danger" to a person has the responsibility to "safely avoid the danger". This will bring the rule more in line with general self defense laws.
- Adds verbiage in the rule stating "Life and safety of a human is paramount to life and safety of a wild animal".
- Person is presumed to have acted reasonably if:
  - A wild animal enters a home, tent, camper, or other similar living structure occupied by the person provided the wild animal is reasonably perceived to be capable of causing severe bodily injury or death to human and the wild animal is killed while attempting to enter, entering, or occupying a living structure.

1594 West North Temple, Suite 2110, PO Box 146301, Salt Lake City, UT 84114-6301
telephone (801) 538-4700 • facsimile (801) 538-4709 • TTY (801) 538-7458 • *www.wildlife.utah.gov*

R657. Natural Resources, Wildlife Resources.
R657-63. Self Defense Against Wild Animals.
R657-63-1. Purpose and Authority.

(1) The purpose of this rule is to define conditions and circumstances under which a person is legally justified in killing or seriously wounding a threatening or attacking wildlife animal.

(2) This rule is established and promulgated by the Wildlife Board under authority of Sections 23-14-18 and 23-14-19.

R657-63-2. Definitions.

(1) Terms used in this rule are defined in Section 23-13-2.

(2) In addition:

(a) “Wild animal” means, for purposes of this rule, an individual animal that falls under the definition of “protected wildlife” as defined in Section 23-13-2.

(b) “Enter” means to physically penetrate the interior space of a structure with any part of the body, whether or not the exterior surface of the structure is ruptured.

R657-63-3. Self Defense.

(1) A person is legally justified in killing or seriously injuring a threatening wild animal when the person reasonably believes such action is necessary to protect them self, another person, or a domestic animal against an imminent attack by the wild animal that will likely result in severe bodily injury or death to the victim.

(2)(a) In determining imminence or reasonableness under Subsection (1), the trier of fact may consider, but is not limited to, any of the following factors:

([~~a~~]i) the nature of the danger;

([~~b~~]ii) the immediacy of the danger;

([~~c~~]iii) the probability that the threatening wild animal will attack;

([~~d~~]iv) the probability that the attack will result in death or serious bodily injury;

([~~e~~]v) the ability to safely[~~retreat;~~] avoid the danger;

([~~f~~]vi) the fault of the person in creating the encounter; and

([~~g~~]vii) any previous pattern of aggressive or threatening behavior by the individual wild animal which was known to the person claiming self defense.

(b) Notwithstanding Subsection (2)(a), a person who is legally located or traveling in a place where attacked or approached by a threatening wild animal is not required to retreat.

(c) In all cases involving a reasonably plausible assertion of self defense, it is presumed the life and safety of a human being is paramount to the life or safety of a wild animal.

(3)(a) A person shall notify the division within 12 hours after killing or wounding a wild animal under Subsection (1).

(b) No wild animal killed pursuant to Subsection (1) or the parts thereof may be removed from the site, repositioned, retained, sold, or transferred without written authorization from the division.

(4)(a) A person is not legally justified in killing or seriously injuring a threatening wild animal under the circumstances specified in Subsection (1) if the person[~~:~~]

[~~(i) has the ability to safely retreat from the threatening animal and fails to do so, except when the animal enters a home, tent, camper, or other permanent or temporary living structure occupied at the time by the person or another person; or~~][~~(ii)~~] intentionally, knowingly, or recklessly provokes or attracts the wild animal into a situation in which it is probable it will threaten the person, another person, or a domestic animal.

(b) Notwithstanding Subsection (4)(a[~~)(ii~~]), a person lawfully pursuing a cougar or bear with dogs may seriously injure or kill that cougar or bear when they reasonably believe such action is necessary to protect them self or another person against an imminent attack that will likely result in severe bodily injury or death.

(5) A person that kills or seriously injures a wild animal that enters a home, tent, camper, or other permanent or temporary living structure occupied by a person is presumed to have acted reasonably and had a reasonable fear the wild animal's entry presented an imminent threat of severe bodily injury or death to an occupant of the structure, provided the intruding wild animal is:

(a) reasonably perceived as an animal physically capable of causing severe bodily injury or death to a human being; and

(b) killed or injured while attempting to enter, entering, or occupying the involved structure.

R657-63-4. Violations.

A person that kills or seriously injures a wild animal without legal justification as provided in this rule and otherwise in violation of the law shall be subject to criminal prosecution under this Title and the rules and proclamations of the Wildlife Board.

KEY: wildlife
Date of Enactment or Last Substantive Amendment: March 14, 2011
Notice of Continuation: none/new rule
Authorizing, and Implemented or Interpreted Law: 23-14-18; 23-14-19

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

MEMORANDUM

Date: July 14, 2015

To: Regional Advisory Council Member and Wildlife Board

From: Rick Olson, Law Enforcement Captain

SUBJECT: Use of weapons on Division lands; Amendments to Rules R657-6 and R657-9

Highlights:

- Propose changes to Upland Game and Waterfowl rules to ensure they are consistent with Utah firearm laws.
- The rules will no longer restrict the possession of firearms.
- The rules will restrict the discharge of firearms on specified WMA's, listed in the guidebooks, to legal weapons during open seasons for lawful hunting purposes or; as authorized by COR or similar document or; for lawful purposes of self defense.

1594 West North Temple, Suite 2110, PO Box 146301, Salt Lake City, UT 84114-6301
telephone (801) 538-4700 • facsimile (801) 538-4709 • TTY (801) 538-7458 • *www.wildlife.utah.gov*

R657. Natural Resources, Wildlife Resources.
R657-6. Taking Upland Game.
R657-6-1. Purpose and Authority.

(1) Under authority of Sections 23-14-18 and 23-14-19 and in accordance with 50 CFR 20, 2004 edition, which is incorporated by reference, the Wildlife Board has established this rule for taking upland game.

(2) Specific season dates, bag and possession limits, areas open, number of permits and other administrative details that may change annually are published in the guidebook of the Wildlife Board for taking upland game and wild turkey.

R657-6-8. Use of Firearms, Crossbows and Archery Tackle on State Wildlife Management Areas.

(1) A person may not [~~possess~~]discharge a firearm, [~~a~~]crossbow, or archery tackle[~~, except during the specified hunting seasons or as authorized by the Division on the following wildlife management areas:~~] on the Bear River Trenton Property Parcel, Browns Park, Bud Phelps, Huntington, James Walter Fitzgerald, Kevin Conway, Manti Meadows, Montes Creek, Nephi, Pahvant, Redmond Marsh, Roosevelt, Scott M. Matheson Wetland Preserve, Stewart Lake, Vernal, and Willard Bay[~~.~~] Wildlife Management areas during any time of year, except:

([~~2) The firearm restrictions set forth in this section do not apply to a person licensed to carry a concealed weapon in accordance with Title 53, Chapter 5, Part 7 of the Utah Code, provided the person is not utilizing the concealed firearm to hunt or take wildlife.~~]a) the use of authorized weapons as provided in Utah Admin. Code R657-6-6 during open hunting seasons for lawful hunting activities;

(b) as otherwise authorized by the Division in special use permit, certificate of registration, administrative rule, proclamation, or an order of the Wildlife Board; or

(c) for lawful purposes of self-defense.

R657-6-9. Use of Firearms, Crossbows, and Archery Tackle on State Waterfowl Management Areas.

(1) A person may not [~~possess~~]discharge a firearm, crossbow, or archery tackle[~~, except during the specified waterfowl hunting seasons or as authorized by the Division on the following waterfowl management areas:~~] on the Bicknell Bottoms, Blue Lake, [~~Browns~~]Brown's Park, Clear Lake, Desert Lake, Farmington Bay, Harold S. Crane, Howard Slough, Locomotive Springs, Mills Meadows, Ogden Bay, Powell Slough, Public Shooting Grounds, Salt Creek, Stewart Lake, Timpie Springs[~~,~~] and Topaz[~~.~~] Waterfowl Management areas during any time of the year, except:

[~~(2) During the waterfowl hunting seasons, a shotgun is the only firearm that may be held in possession.~~]

[~~(3) The firearm restrictions set forth in this section do not apply to a person licensed to carry a concealed weapon in accordance with Title 53, Chapter 5, Part 7 of the Utah Code, provided the person is not utilizing the concealed firearm to hunt or take wildlife.~~]

(a) the use of authorized weapons as provided in Utah Admin. Code R657-9-7 during open waterfowl hunting seasons for lawful hunting activities;

(b) as otherwise authorized by the Division in special use permit, certificate of registration, administrative rule, proclamation, or an order of the Wildlife Board; or

(c) for lawful purposes of self-defense.

KEY: wildlife, birds, rabbits, game laws
Date of Enactment or Last Substantive Change: August 11, 2014
Notice of Continuation: July 8, 2010
Authorizing, and Implemented or Interpreted Law: 23-14-18; 23-14-19

R657. Natural Resources, Wildlife Resources.
R657-9. Taking Waterfowl, Wilson's Snipe and Coot.
R657-9-1. Purpose and Authority.

(1) Under authority of Sections 23-14-18 and 23-14-19, and in accordance with 50 CFR 20, 50 CFR 32.64 and 50 CFR 27.21, 2004 edition, which is incorporated by reference, the Wildlife Board has established this rule for taking waterfowl, Wilson's snipe, and coot.

(2) Specific dates, areas, limits, requirements and other administrative details which may change annually are published in the guidebook of the Wildlife Board for taking waterfowl, Wilson's snipe and coot.

R657-9-9. Use of Weapons on State Waterfowl Management Areas.

(1) A person may not [~~possess~~]discharge a firearm, crossbow, or archery tackle on the [~~following waterfowl management areas any time of the year except during the specified waterfowl hunting seasons or as authorized by the division:~~] Bicknell Bottoms, Blue Lake, Brown's Park, Clear Lake, Desert Lake, Farmington Bay, Harold S. Crane, Howard Slough, Locomotive Springs, Mills Meadows, Ogden Bay, Powell Slough, Public Shooting Grounds, Salt Creek, Stewart's Lake, Timpie Springs and Topaz[~~.~~] Waterfowl Management areas during any time of the year, except:

[~~(2) During the~~]

(a) the use of authorized weapons as provided in Utah Admin. Code R657-9-7 during waterfowl hunting seasons[~~, a shotgun is the only firearm that may be in possession, except as provided in Rule R657-12.~~] for lawful hunting activities;

(b) as otherwise authorized by the Division in special use permit, certificate of registration, administrative rule, proclamation, or order of the Wildlife Board; or

([~~3) The firearm restrictions set forth in this section do not apply to a person licensed to carry a concealed weapon in accordance with Title 53, Chapter 5, Part 7 of the Utah Code, provided the person is not utilizing the concealed firearm to hunt or take wildlife.~~]c) for lawful purposes of self-defense.

KEY: wildlife, birds, migratory birds, waterfowl
Date of Enactment or Last Substantive Amendment: August 11, 2014
Notice of Continuation August 16, 2011
Authorizing, and Implemented or Interpreted Law: 23-14-19; 23-14-18; 50 CFR part 20

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

MEMORANDUM

Date: July 14, 2015

To: Regional Advisory Council Member and Wildlife Board

From: Kenny Johnson, Administrative Services Section Chief

SUBJECT: Proposed Fee Schdule

Highlights:

- There are no proposed changes to the Fee Schedule for the next Fiscal year.

1594 West North Temple, Suite 2110, PO Box 146301, Salt Lake City, UT 84114-6301
telephone (801) 538-4700 • facsimile (801) 538-4709 • TTY (801) 538-7458 • *www.wildlife.utah.gov*

Fees for Dept of Natural Resources (RFA)

There are separate Fee amounts stored for Agencies, GOMB and the LFA.
The amounts listed are the amounts that are furthest through the approval workflow. (Agency >>> GOMB >>> LFA)

Fee

Fishing Licenses	
Resident	
Youth Fishing (12-13)	$5.00
Resident Youth Fishing Ages 14-17 (365 Day) (per Unit)	$16.00
Resident Fishing Ages 18-64 (365 day) (per Unit) Resident Multi Year License (Up to 5 years) for Ages 18-64 $33/year.	$34.00
Age 65 Or Older (365 day)	$25.00
Disabled Veteran (365 day)	$12.00
Resident Fishing 3 day any age (per Unit)	$16.00
7-Day (Any Age)	$20.00
Nonresident	
Youth Fishing (12-13)	$5.00
Nonresident Youth Fishing Ages 14-17 (365 day) (per Unit)	$25.00
Nonresident Fishing age 18 Or Older (365 day) (per Unit) Nonresident Multi Year (Up to 5 Years) for Ages 18 or Older $74/year.	$75.00
Nonresident Fishing 3 day any age (per Unit)	$24.00
7-Day (Any Age)	$40.00
Set Line Fishing License	$20.00
Season Fishing Licenses not Combinations	Up to 20% discount
Game Licenses	
Introductory Hunting License Upon successful completion of Hunter Education - add to registration fee	$4.00
Resident Introductory Combination license (hunter's ed completion) (per Unit)	$6.00
Nonresident Introductory Combination license (hunter's ed completion) (per Unit)	$6.00
Resident	
Hunting License (up to 13)	$11.00
Resident Hunting License Ages 14-17 (per Unit)	$16.00
Resident Hunting License Ages 18-64 (per Unit) Resident Multi Year license (Up to 5 years) for Ages 18-64 $33/year	$34.00
Resident Hunting License Ages 65 Or Older (per Unit)	$25.00
Resident Youth Combination License Ages 14-17 (per Unit)	$20.00
Resident Combination license Ages 18-64 (per Unit) Resident Multi Year License (Up to 5 Years) for ages 18-64 $37/year	$38.00
Resident Combination Ages 65 or Older (per Unit)	$29.00
Dedicated Hunter Certificate of Registration (COR)	
1 yr. (12-17)	$40.00
1 Yr. (18+)	$65.00
3 Yr. (12-17)	$120.00
3 Yr. (18+)	$195.00
Lifetime License Dedicated Hunter Certificate of Registration (COR)	
1 Yr. (12-17)	$12.50
1 Yr. (18+)	$25.00
3 Yr. (12-17)	$37.50
3 Yr. (18+)	$75.00

Nonresident	
Nonresident Youth Hunting License Ages 17 and Under (per Unit)	$25.00
Nonresident Hunting License Age 18 or Older (365 day) (per Unit)	$65.00
Nonresident Multi Year Hunting License (per Unit) (Up to 5 Years)	$64.00
Nonresident Youth Combination license Ages 17 and under (per Unit)	$29.00
Nonresident Combination license Ages 18 Or Older (per Unit) Nonresident Multi Year License (Up to 5 Years) for Ages 18 or Older $84/year.	$85.00
Dedicated Hunter Certificate of Registration (COR)	
1 Yr. (14-17) Includes season fishing license	$268.00
1 Yr. (18+) Includes season fishing license	$349.00
3 Yr. (12-17) Includes season fishing license	$814.00
3 Yr. (18+) Includes season fishing license	$1,047.00
Small Game - 3 Day	$32.00
Falconry Meet	$15.00
General Season Permits	
Resident	
Turkey	$35.00
General Season Deer	$40.00
Antlerless Deer	$30.00
Two Doe Antlerless	$45.00
Depredation - Antlerless	$30.00
Resident Landowner Mitigation	
Deer - Antlerless	$30.00
Elk - Antlerless	$50.00
Pronghorn - Doe	$30.00
Nonresident Landowner Mitigation	
Deer - Antlerless	$93.00
Elk - Antlerless	$218.00
Pronghorn - Doe	$93.00
Nonresident	
Turkey	$100.00
General Season Deer Includes season fishing license	$268.00
Depredation - Antlerless	$93.00
Antlerless Deer	$93.00
Two Doe Antlerless	$171.00
Stamps	
Wyoming Flaming Gorge	$10.00
Arizona Lake Powell	$8.00
Limited Entry Game Permits	
Deer	
Resident	
Limited Entry	$80.00
Premium Limited Entry	$168.00
Co-Operative Wildlife Management Unit (CWMU)/Landowner	
Buck	$40.00
Limited Entry	$80.00

Premium Limited Entry	$168.00
Antlerless	$30.00
Two Doe Antlerless	$45.00
Nonresident	
Limited Entry Includes season fishing license	$468.00
Premium Limited Entry Includes season fishing license	$568.00
Co-Operative Wildlife Management Unit (CWMU)/Landowner	
Buck Includes season fishing license	$268.00
Limited Entry Includes season fishing license	$468.00
Premium Limited Entry Includes season fishing license	$568.00
Antlerless	$93.00
Two Doe Antlerless	$171.00
Elk	
Resident	
Archery	$50.00
General Bull	$50.00
Limited Entry Bull	$285.00
Antlerless	$50.00
Control	$30.00
Resident Two Cow Elk permit (per Unit)	$80.00
Depredation	$50.00
Depredation - Bull Elk - With Current Year Unused Bull Permit	$235.00
Depredation - Bull Elk - Without Current Year Unused Bull Permit	$285.00
Co-Operative Wildlife Management Unit (CWMU)/Landowner	
Any Bull	$285.00
Antlerless	$50.00
Premium Limited Entry Bull	$513.00
Nonresident	
Archery Includes season fishing license	$393.00
General Bull Includes season fishing license	$393.00
Limited Entry Bull Includes season fishing license	$800.00
Antlerless	$218.00
Control	$93.00
Nonresident Two Cow Elk permit (per Unit)	$350.00
Depredation - Antlerless	$218.00
Co-Operative Wildlife Management Unit (CWMU)/Landowner	
Any Bull Includes fishing license	$800.00
Antlerless	$218.00
Premium Limited Entry Bull Includes fishing license	$1,505.00
Pronghorn	
Resident	
Limited Buck	$55.00
Limited Doe	$30.00

Limited Two Doe		$45.00
Co-Operative Wildlife Management Unit (CWMU)/Landowner		
Buck		$55.00
Doe		$30.00
Depredation Doe		$30.00
Archery Buck		$55.00
Nonresident		
Limited Buck Includes season fishing license		$293.00
Limited Doe		$93.00
Limited Two Doe		$171.00
Archery Buck Includes season fishing license		$293.00
Depredation Doe		$93.00
Co-Operative Wildlife Management Unit (CWMU)/Landowner		
Buck Includes season fishing license		$293.00
Doe		$93.00
Moose		
Resident		
Bull		$413.00
Antlerless		$213.00
Co-Operative Wildlife Management Unit (CWMU)/Landowner		
Bull		$413.00
Antlerless		$213.00
Nonresident		
Bull Includes season fishing license		$1,518.00
Antlerless		$713.00
Co-Operative Wildlife Management Unit (CWMU)/Landowner		
Bull Includes season fishing license		$1,518.00
Antlerless		$713.00
Bison		
Resident		$413.00
Resident Antelope Island		$1,110.00
Nonresident Includes season fishing license	$1,518.00	
Nonresident Antelope Island Includes season fishing license		$2,615.00
Bighorn Sheep		
Resident		
Desert		$513.00
Rocky Mountain		$513.00
Resident Rocky Mtn/Desert Bighorn Sheep Ewe permit (per Unit)		$100.00
Nonresident		
Desert Includes season fishing license		$1,518.00
Rocky Mountain Includes season fishing license		$1,518.00
Nonresident Rocky Mtn/Desert Bighorn Sheep Ewe permit (per Unit)		$1,000.00
Goats		
Resident Rocky Mountain		$413.00

Nonresident Rocky Mountain Includes season fishing license	$1,518.00
Cougar/Bear	
Resident	
Cougar	$58.00
Bear	$83.00
Premium Bear	$166.00
Bear Archery	$83.00
Cougar Pursuit	$30.00
Bear Pursuit	$30.00
Nonresident	
Cougar	$258.00
Bear	$308.00
Premium Bear	$475.00
Cougar Pursuit	$135.00
Bear Pursuit	$135.00
Wolf	
Resident	$20.00
Nonresident	$80.00
Cougar/Bear	
Cougar or Bear Damage	$30.00
Wild Turkey	
Resident Limited Entry	$35.00
Nonresident Limited Entry	$100.00
Waterfowl	
Swan	
Resident	$15.00
Nonresident	$15.00
Sandhill Crane	
Resident	$15.00
Nonresident	$15.00
Sportsman Permits	
Resident	
Bull Moose	$413.00
Hunter's Choice Bison	$413.00
Desert Bighorn Ram	$513.00
Bull Elk	$513.00
Buck Deer	$168.00
Buck Pronghorn	$55.00
Bear	$83.00
Cougar	$58.00
Rocky Mountain Goat	$413.00
Rocky Mountain Sheep	$513.00
Turkey	$35.00
Other	
Falconry Permits	
Resident	
Capture	
Apprentice Class	$30.00
General Class	$50.00
Master Class	$50.00

Nonresident	
Capture	
Apprentice Class	$115.00
General Class	$115.00
Master Class	$115.00
Handling Includes licenses, Certificate of Registration, and exchanges	$10.00
Drawing Application	$10.00
Landowner Association Application Nonrefundable	$150.00
Resident/Nonresident Dedicated Hunter Hourly Labor Buyout Rate	$20.00
Bird Bands	$0.25
Furbearer/Trap Registration	
Resident Furbearer Any age	$29.00
Nonresident Furbearer Any age	$154.00
Resident Bobcat Temporary Possession	$15.00
Nonresident Bobcat Temporary Possession	$45.00
Resident Trap Registration	$10.00
Nonresident Trap Registration	$10.00
Duplicate Licenses, Permits and Tags	
Hunter Education cards	$10.00
Furharvester Education cards	$10.00
Duplicate Vouchers CWMU/Conservation/Mitigation	$25.00
Refund of Hunting Draw License	$25.00
Application Amendment	$25.00
Late Harvest Reporting	$50.00
Wildlife Management Area Access (without a valid license)	$10.00
Exchange	$10.00
Wood Products on Division Land	
Firewood (2 Cords)	$10.00
Christmas Tree	$5.00
Ornamentals	
Conifers (per tree) Maximum $60.00 per permit	$5.00
Deciduous (per tree) Maximum $60.00 per permit	$3.00
Posts Maximum $60.00 per permit	$0.40
Hunter Education	
Hunter Education Training	$6.00
Hunter Education Home Study	$6.00
Furharvester Education Training	$6.00
Bowhunter Education Class	$6.00
Long Distance Verification	$2.00
Becoming an Outdoors Woman Special Needs Rates Available	$150.00
Hunter Education Range	
Adult Market price up to $10.	$5.00
Youth Ages 15 and under. Market price up to $5.	$2.00

Group for organized groups and not for special passes	50% discount
Spotting Scope Rental	$2.00
Trap, Skeet or Riverside Skeet (per round) Market price up to $10	$5.00
Five Stand - Multi-Station Birds Market price up to $10	$7.00
Ten Punch Pass	
Ten Punch Pass Shooting Ranges Youth (Rifle/Archery/Handgun) (per Unit) Market price up to $45.00	Up to $45
Ten Punch Pass Shooting Ranges (Shotgun) (per Unit) Market price up to $95.00	Up to $95
Ten Punch Pass Shooting Ranges Adult (Rifle/Archery/Handgun) (per Unit) Market price up to $95.00	Up to $95
Sportsmen Club Meetings	$20.00
Reproduction of Records	
Self Service (per copy)	$0.10
Staff Service (per copy)	$0.25
Geographic Information System	
Personnel Time (per hour)	$50.00
Processing (per hour)	$55.00
Data Processing	
Programming Time (per hour)	$75.00
Production (per hour)	$55.00
License Agency	
Application Other Services to be reimbursed at actual time and materials	$20.00
Postage	Current rate
Lost license paper by license agents (per page)	$10.00
Return check charge	$20.00
Hardware Ranch Sleigh Ride	
Adult	$5.00
Age 4-8	$3.00
Age 0-3	No charge
Education Groups (per person)	$1.00
Easement and Leases Schedule	
Application for Leases	
Leases Nonrefundable	$250.00
Easements	
Rights-of-way Nonrefundable	$750.00
Rights-of-entry Nonrefundable	$50.00
Easements Oil and Gas Pipelines (per Unit)	$250.00
Amendment to lease, easement, right-of-way Nonrefundable	$400.00
Amendment to right of entry (per Unit)	$50.00
Certified document Nonrefundable	$5.00
Research on leases or title records (per hour)	$50.00
Rights-of-Way	
Leases and Easements - Resulting in Long-Term Uses of Habitat Fees shall be determined on a case-by-case basis by the division, using the estimated fair market value of the property, or other legislatively established fees, whichever is greater, plus the cost of administering the lease,	Variable

right-of-way, or easement. Fair market value shall be determined by customary market valuation practices.	
Special Use Permits for non-depleting land uses of < 1 year A nonrefundable application of $50 shall be assessed for any commercial use. Fees for approved special uses will be based on the fair market value of the use, determined by customary practices which may include: an assessment of comparable values for similar properties, comparable fees for similar land uses, or fee schedules. If more than one fee determination applies, the highest fee will be selected.	Variable
Width of Easement	
0' - 30' Initial	$12.00
0' - 30' Renewal	$8.00
31' - 60' Initial	$18.00
31' - 60' Renewal	$12.00
61' - 100' Initial	$24.00
61' - 100' Renewal	$16.00
101' - 200' Initial	$30.00
101' - 200' Renewal	$20.00
201' - 300' Initial	$40.00
201' - 300' Renewal	$28.00
>300' Initial	$50.00
>300' Renewal	$34.00
Outside Diameter of Pipe	
<2.0" Initial	$9.40
<2.0" Renewal	$4.00
2.0" - 13" Initial	$19.00
2.0" - 13" Renewal	$8.00
13.1"-37" Initial (per Unit)	$38.00
13.1" - 25" Renewal	$12.00
25.1" - 37" Renewal	$16.00
>37" Initial	$75.00
>37" Renewal	$32.00
Roads, Canals	
Permanent loss of habitat plus high maintenance disturbance 1' - 33' New Construction	$18.00
Permanent loss of habitat plus high maintenance disturbance 1' - 33' Existing	$12.00
Permanent loss of habitat plus high maintenance disturbance 33.1' - 66' New Construction	$24.00
Permanent loss of habitat plus high maintenance disturbance 33.1' - 66' Existing	$18.00
Assignments: Easements, Grazing Permits, Right-of-entry, Special Use (per Unit)	$250.00
Certificates of Registration	
Initial - Personal Use	$75.00
Initial - Commercial	$150.00
TYPE I	
Certificate of Registration (COR) Fishing Contest	
Small, Under 50	$20.00
Medium, 50 to 100	$100.00
Large, over 200	$250.00
Amendment	$10.00
Certificate of Registration (COR) Handling	$10.00
Renewal	$30.00

Late fee for failure to renew Certificates of Registration when due: greater of $10 or 20% of fee.		Variable
Required Inspections		$100.00
Failure to Submit Required Annual Activity Report When Due		$10.00
Request for Species Reclassification		$200.00
Request for Variance		$200.00
Commercial Fishing and Dealing Commercially in Aquatic Wildlife		
Dealer in Live/Dead Bait		$75.00
Helper Cards - Live/Dead Bait		$15.00
Commercial Seiner		$1,000.00
Helper Cards - Commercial Seiner	$100.00	
Commercial Brine Shrimper		$15,000.00
Helper Cards - Commercial Brine Shrimper	$1,500.00	
Upland Game Cooperative Wildlife Management Units		
New Application		$250.00
Annual		$150.00
Big Game Cooperative Wildlife Management Unit		
New Application		$250.00
Annual		$150.00
Falconry		
Three year		$45.00
Five Year		$75.00
Commercial Hunting Areas		
New Application		$150.00
Renewal Application		$150.00

Dear Utah Wildlife Board:

The Intetnational Eagle Austringers Association (IEAA) would like to schedule a falconry meet in Utah County, Utah, over the weekend of October 23-25. We call this meet, "The Gathering of Eagles." Estimates are that approximately 25 to 30 participants will attend.

During this meet we anticipate hunting small game, mainly jack rabbits and foxes, if available. Additionally, pheasant and waterfowl may also be taken if the occasion arises. We anticipate possibly 3-4 Eagles as well as other Raptors during the meet.

The International Eagle Austringers Association is a small group of dedicated Eagle falconers. we are hoping to have an opportunity to bring together a small group of falconers specifically oriented towards Eagle falconry in Utah County.

Specifically, R657-20-7(8) states that the Wildlife Board must grant approval for non- residents to purchase a 5-day non-resident meet license. Accordingly, and on behalf of Carter Wilford the 2015 meet organizer, we are requesting that the Wildlife Board grant approval for non-resident falconers attending the 2015 meet to purchase a 5-day non-resident meet license

If I can provide additional clarification or can answer any questions, please do not hesirate to contact me at 801-400-0827.

Sincerely,

Carter Wilford
Member of IEAA

Red Fleet Reservoir
Fishery Management Plan

Red Fleet Reservoir Advisory Committee
2014-2015

Red Fleet Reservoir
Fishery Management Plan
Red Fleet Reservoir Advisory Committee

Red Fleet Reservoir Advisory Committee (Committee) Representation:

The Committee was formed over the summer of 2014 to provide public input to the Utah Division of Wildlife Resources (Division) regarding the management of the Red Fleet Reservoir fishery. Members were selected through input and recommendations from various groups interested in Red Fleet Reservoir. Committee members included:

- Mike Murray - Utah State Parks
- Craig Henline – Angler/Public
- Cody Hansen – Angler/Public
- Nathan Belliston – Angler/Public
- Randy Bywater – Angler/Public
- Wade Moulton – Angler/Public
- Charlie Card – Angler/TU
- Beau Searle – Angler/Public
- Marcus Batty – Angler/Industry
- Dan Roper – Angler/TU
- George Sommer – Angler/Public
- Jeff Taniguchi – Angler/TU

Division representatives participating in the effort include:
- Trina Hedrick – Northeastern Region Aquatics Manager
- Natalie Boren – Northeastern Region Fisheries Biologist
- Garn Birchell – Northeastern Region Assistant Manager
- Matt Breen – Northeastern Region Native Aquatics Project Leader
- Paul Birdsey – Coldwater Sportfish Coordinator
- Drew Cushing – Warmwater Sportfish Coordinator
- Krissy Wilson – Native Aquatics Coordinator
- Dan Abeyta – Northeastern Regional Advisory Council Member
- Larry Wheatcraft – Northeastern Region Conservation Officer

Other individuals participating in this effort include:
Kevin McAbee – United States Fish and Wildlife Service, Upper Colorado River Endangered Fish Recovery Program
Mike Mills – Central Utah Water Conservancy District
Dan Orr – Trout Unlimited, High Desert Anglers

Committee Purpose and Mission:

The purpose of the Committee as outlined by the Division was to identify a suitable fishery within the biological and political constraints for Red Fleet Reservoir that would be enticing to anglers and then develop a plan for implementation by the Division.

The Committee charged itself with the mission to:

Provide direction and advice to the Division in the development of a fishery management plan for Red Fleet Reservoir that will provide the anglers of Utah a quality fishing experience.

Constraints

All recommendations have considered the following:

1. existing state and federal laws and policies;
2. life history/biology of fish species;
3. that some species (e.g., brown trout) are present in the drainage above the reservoir and cannot be eradicated;
4. limnology of the reservoir;
5. morphometry of the reservoir basin;
6. upstream and downstream impacts on aquatic resources;
7. current budgetary and funding constraints;
8. availability of alternative fish species for stocking; and
9. public perceptions and expectations.

Desired Condition

While working within the constraints listed above, the Committee identified the desire for a unique fishery comprised of quality fish and a diverse species assemblage that could accommodate both a "family fishery" component and a component for more experienced anglers.

The Division's interest is for a stable fishery that is attractive to more anglers than identified in the 2011-2012 creel survey completed at Red Fleet and that offers a fishery in multiple seasons. The Red Fleet fishery must also comply with the Endangered Species Act.

Current Condition

Red Fleet Reservoir is low-use fishery (15.4 angler hours/surface acre) located in Uintah County in northeastern Utah approximately 10 miles northeast of Vernal, Utah. Red Fleet Reservoir is approximately 520 surface acres at full pool and has a maximum storage capacity of approximately 27,000 acre feet of water. The reservoir provides water for agricultural uses to shareholders downstream of the dam, predominantly irrigation, but also stock water. Red Fleet Reservoir is also a municipal drinking water source for the town of Vernal. The reservoir is typically at its highest point each spring, depending on the amount of winter precipitation and runoff. Demands for water increase around the second week of May, resulting in a lowering of the water level in the reservoir.

Since completion of the dam in 1982, Red Fleet Reservoir fishery management has focused on rainbow trout, although the stock size has increased from fingerling to advanced fingerling to catchable given the repeated illegal introduction and establishment of warm and cool water piscivores. Brown trout, Flannelmouth Sucker, Speckled Dace, and Mountain Sucker were impounded by the dam and are still found in the reservoir during gill netting efforts suggesting naturally reproducing populations either in the reservoir or in Brush Creek. Additional species include Largemouth Bass and Bluegill which were illegally introduced in the 1980's. Walleye were also illegally introduced and were first detected in the reservoir in 2002 with only three large fish, and subsequently, in 2006 with multiple size and age classes.

Red Fleet Reservoir received just over 13,000 angler hours of use in the 1992 creel and only 9,000 angler hours in the 2011-12 creel (Boren et al. 2014). While catch rates for rainbow trout in the creel do meet our fishery goal of 0.5 fish/hr, our gill netting results have not met the statewide target. No other species in the reservoir comes close to meeting the statewide goal for either gill netting or creel. We suspect that the fishery is either not interesting enough to anglers or fast enough fishing to attract them consistently through the years. Drought years can have serious impacts on water levels at Red Fleet which can in turn impact the fishery. Water levels dropped significantly in 2002 and again in 2013 and 2014. In fact, 2002 and 2014 were the lowest recorded levels in Red Fleet's 35-yr history causing drastic changes in habitat over the course of the extended draw downs.

Post Stocking Species Assemblages

On February 26, 2015 the Committee decided upon the species assemblage that would be stocked back into Red Fleet Reservoir after the treatment in October 2015. Using sideboards presented in previous meetings, and considering the list of species that are not compatible with endangered species recovery (provided by the Upper Colorado River Endangered Fish Recovery Program (UCREFP)), the team arrived at consensus on species that would go back into the reservoir. The following species were chosen as predators: Wiper (*Morone saxatilis* x *M. chrysops*), sterile Walleye (requires 100% sterility in test batches; *Sander vitreus*), Largemouth Bass (*Micropterus salmoides*; stocking contingencies -- see timeline of tasks), Tiger Trout (*Salmo trutta* x *Salvelinus fontinalis*) and Colorado River Cutthroat Trout (*Oncorhynchus clarki pleuriticus*; Brush Creek only). The following species were chosen as forage species: Yellow Perch (*Perca flavescens*), Black Crappie (*Pomoxis nigromaculatis*), Mountain Whitefish (*Prosopium williamsoni*), and Fathead Minnow (*Pimephalas promelas*).

This assemblage is intended to provide a unique opportunity to the angling community and also provide a diverse forage base for the top predators identified. Establishment of a forage base in Red Fleet Reservoir is crucial to the successful establishment of the predators identified. It will also be critical to evaluate the success/failure of each species within this new assemblage. Based upon the response by each species, and after three to five years of assessments, we will establish a long term stocking plan for Red Fleet Reservoir.

Escapement Prevention

Two species chosen for stocking into Red Fleet Reservoir are considered a threat to endangered fish in the Colorado River basin if they reach riverine habitats -- Wiper and sterile Walleye. However, they are both on the approved list of species for reservoir stocking because they are not able to reproduce. Their stocking within the reservoir is contingent upon the installation of a fish barrier to prevent escapement. The lack of reproduction and the escapement prevention is a two-tiered strategy to prevent these species from establishing populations in endangered fish habitat. Therefore, introduction of both sterile Walleye

and Wiper trigger the need for a fish escapement barrier, which will likely be a screen below Red Fleet Dam. This was made clear to both Division managers and the Red Fleet Committee.

A five year maintenance plan will be developed upon installation of the fish escapement barrier, which will be completed no later than 2020. Until the fish screen is installed, managers will monitor water conditions in the drainage and determine if a spill is likely to occur. If the reservoir is expected to spill, the Division will install a temporary barrier (similar to the one used at Starvation Reservoir).

Timeline for construction of the permanent fish screen:

Funding proposal submitted in December 2015 (FY2016)
Engineering for screen 2016 (FY2017)
Construction of screen in 2017 (FY2018).

Visions, Goals, Objectives and Tools for Management of Red Fleet Reservoir (5-yr review cycle)

The following vision statement was developed by the Red Fleet Committee:

"Establish Red Fleet as a destination fishery by offering a diverse and unique fishing opportunity to anglers year-round that also appeals to anglers of multiple skill levels and interests."

Goals

1. Educate the public and ensure no new species are moved in or out of Red Fleet Reservoir after the treatment.
2. Manage Red Fleet Reservoir for stable forage fish populations and balanced predator:prey ratios.
3. Fill current data needs and gaps.
4. Manage Red Fleet Reservoir as a destination fishery.
5. Manage Red Fleet Reservoir for compatibility with native fish management.

Objectives (by goal) and Tools to accomplish each Objective

1. Educate the public and ensure no new species are moved in or out of Red Fleet Reservoir after the treatment.

Objective #1: Work with outreach and other entities to produce appropriate outreach media.

Tools to accomplish this objective:

- Work with the Division's Outreach section and other entities to create flyers, posters, and other appropriate media to educate the public on the new species assemblage and the new fishery.

- Use social media to highlight the new Red Fleet fishery and educate the public about the importance of not moving fish into or out of Red Fleet & other water bodies after this renovation.
- Work with local businesses or local/statewide forums (e.g., Paddlefest, Walleye Classic, Angler's Coalition meetings) to promote the new fishery.
- If possible, hire additional seasonal help to assess the fishery and help with outreach.
- Work with Law Enforcement to conduct more livewell/cooler checks coming into and out of Red Fleet Reservoir. Use social media and local media to inform the public of why we are conducting increased LE efforts at Red Fleet.
- Develop signage, for installation at Red Fleet Reservoir and other water bodies and initiate an illegal transport sign campaign.
- See Goal #5.

2. Manage Red Fleet Reservoir for stable forage fish populations and for balanced predator: prey ratios.

Objective #1: Manage for stability of forage species.

Tools to accomplish this objective:

- Ensure two of the three forage species (Yellow Perch, Black Crappie, Mountain Whitefish) are recruiting in each 3-year cycle. This can be assessed by annual surveys such as gill-netting, trap-netting and electrofishing.
- Utilize supplemental stocking of other forage species if needed in the future (Rainbow Trout, Fathead Minnow).
- Develop a timeline for forage species progression, if a species does not meet that timeline look to another forage base option.
- Work with the U.S. Bureau of Reclamation and Utah State Parks to create Black Crappie structures that can be installed in Red Fleet Reservoir for long term improvements for this species. Installation of these structures will likely benefit other forage species as well.
- Assess how each species responds (growth, condition) in this new fishery and determine the carrying capacity of the nutrient/forage base in the Red Fleet/Brush Creek system. Our iterative process will allow the use of stocking and transfers to buffer against poor recruitment years and help keep the forage species populations stable.
- Once species have become established, Division fisheries managers should evaluate the need for more strict fishing regulations to protect forage species from overharvest, while still allowing for angling harvest opportunities.
- After two years (2017), fisheries managers will develop goals for measuring success of forage species.
    - Develop targeted catch rates for each species appropriate to the species and the reservoir (e.g.,1.0 fish/hr for Yellow Perch) based on observations within Red Fleet Reservoir and from around the state.
    - Maintain a ratio of forage to predators of 8:1 or 7:1.

Objective #2: Manage for stability of predator species.

Tools to accomplish this objective:

- Evaluate growth and condition of individual predator species via annual surveys (gill-netting, trap-netting and electrofishing).
- Adjust stocking rates of predators based on the above results, knowing Tiger Trout, Wiper and Walleye are all sterile fish within this system.
- Impose appropriate regulations on specific species according to how well each species performs in the system and observed catch and harvest rates by Red Fleet anglers. If a certain species exhibits potential for trophy status then regulations can be adjusted at a future time with input from the Committee.
- In the Brush Creek system, consider catch and release or limited harvest regulations for Colorado River Cutthroat Trout depending on harvest rate, keeping in mind that bait can be used in the reservoir.
- Create proper signage to inform the public of any new regulations at Red Fleet/Brush Creek and use media/social media to convey the message.
- After two years (2017), we will develop goals for measuring success for each predator species.
    - Develop targeted catch rates for each species appropriate to the species and the reservoir (e.g., maintain catch rates of 0.5 fish/hr for Wiper) based on observations within Red Fleet Reservoir and from around the state.
    - Maintain a mean body condition using a relative weight (W_r) range of 90-100+ for each predator species.
    - Use Proportional Stock Density number to help evaluate growth of stocked sterile fish.

3. Fill current data needs and gaps.

Objective#1: Utilize regional fisheries biologist, sportfish technicians, and the angling public to fill data needs.

Tools to accomplish this objective:

- Develop a zooplankton monitoring program which includes 1-3 sampling events throughout the year to develop long-term trend data.
- Develop and implement annual sampling for crayfish within the reservoir.
- Define habitat limitations for each species and work to improve condition.
- Conduct creel surveys post-treatment of Red Fleet fishery to document use. The next creel is currently scheduled for 2017 or 2018.

4. Manage Red Fleet as a destination fishery.

Objective #1: Provide quality fish with adequate forage and ensure that the public is aware of these efforts and is able to take advantage of these efforts.

Tools to accomplish this objective:

- Keep in mind our long range vision statement for any future management of Red Fleet Reservoir, including key terms such as “diverse”, “year-round opportunity” and “variety for various skill levels”.
- Work towards getting Red Fleet Reservoir on the Blue Ribbon Fisheries list.
- Create interest from anglers on the Wasatch front and from neighboring states such as Colorado and Wyoming.
- Work to build events at Red Fleet Reservoir (three per year)for the first five years then reassess.
    - Events could include: family events, fishing tournaments, ice fishing derbies.
- Work to provide better accessibility to Red Fleet Reservoir by improving angling access to areas such as north beach and the area near the dam.
    - Look for funding to construct a trail system immediately around the reservoir.
    - Improve access to handicapped anglers.
- Ensure that Red Fleet Reservoir has a seasonal component to its fishery and can be used year round to provide adequate fishing opportunity.
    - Develop measurable catch rates for each season.
- Develop a targeted angler usage upon stabilization of the fishery (goal would be greater than 15.4 angler hrs/surface acre).

5. Manage Red Fleet Reservoir for compatibility with native fish management.

Objective #1: Protect and remain compatible with the native fishery below Red Fleet Reservoir.

Tools to accomplish this objective:

- Work towards the goal of fish screen installation within five years.
- In time frame between post-treatment and fish screen installation, install temporary barrier when reservoir is expected to spill.
- Use outreach and education to remind our public/anglers of the importance of ESA compliance and the time spent developing this fishery to ensure compliance.

Discussion

The Red Fleet Management Plan should be considered a living document that will change according to conditions observed in the reservoir. Varying environmental factors such as drought, normal water usage, and water quality can come into play in the future. Committee members will be brought back together for input and assistance via email as needed and in person annually, but potentially sooner as conditions change.

This plan and associated timeline should be used as guidance by fisheries managers and the Committee to achieve their stated goals and objectives for this fishery. We will continue to keep in mind the vision statement created by this group and agreed upon by Division managers and work towards its implementation annually.

Priority Tasks by Year

- **2015**
  - Complete AIS inspections in preparation for fish transfers out of Red Fleet and into Red Fleet (Summer 2015)
  - Complete Fish Transfer request forms and gain approval from SLC office
  - Emergency change for Red Fleet (double catch limit). Encourage harvest of limit of all species within the reservoir. Include local newspaper articles/social media outreach
  - Complete disease work for the following species:
    - Largemouth Bass @ Red Fleet- July 1st scheduled date
    - Mountain Whitefish @ Moon Lake/ Lake Fork/Brown Duck drainage – July 14-15th
    - Black Crappie @ Pineview (one time transfer)
    - Yellow Perch @ Big Sandwash – July 29th
      - YP @ Fish Lake (Disease work ongoing by Southern Region)
    - Fathead Minnow @ Green River near Vernal- July or August
  - Develop a stocking timeline (initial stocking four weeks after treatment)
    - Both forage and predator species
  - Secure sterile Walleye with 100% triploidy rates and monitor progress of growth in our ponds for stocking in October/November 2015
  - Schedule dates for the following activities:
    - Largemouth Bass transfer from Red Fleet to Steinaker (1-2 days) with help from local anglers on each day.
      - August 14-15th 2015 are the dates for this event.
    - Fertile Walleye removal day with a fish fry. Sportsman's Warehouse and KSL could potentially help with the event. Will need angling public's help to catch Walleye; DWR can set nets and E-fish.
      - August 22nd is the date for this event
    - Annual gillnetting (following trend netting protocol) to evaluate drought condition impact to this fishery.
      - June 16th
    - Pre-treatment crayfish monitoring
      - May 4th and June 16th
    - Pre-treatment zooplankton monitoring
      - April 6th, June 4th, August 6th and September 30th and October 20th
  - Prepare for October 6th 2015 treatment
  - Prepare press releases for increased law enforcement presence at Red Fleet including more random live well and cooler checks for boats coming in and out of Red Fleet.
  - Begin restocking the week of October 26th 2015
  - Assess feasibility of a winter Yellow Perch transfer from Fish Lake to Red Fleet and coordinate with the Fish Lake ice derby.
- **2016**

- Committee meets in February 2016 to discuss upcoming field season work specific to Red Fleet.
- Transfer forage according to our timeline from our source locations
  - Committee (or other volunteers) assistance requested
- Continue zooplankton monitoring April 2016 (every 2 months for 1 year)
- Develop crayfish monitoring plan and begin April 2016
- April-May evaluate the CRCT population in Brush Creek utilizing a backpack electrofishing crew and conduct pre-spawn as to not disturb any attempts of CRCT to spawn in the stream.
- May- June evaluate forage transferred in November 2015 (did they survive and spawn in the spring?)
- May- June evaluate predators transferred in November 2015 (did they survive?)
- June-August work to install habitat structure for Black Crappie utilizing public and angling community assistance.
- September-October evaluate both predators and forage for summer survival and overall numbers going into the winter months.
- Winter 2016 conduct an ice fishing event with the Committee to determine catchability of stocked fish and evaluate our goal of making Red Fleet a year round destination fishery.
- Winter/Spring re-evaluate any changes to regulations by species in Red Fleet.
  - Should include regulations for CRCT in Brush Creek
  - Forage regulations
  - Predator regulations
  - Consider Flannelmouth Sucker and other natives if they successfully repopulate the stream.
  - New regulations need to be sent to SLC by April 1st 2017 for 2018 changes.
- Winter- Submit WRI proposal for fish screen by January 1st 2016

- **2017**
  - Winter- Determine whether to begin Red Fleet creel survey in 2017 or 2018. If 2017, develop and begin implementation in April 2017.
  - Committee meets in February 2017 to discuss upcoming field season work and assess goals and objectives to this point in the Red Fleet plan.
    - Discuss events to meet our three events per year goal
  - April-September conduct zooplankton surveys and develop trend data sets.
  - In conjunction with other sampling events conduct crayfish surveys and develop long-term trend data sets.
  - May-July evaluate forage from previous transfers.
    - Determine relative abundance, recruitment and success of each species
    - Determine status of all forage species, what's working, what's not and do we need to look at other options?
  - May-June evaluate predators via electrofishing and other non-lethal methods of conducting fish surveys.
    - Determine condition, growth and mortality if possible.

        - Determine status of predator species, if one is not doing well; further explore Largemouth Bass or a sterile Largemouth Bass to introduce into Red Fleet.
    - June- August evaluate use of installed habitat structures by all forage species, determine if working and should we install more structures.
        - Use underwater cameras to evaluate specific habitat electrofishing surveys
    - July- If WRI approved, money will be available to complete engineering, design, and determine installation date of a fish screen on Red Fleet outlet structure.
    - September- October evaluate both predators and forage.
    - *October-December need to develop the measurements of success for each species based upon two years of survey data. Develop and meet with Committee to discuss.
    - Winter- Host a second ice fishing event to determine catchability of stocked fish and evaluate our goal of making Red Fleet a year round destination fishery.
    - Winter/Spring assess/adjust any specific regulations by species in Red Fleet.
        - Should include regulations for CRCT in Brush Creek
        - Forage regulations
        - Predator regulations

- **2018**
    - Winter- If postponed to 2018, develop Red Fleet creel survey; begin April 2018.
    - Management team meets in February 2017 to discuss upcoming field season work and assess goals and objectives to this point in the Red Fleet plan.
        - Discuss events to meet our three events per year goal
    - April-September conduct zooplankton surveys and develop trend data sets.
    - In conjunction with other sampling events conduct crayfish surveys and develop long term trend data sets.
    - May-July evaluate forage from previous transfers.
        - Determine relative abundance, recruitment and success of each species
        - Determine status of all forage species, what's working what's not and do we need to look at other options?
    - May-June evaluate predators via electrofishing and other non-lethal methods of conducting fish surveys.
        - Determine condition, growth and mortality if possible.
        - Determine status of predator species, if one is not doing well; further explore Largemouth Bass or a sterile Largemouth Bass to introduce into Red Fleet.
    - June- August evaluate use of installed habitat structures by all forage species, determine if working and should we install more structures.
        - Use underwater camera to evaluate or specific habitat electrofishing surveys
    - September- October evaluate both predators and forage.

Works Cited

Boren, N., G. Birchell, and T. Hedrick. 2014. Red Fleet Reservoir creel census: April 2011-March 2012. Utah Division of Wildlife Resources publication no. 14-26. Salt Lake City, UT.